

# VW Golf GTi Edition 30 226bhp

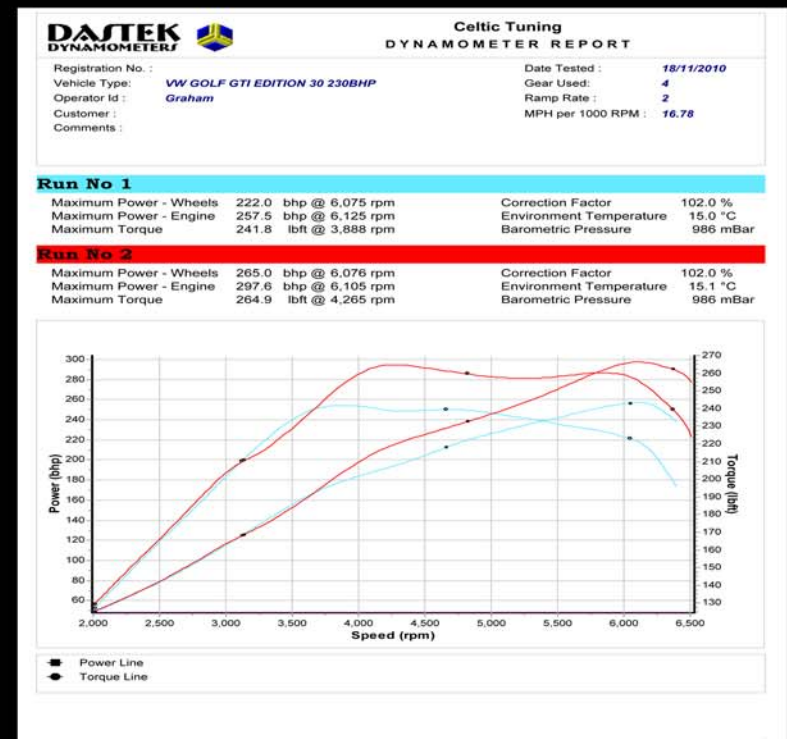


In 2005 VW released their direct injection petrol turbo engine known as the TFSi. Turbo fuel stratified injection (TFSi) denotes a type of forced-aspiration ("turbo") engine where the fuel is pressure-injected straight into the combustion chamber. FSI direct injection technology increases the torque and power of spark-ignition engines, making them as much as 15 percent more economical and reduces exhaust emissions. The step up in terms of power and refinement over its predecessor, the 1.8 20v Turbo, was so vast that it was the winner of the 1.8-2.0 litre category for four consecutive years in the 2005, 2006, 2007 and 2008 annual competition for International Engine of the Year. The 2.0 TFSi engine provides power outputs from 197bhp in the Golf GTi right up to 265bhp in the Audi S3 and Audi TTS. The unit on test here is the BYD engine with 226bhp and fitted to the VW Golf GTi Edition 30. The 226bhp engines and upwards have substantial differences to the base unit 197bhp in the stock GTI. They have stronger pistons and gudgeon pins, new rings, reinforced connecting rods, new bearings, reinforced cylinder block at the main bearing pedestals and cap, new lightweight aluminium-silicon alloy cylinder head for high temperature resistance and strength, adjusted exhaust camshaft timing, increased cross-section high-pressure injectors and 1.2 bars boost pressure K04 turbocharger with larger turbine and compression rotor.

This variant of the Edition 30 also comes with VW's highly acclaimed DSG system which enables gear changes in a few hundredths of a second. The Direct-Shift Gearbox, commonly abbreviated to DSG, is an electronically controlled multiple-shaft manual gearbox, in a transaxle design - without a conventional clutch pedal, and with full automatic, or semi-manual control. In 2003 it became the world's first dual clutch transmission in a series production car, fitted to the VW Golf R32 and later into the Audi TT 3.2. The benefit to the performance of the Edition 30 is impressive, with gear changes quicker than you can think, the up and down changes through the gear box has to be experienced to be believed.

As with a lot of VAG engines, on the dyno it produced well over standard figures, producing 257bhp and 241lbft it was a clear 31bhp and 20lbft more than claimed. On the road this felt evident, achieving the stock 0-60mph run in 7.19s and going on to do the 0-100mph in just 16.55s the Golf has real pace. Once modified the Edition 30 produced 297bhp and 265lbft torque which completely transformed the character of the car. The 0-60mph sprint came down to 6.26s and the 0-100mph in just 12.79s, times that would be even quicker should the Edition 30 have been able to maintain traction in 1st and 2nd gears. One figure which gives you an indication of just how quick this is, the stock Edition 30 hit 100mph in 452m (metres) whereas modified this came down to just 324m, some 128m sooner which equates to around a 30% shorter distance. Amending the DSG software can bring further gains to this engine, lifting the torque limiter, raising the engine RPM limited by the DSG and changing the shift times can make this even quicker on the road.

Speed in MPH	0-30	0-40	0-50	0-60	0-70	0-80	0-90	0-100
Original time in secs	2.88	4.41	5.70	7.19	9.00	10.95	13.69	16.55
Modified time in secs	2.63	4.16	5.08	6.26	7.59	9.00	10.81	12.79
Improvement (s) in secs	-0.25	-0.25	-0.62	-0.93	-1.41	-1.95	-2.88	-3.76



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