STOMSKI RACING

DigiDix™

DIGITAL DEGREE WHEEL CAM TIMING SYSTEM

A revolution in cam timing, STOMSKI RACING's new DigiDix™– Digital Degree Wheel- provides the most accurate, easy to use degree wheel ever. No more awkward setups, questionable readings, convoluted pointers, or imprecise measurements. With DigiDix™, simply bolt the sensor/adapter to the flywheel end of the crankshaft and secure the torsion arm. You are now ready to measure crank rotation to one tenth (.1) of one degree accuracy and repeatability. Setup time is less than one minute. DigiDix™ includes a 3 foot cable for easy reading anywhere on the engine and fits all 911 and GT3 engines. STOMSKI RACING– reinventing the wheel. Patent Pending.

Instructions

DigiDix™ works on all 911 engines by centering on the input shaft clearance hole on the flywheel end of the crankshaft. First make sure the clearance hole in the center of the crankshaft is clean (and with no pilot bearing) Lightly grease (or oil) the O-rings on the DigiDix™ adapter block and present to the crankshaft with the nipple inserted into the clearance hole of the crankshaft. (See Figure 1)

Figure 1

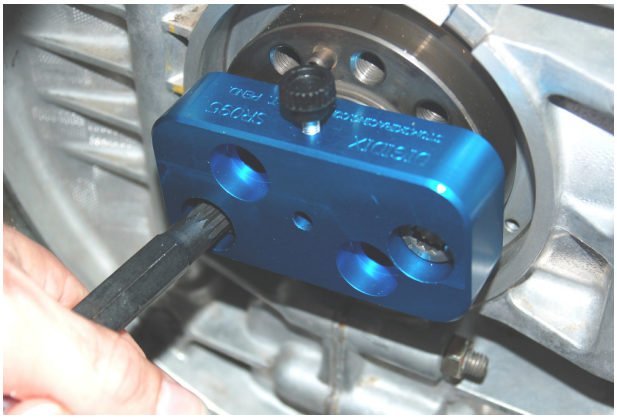

Figure 2

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The O-rings will ensure that the adapter centers itself on the centerline of the crankshaft. Depending on which crankshaft you are installing DigiDix™ on to (6 or 9 bolt), it will determine which hole pattern lines up for installation of two flywheel bolts. While securing the DigiDix™ Adapter Block to the crankshaft, ensure that the block is not cocked or misaligned- it should fit squarely to the crankshaft end, and you should alternately "walk" each bolt down to gradually secure the block. The flywheel bolts only need to be hand tightened- do not torque them. (See Figure 2)

With the DigiDix™ Adapter block in place, back the knob/thumb screw out enough to make sure the sensor hole is free to accept the shaft from the sensor. Keeping the sensor shaft oriented so as to ensure that the flat on the sensor shaft is aligned to accept the thumb screw in the block, slide the shaft into the place. (See Figure 3)

Figure 3

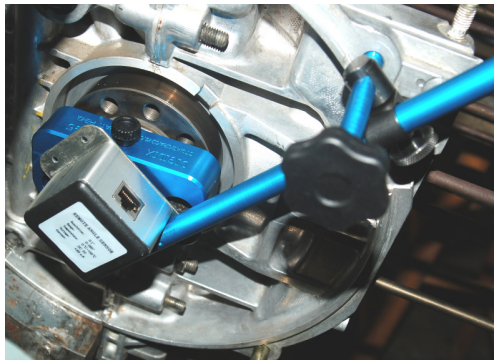

Figure 4

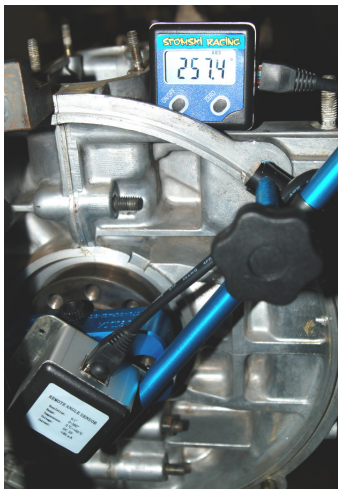

Figure 5

Lightly tighten the thumb screw to hold the sensor shaft in the adapter block and lightly pull back on the sensor to see that it is secure. Adjust the torsion arm, anchor stud, and swivel joint to secure the torsion arm into one of the bell-housing bolt holes of the engine case. While the swivel joint is loosened, slide the swivel joint along the torsion arm to position the anchor stud at a bolt hole. GENTLY align the arm and stud, being careful that the arm is kept at right angles to the sensor (and that the outer end of the torsion arm is NOT pulled away from the engine case, putting an awkward load on the sensor and/or sensor shaft).

By holding the swivel joint between your fingers, and pressing the thumb screw with your thumb, any load on the swivel joint should be relieved, allowing for easier adjustment. Once the stud is positioned, secure it in the bolt hole, and snug down the swivel joint, double checking that all parts are in alignment. (See Figure 4) The sensor itself does not have to be pressed flush against the adapter block. Turn the crankshaft over to ensure the block moves freely and that all parts are properly aligned. Insert one end of the cable into the sensor, the other end into the display unit, turn the unit on, and you are ready to find top dead center. (See Figure 5) Ignore the initial number that is shown on the display. Once you determine TDC, simply press the "zero" button to set TDC. After several minutes of inactivity the display will "time out" in order to conserve battery life, but simply pressing the on/off button will return the actual current reading (*even* if the engine has been rotated and the display is off).

SETTING TDC USING DigiDix™ AND A DEAD-STOP FIXTURE

With DigiDix™ in place and turned on, turn the engine over to approximately 10° BEFORE "anticipated" TDC. Using a dead-stop TDC indicator such as SR022 or SR023, dial the indicator shaft to contact the piston dome, then lock the shaft using the lock nut. Back the crankshaft up a bit (counter-clockwise) and slowly turn clockwise to "bump" up against the stop. Press and hold the ZERO button on the DigiDix™ display until the display clears and 0.0° displays. Slowly rotate the crankshaft counterclockwise approximately 340° until the piston dome once again contacts the dead-stop, note the reading on the DigiDix™ display. Subtract the number on the display from 360, divide the result by two (we will call this number "X"). Remove the dead-stop, and continue rotating (counter-clockwise) the crankshaft X degrees. Now ZERO DigiDix™ display once more- this is your pure/calculated TDC.