

TEMPEST[®] excellence

Tempest AT5K[™] Automatic Spark Plug Resistance Tester

Think Green - Fly Clean - Misfires Cause Pollution







The Tempest® AT5K™ quickly and accurately checks spark plug resistors and quickly displays the results.

Note: The AT5K™ only checks resistance values. It does not replace, nor is it a substitute for, other tests required to determine a spark plugs condition.

To access the battery, remove the rear cover, see Figure 1.

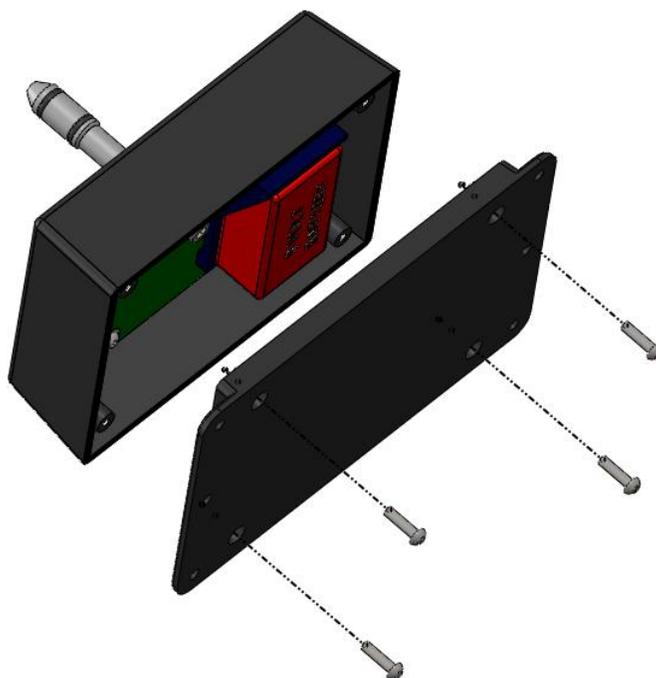


Figure 1

CHECKING SPARK PLUG RESISTANCE IS IMPORTANT:

Excessive resistance causes:

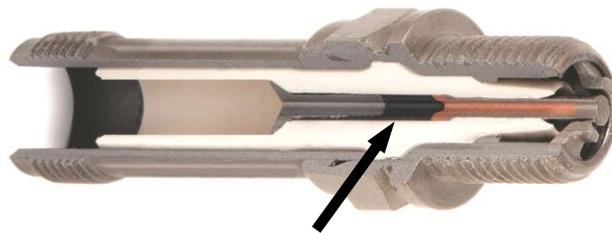
- Hard starting.
- Skipping, missing, excessive fuel consumption and pollution.
- Roughness in turbocharged engines.
- Roughness during lean of peak operations.
- Roughness at high altitudes.
- Spark plug fouling.
- Engine oil contamination from excessive carbon and unburned fuel entering the crankcase.
- Unnecessary electrical stress on ignition leads, contact points, capacitors and magnetos.
- Costly, unnecessary spark plug maintenance.

AT5K™ means: "At 5000 Ohms" change that plug!
Install **Tempest®** spark plugs with monolithic solid state resistors!

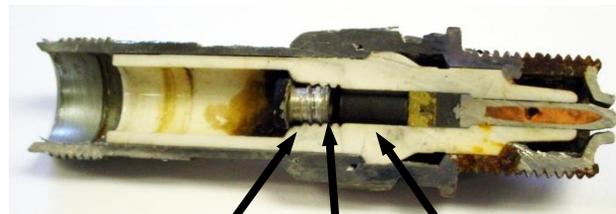
CHECK RESISTANCE PRIOR TO INSTALLATION:

New spark plugs without monolithic resistors may drift out of range even before being entered into service.

Military Specification MIL-S-7886, establishes specifications for aircraft spark plugs and directs that spark plug resistance should be measured at less than 10 volts.



