



MicroTech Rotary Engine Compression Tester

Congratulations on your purchase of the MicroTech Rotary Engine Compression tester and thank you for making MicroTech your manufacturer of choice.

At Microtech, a substantial amount of our time is spent working with the rotary engine. For 25 years our rotary customers have been winning races and breaking records.

We work alongside several of the world's leading rotary engine tuners and mechanics. The MicroTech Rotary Engine Compression Tester is a direct result of the feedback received from these guys. We believe this tool is a valuable addition to any rotary racer or enthusiast's toolbox.



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Preparing the compression tester for use

Before you begin, you will need to download the correct software and USB Driver to your laptop.

The MicroTech Rotary compression tester uses the “Handset Editor” software which can be downloaded for free from the technical/downloads section of our website www.microtechEFI.com or click on the direct link here <http://microtechEFI.com/download/HANDsetup.exe>.

The USB driver can be downloaded here http://microtechEFI.com/download/USB_DRIVER.exe.

The handset editor is compatible with all version windows software from Windows XP onwards.

Once the software is downloaded, use the autorun feature to install the software to the laptop.

IMPORTANT: You MUST download both the software and the USB driver for the compression tester to work. If you are already using the MicroTech USB laptop adapter for tuning our ECU’s, your laptop will already have the USB driver installed and you will not need to download it again.

IMPORTANT: You will more than likely have to configure the com port settings in the laptop to match those on the Microtech software. This can be done by clicking on the “properties” icon in the Microtech software and by accessing the device manager on your windows software.

Once the software and driver installation is complete, connect the USB cable to the laptop and click “connect system” to ensure the installation has been successful.

Connecting the Compression tester to the engine

- 1) Ensure the vehicle battery is fully charged
- 2) Start the engine and warm up to operating temperature
- 3) Turn off the engine and **DISCONNECT THE CRANK ANGLE SENSOR** to disable the ECU (very important)
- 4) Remove the trailing spark plugs only from the engine
- 5) Screw the brass adapter by hand into the spark plug hole on rotor #1 (do not overtighten)
- 6) Connect the pressure sensor to the brass adapter using the quick disconnect fitting
- 7) Ensure the pressure sensor is connected to the matching wiring loom and the USB cable is plugged into the laptop

You are now ready to do the compression test.



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Performing a compression test

With the laptop software connected, fully open the throttle & crank the engine for approx. 5-6 seconds.

When the compression tester receives a cranking signal, the compression results from each of the 3 rotor faces will be displayed in both text and graph form along with cranking RPM.

After performing the compression test on rotor #1, click "save" (this will save the data for rotor #1) then "reset" to clear the rotor #1 data from the screen & prepare the tester for rotor #2.

MAX COMPRESSION READING FOR EACH FACE OF THE ROTOR

LOWER LIMIT OF COMPRESSION @ XXXRPM IS THE LOWEST ACCEPTABLE COMPRESSION READING RECOMMENDED BY MAZDA FOR THAT PARTICULAR RPM

This is applicable for factory standard rotary engines using a factory starter motor and +12v electrical system. This guideline will NOT be accurate on modified engines with aftermarket starter motors or 16v electrical systems.

MAX CRANKING RPM

Clicking the RPM window will also act as a master reset. It clears all previous compression readings and unsaved file data.

SENSOR PSI DISPLAYED IN REAL TIME

RESET TESTER TO ZERO BEFORE STARTING A NEW COMPRESSION TEST

SAVE CURRENT COMPRESSION DATA BEFORE STARTING A NEW COMPRESSION TEST

OPEN PREVIOUSLY SAVED COMPRESSION TEST FILES FROM THE LAPTOP

GRAPH VIEW OF EACH COMPRESSION PULSE (PSI) AND CRANKING TIME (SECONDS)



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Repeat the same procedure for rotor #2

After completing the test on rotor #2, click "save as" to save the compression test to the laptop.

The "Ins.Notes" icon can be used to add notes to the files before they are saved for future reference.

Saved compression files can be accessed anytime using the "Open File" icon (when connected to the Handset Editor software) or via the windows software on the laptop.

There is no limit to the number of rotors that can be added to a saved compression file. The procedure above can be used when testing 3 rotor, 4 rotor and 6 rotor engines.

**ROTOR FACE INDICATOR
ILLUMINATES TO INDICATE
WHICH ROTOR FACE IS
BEING SAMPLED**

**COMPRESSION RESULTS
FROM PREVIOUS ROTOR**
These values only appear after you have
saved the first compression test data.

**HANDSET VIEW
NAVIGATE BY USING
KEYBOARD ARROW KEYS
OR CLICKING ON BLUE
FUNCTION BUTTONS**

**CRANKING RPM
DISPLAYED IN REAL TIME**
Will only display when cranking
engine

**PRESSING THE RED
SAVE BUTTON WILL
CONVERT THE
COMPRESSION TEST
DATA TO A TXT FILE
WHICH CAN THEN BE
SAVED TO THE LAPTOP**

**INSERT NOTES
BEFORE SAVING
COMPRESSION TEST**

**SAVE
COMPLETED
COMPRESSION
TEST TO LAPTOP**