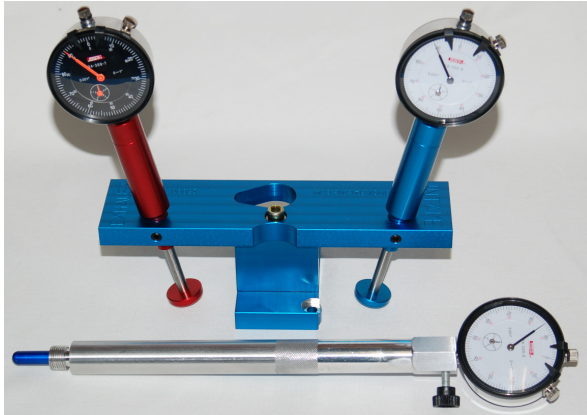


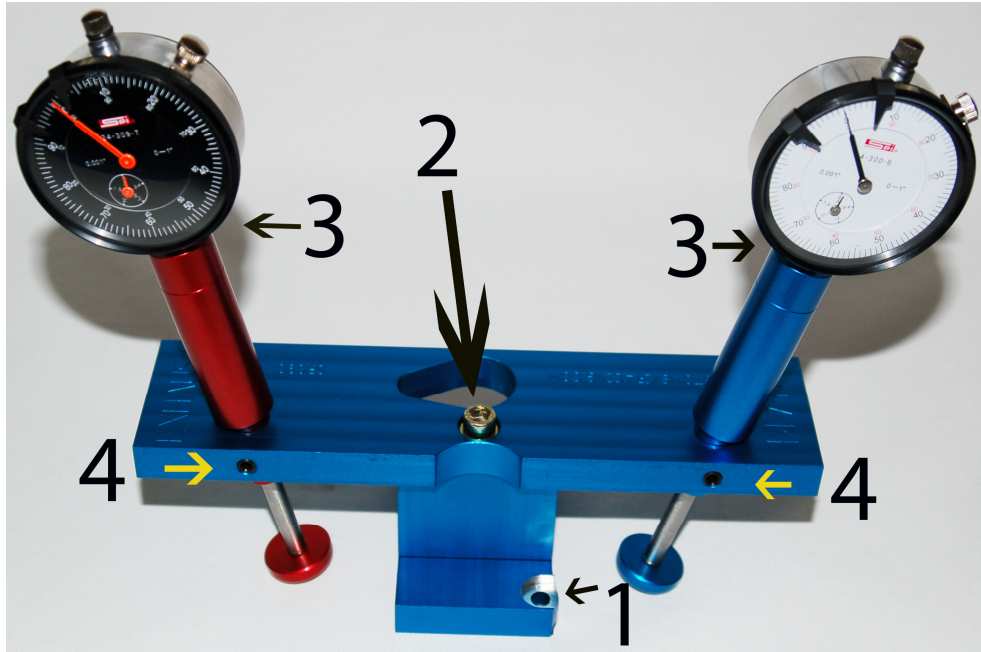
STOMSKI RACING



GT3 Cam Timing Apparatus/SR090

Whether you want to advance or retard cam timing, upgrade cams, or just be able to set with ABSOLUTE precision the cam timing on any of the GT3/GT2 engines, this is the most accurate tool to accomplish those tasks. No need to settle for the “close enough” or in the “ball park” settings accomplished by using the factory tools. STOMSKI RACING’s GT3 Cam Timing Apparatus provides for absolute accuracy, infinite adjustability, and superb flexibility for all cams and setups. Includes complete fixture with ASME/ANSI Calibration Certificated dial indicators and one (either 12mm or 14mm) TDC Indicators with Travel Gauge (SR092 or SR093). Storage case included.

Instructions



SR090 is comprised of a reversible bracket and two dial indicators. The bracket mounts to the cam housing on the GT3 engine and by way of travel indicators, cam lobe position is measured in relation to the position of the crank/piston (TDC) and thus the cams may be timed appropriately. Insofar as SR090 measures directly off of the cam lobes and NOT off of the lifter bucket, the readings taken are measured when the cam is at 180° past (or before) maximum opening pressure.

