



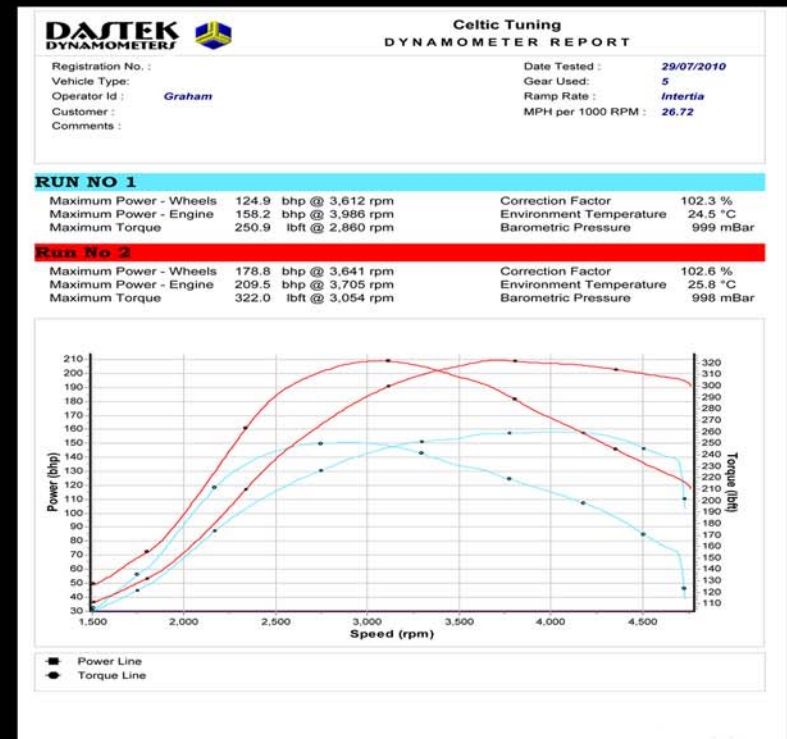
Alfa Romeo 159 1.9 JTDm 150bhp

The Alfa Romeo 159 is classed as a compact executive car produced since 2005. It uses the GM/Fiat premium platform, shared with the likes of the Alfa Brera and Spider, and came in a commendable third place in the 2006 European Car of the Year awards. The 159 is still in production today and comes with a range of petrol and diesel engines in both 2WD and 4WD layouts. The diesels come in 1.9 8v, 1.9 16v, 2.0 16v and 2.4 20v litre variants and deliver power outputs of 120bhp, 150bhp, 170-bhp and 210bhp respectively. The engine on test here is the widely used, tried and tested, 1.9 JTDm 16v with 150bhp and 236lbft as standard. With a weight of 1490kgs the Alfa 159 is deemed a heavy vehicle in its class which reflects in the performance times as tested below. The stock figure for 0-60mph is acclaimed to be 8.9s however on our test device it only managed 11.9s, some 3 seconds off. This figure, however accurate it is, is merely for comparative purposes to show the difference once modified. The 1910cc 1.9 JTD multijet engine uses commonrail 2 technology with 1600 bar injectors, dual mass flywheel, electronic exhaust gas recirculation and a high spec Garrett VNT turbo. The end result is a smooth diesel engine which is a great base for tuning and high power modifications.

The 1.9 JTDm engine in the Alfa 159 runs the Bosch EDC16C39 engine management, the last and most advanced in the series before moving on to the EDC17 range. Once modified with our Stage 1 software the JTDm engine managed an enormous 209bhp and 322lbft torque giving it an impressive 109bhp & 168lbft per litre, a figure which very few can rival. The in gear performance was improved so much so that on the road it was notably quicker than the 2.4 JTDm with 210bhp as standard due to having a lighter engine and higher torque figure. The improvement on the 1.9 JTDm engine is not limited to certain aspects of the rev range, the increase in torque is so linear that in every gear above 1,500rpm the difference can be felt and as a result makes the 159 feel a lot more nimble than the 1490kgs unladen weight would suggest. With the 0-60mph time being reduced by 3.63 seconds and the 0-100mph by a staggering 17.71 seconds you can see that the best of the engine is once on the move in the mid range where performance is simply on tap.

The 1.9 JTDm engine is a massively flexible engine and comes in a variety of formats. The 16v unit starts at 120bhp (GM platforms) and goes right up to 170bhp with single turbo and 190bhp in twin turbo format. The engine itself we have tested above 250bhp with great reliability and success, with the right clutch and turbo setup the power gains on these engines is truly impressive. For those more cautioned drivers wishing to stick with factory tolerance, the 170bhp cloverleaf variants is simply a software upgrade and available on all 2006 1.9 JTDm variants.

Speed in MPH	0-30	0-40	0-50	0-60	0-70	0-80	0-90	0-100
Original time in secs	4.27	6.06	9.27	11.9	16.3	20.67	28.23	40.1
Modified time in secs	3.55	4.71	6.39	8.27	10.9	13.23	17.47	22.39
Improvement (s) in secs	-0.72	-1.35	-2.88	-3.63	-6.21	-7.44	-10.76	-17.71



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