Tempest® Solid-State "FIRED IN" MONOLITHIC RESISTOR



Aluminum Cap, Spring, Carbon Pile

Competitive Spark Plug - "spring/carbon pile" moving parts resistor

OPERATION:

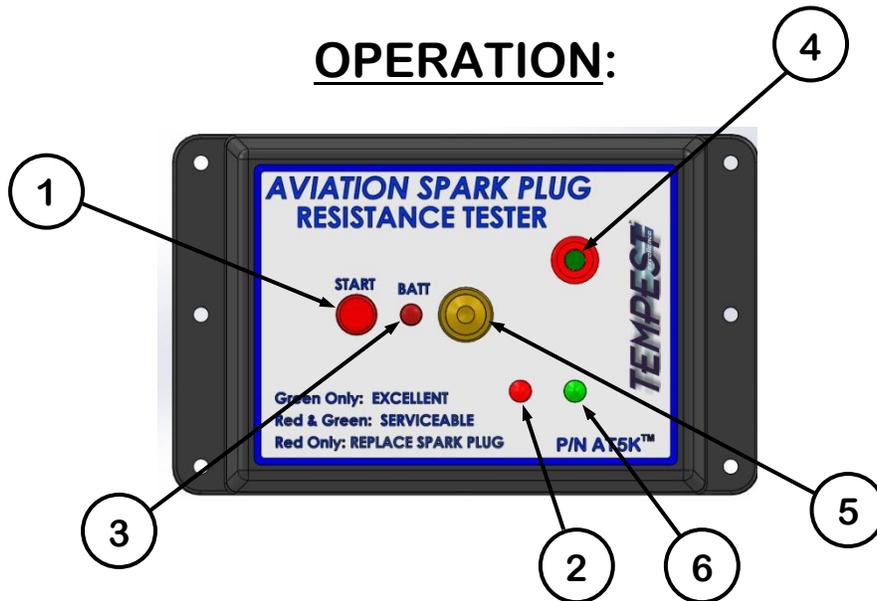


Figure 2

Press the red button (1), see Figure 2. The red test LED (2) will illuminate. Note: If the battery is low, LED (3) will flash brightly. The AT5K™ will automatically turn itself off.

Plug the lead into the socket (4). Touch the lead's end to the test post (5). The red LED (2) should extinguish and the green LED (6) should come on.

Clean the lead well of the spark plug to be tested and place it on the test post, see Figure 3.

Touch the test lead to the spark plug center electrode, see Figure 4.



Figure 3



Figure 4

Red LED Only:

- Make sure a good contact between the plug and test post exists. Check the plug again. If the red LED alone remains on, resistance is above ~ 5000 Ohms. Replace the spark plug with a TEMPEST® spark plug.

Red and Green LED's both on:

- Resistance in serviceable range --- less than ~5000 Ohms.

Green LED only:

- Resistance in new spark plug range --- less than ~4000 Ohms.

APPLICABILITY:

The AT5K™ works with all popular aviation spark plugs including TEMPEST® HIGH ENERGY™ electronic ignition spark plugs. It can also be used with unshielded spark plugs.

Auburn, AC, Autolite, Bendix, BG, Champion, TEMPEST®, Electroair UREM37-HE™ electronic ignition spark plug, Unison, Lodge, Red Seal, Spitfire, T-N-T Manufacturing, FYRAC, Chain-O-Spark, Rummell's Spark Plugs.

For Unshielded Spark Plugs:

Insert a second lead into the test post. Connect the lead to the spark plug wire terminal. Test the spark plug.

CALIBRATING THE AT5K™:

Use standard +/- 2% commercial resistors having the following values to check the AT5K™ response: 3.5k, 4.5k and 5.5k Ohms. Connect one end of a resistor to test post and the other to the test lead. The following should occur:

- 3.5k Ohm resistor = green LED only illuminated.
- 4.5k Ohm resistor = green and red LEDs illuminated.
- 5.5k Ohm resistor = red LED only illuminated.

CIVIL AERONAUTICS AUTHORITY TRAINING:

Use the information in this booklet to meet training requirements of your Civil Aeronautic Authority, where applicable, concerning use of the AT5K™.

GOOD PRACTICES:

- Disconnect the test lead(s) from the AT5K™ when not in use.
- Keep solvents, lacquer thinner, etc. away from the AT5K™.
- Don't submerge the AT5K™ in water or liquids.



"Taking Aviation by Storm"

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