

VOSA Approved Vehicle Testing of Oxytane

These tests were carried out at Unit 33, Sugarbrook Road, Aston Fields Industrial Estate, Bromsgrove, B60 3DN, England, on September 29th 2008.

Tests carried out using Bosch 350 calibrated Diesel Smoke tester.

Vehicle: **Bentley**

Mileage: **38631**

YOM: 2004

Variant: **6.0l V8 Twin Turbo**

HC Testing:

The European Law allows a mean level of up to 0.5% CO. This car however had been left on idle after a long journey and a lot of fuel was sitting in the catalytic convertors.

European emission standards for **passenger cars** (Category M₁^{*}), g/km

Tier	Date	CO	HC	NO _x	HC+NO _x	PM
Diesel						
EM1	January 1989	2.72 (3.16)	-	-	0.97 (1.13)	0.14 (0.18)
Euro 2, IDI	January 1993	1.0	-	-	0.7	0.08
Euro 2, DI	January 1993	1.0	-	-	0.9	0.10
Euro 3	December 1997	0.64	-	0.50	0.56	0.05
Euro 4	January 2003	0.50	-	0.25	0.30	0.025
Euro 5 (future)	September 2009	0.50	-	0.18	0.23	0.005
Euro 6 (future)	September 2014	0.50	-	0.08	0.17	0.005
Petrol (Gasoline)						
EM1	January 1989	2.72 (3.16)	-	-	0.97 (1.13)	-
Euro 2	January 1993	2.2	-	-	0.5	-
Euro 3	January 1997	2.30	0.20	0.15	-	-
Euro 4	January 2003	1.0	0.10	0.08	-	-
Euro 5 (future)	September 2009	1.0	0.10	0.06	-	0.005**
Euro 6 (future)	September 2014	1.0	0.10	0.06	-	0.005**

* Before Euro 5, passenger vehicles > 2500 kg were type approved as [light commercial vehicle N1](#) - [see here](#)

** Applies only to vehicles with direct injection engines

B O S C H

Cat. equipped vehicle
with closed loop control

TEST STATION
CHIPPED U.K.
UNIT 33, SUGARBROOK ROAD
ASTON FIELDS IND EST.
BROMSGROVE, B60 3DN.
TEL: (01527) 579345
VTS number: -----

BEA version: V1.20-UK
AMM version: 000-B6

Date: 30.09.2008
Time: 15:15

VEHICLE DETAILS

Reg. Number: CHIPPEDUK
Manufact.: BENTLEY MOTORS LIMITED
Model: Bentley
2002/2003/2004/2005/2006
/2007 Models
Type: (10th Character
of VIN is 4/5/6/7)
with 6.0 litre twin
turbo W12 (5th
Character of VIN is
E) (commercial use)
Engine Capacity: 6000
Odometer Reading: 38631

DESCRIPTION

Engine speed bypassed
Oil temperature bypassed
Gauge showed warm engine

Fast Idle Test

Speed Not checked
CO 0.52 %vol
HC 38 ppm
Lambda 0.98

2nd Fast Idle Test

Speed Not checked
CO 0.17 %vol
HC 12 ppm
Lambda 0.99

Natural Idle Test

Speed Not checked
CO 0.12 %vol

SUMMARY RESULTS

Oil temp. (80) OK

Fast Idle Test: FAIL
Speed (1950-2550) Not Done
CO (0.2) fail
HC (200) pass
Lamb. (0.97-1.03) pass

2nd Fast Idle Test: PASS
Speed (1950-2550) Not Done
CO (0.2) pass
HC (200) pass
Lamb. (0.97-1.03) pass