Using either the dead-stop method (SR022/SR023) or the live method (SR092/SR093), set #1 cylinder to TDC/overlap. Install the cam shafts in "rough" position (cam lobes for 1/2/3 installed so that the lobes of the intake and exhaust cams point toward each other and for 4/5/6 so that they point away from each other). Using a 5mm allen wrench, secure SR090 using the captive allen bolts (#1) to the cam housing over #1 cylinder so that the indicator feet ride on the cam lobes. SLOWLY "walk" the bolts down to insure that the base of the bracket stays aligned as you mount the apparatus. Once anchored, determine that all bolts, and knobs (1, 2, and 3) are snug, and that the travel indicators and feet move freely through their range of motion. DO NOT adjust the set screws (#4) on the bracket itself- these are held in place with Loctite.

(For illustration/instruction purposes, we will assume that the maximum opening pressure for the Intake cam to be 110° BTDC and 110° ATDC for Exhaust. Substitute specifications for your camshafts as appropriate. Moreover, for purposes of these instructions- and accuracy- we will use DigiDix™ instead of a standard degree wheel. You may use SR090 with a conventional degree wheel, keeping in mind that you are measuring cam position with SR090 when the cam is 180° out of phase, thus the position reflected by the conventional degree wheel will be different than you would expect if you were measuring off of the lifter bucket.)

With the engine set to #1 TDC/overlap, DigiDix™ zeroed, and SR090 in place, rotate the crankshaft until DigiDix™ reads exactly 250°. If you are VERY skilled, and/or VERY lucky, the indicator for #1 EXHAUST will now be in the middle of the dwell zone of its limit of travel. If not, adjust the camshaft position until it is.

Once #1 Exhaust is set, continue rotating the crankshaft so that DigiDix™ reads 360° then continue past to 110°. Once again, the indicator for #1 INTAKE should now be in the middle of the dwell zone of its limit of travel. If not, adjust the camshaft until it is.

Confirm all readings for #1 then prepare for timing #4 piston. Before removing SR090 from the cam housing, break free the pivot bolt (#2), and loosen it slightly. Slowly back out the 2 anchor bolts (#1)- being certain that the retaining clips that hold the anchor bolts to the base of the fixture remain in place next to the base. Once the bracket is removed from the cam housing, REVERSE the SR090 bracket on its base to prepare for the 4/5/6 cylinder bank. To reverse the bracket, back the pivot bolt out approximately ½ way, pull up on the horizontal bracket until it clears the base-upright, spin the bracket on the base (being careful not to smack the indicator feet as you rotate the fixture), "snap" the bracket back into place on the upright, and snug the pivot bolt in place.

Using a 5mm allen wrench, secure SR090 using the captive allen bolts (#1) to the cam housing over #4 cylinder so that the indicator feet ride on the cam lobes. SLOWLY "walk" the bolts down to insure that the base of the bracket stays aligned as you mount the apparatus. Once anchored, determine that all bolts, and knobs (1, 2, and 3) are snug, and that the travel indicators and feet move freely through their range of motion. As with 1/2/3 cylinder bank, at this point SR090 should be positioned so that the EXHAUST side of the SR090 (as indicated by the word "EXHAUST" scribed in the bracket, the black indicator, and the RED foot and RED indicator holder) is over the exhaust cam lobe. At this point you will likely want to loosen the thumb screws at the base of the dial indicators (#3) to turn the dial indicators so that they face the pulley end of the engine. With all hardware secure, Set #4 to TDC/overlap and time 4/5/6 cams as you did 1/2/3:

For #4 Exhaust, turn the crankshaft until DigiDix™ reads 250°, and confirm that the dial indicator for #4 EXHAUST is in the middle of the dwell zone of its limit of travel. Adjust camshaft as necessary. For #1 INTAKE, continue to turn the crankshaft over until DigiDix™ goes past 360° and then reads 110°- confirm that the dial indicator for #4 INTAKE is in the middle of the dwell zone of its limit of travel. Adjust the camshaft as necessary.