Idle Speed: PASS
Speed (450-700) Not Done
CO (0.3) pass

Exhaust Emissions Test
Overall Result: PASSED

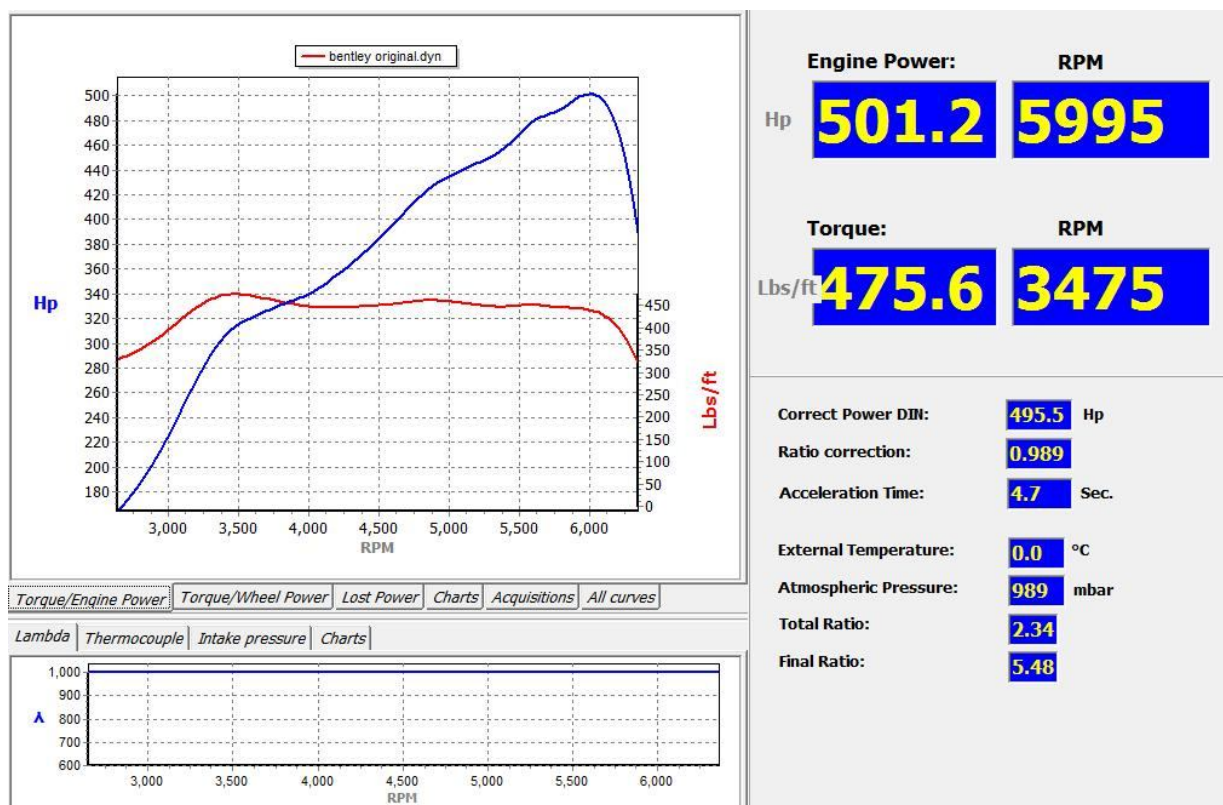
Tested By: SIMON WHITE
Signature: -----

As the results show above, the car failed the first MOT emissions test as the CO levels were 0.52% volume which is 0.02% too high.

After flushing out the cats we got the car to pass emissions with a reading of 0.17% CO volume and an HC of 12ppm with the first being 38ppm when the CO levels were too high.

This is a large car with a big engine so but built within tight tolerance levels and after the cats had been flushed it passed the MOT emissions test perfectly.

We then ran the car on the dynamometer to verify the standard HP and torque of the vehicle.



We then added 15ml of Oxytane directly into the fuel supply to give the desired balance of 1ml to 1 gallon of fuel and allowed the car to idle for 5 minutes giving the fuel enough time to mix. As this engine only runs on 4 cylinders when on idle we ran the car on the dynamometer to see the results on the power and torque before testing for emissions. This allowed us to run the car over a few miles and enable all 8 cylinders to run the Oxytane treated fuel through the entire engine.

You can see here the results of the dynamometer test after we used just 15ml of Oxytane.


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  B O S C H
Basic Emission Test
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UNIT 33, SUGARBROOK ROAD
ASTON FIELDS IND. EST.
BROMSGROVE, B60 3DN.
TEL: (01527) 579345
VTS number:
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BEA version: V1.20-UK
AMM version: 000-B6
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Date: 30.09.2008
Time: 16:16
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VEHICLE DETAILS
Reg. Number: CHIPPEDUK
Manufact.:
BENTLEY MOTORS LIMITED
Model: Bentley
2002/2003/2004/2005/2006
/2007 Models
Type: (10th Character
of VIN is 4/5/6/7)
with 6.0 litre twin
turbo W12 (5th
Character of VIN is
E) (commercial use)
Engine Capacity: 6000
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DESCRIPTION
Engine temp. measurement
by manual observation of
temperature gauge
-----
Fast Idle Test
-----
Speed manual check
CO 0.05 %vol
HC 7 ppm
Lambda 1.00
-----
Natural Idle Test
-----
Speed manual check
CO 0.00 %vol
-----
SUMMARY RESULTS
Fast Idle Test: PASS
Speed (2500-3000) pass
CO (0.20) pass
HC (200) pass
Lamb. (0.97-1.03) pass
Idle Speed: PASS
Speed (450-1500) pass
CO (0.30) pass
Exhaust Emissions Test
Overall Result: PASSED
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Tested By: SIMON WHITE
Signature:

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This car would have passed a UK emission test for an MOT with after the cats had been flushed. However, to see such an improvement in the CO and HC output from the vehicle, it is truly amazing.

Conclusion:

We have seen on this vehicle a drop in emission of over 50% and a reduction in HC of over 40%. When this is combined with the power increase of 10hp and 9lbs/ft of torque, we can make only one recommendation. This being that Oxytane should be used wherever and whenever possible on a this vehicle as the results speak for themselves.

Simon White.