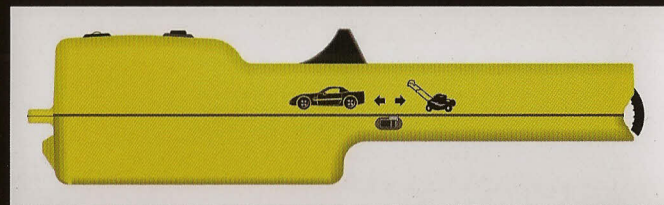


## PRACTICAL AND SAFE

The **CHECKSPARK** engine ignition analyzer is a highly accurate diagnostic sensor that uses micro-circuit technology to troubleshoot why your car or gas powered work tools won't start

## EASY AND CONVENIENT



## CHECK SPARK

**NEW**

Engine Ignition Analyzer

ENGINE NOT STARTING...?

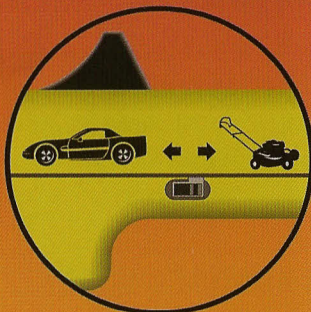


...COULD BE  
LACK OF SPARK

CheckSpark SAFELY tests for proper spark, shorted / fouled plugs and open or broken spark plug wires

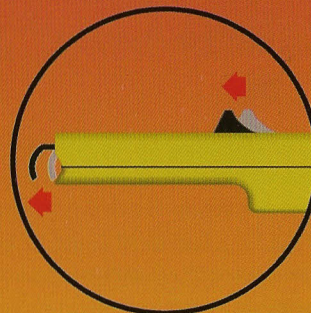
### UNIVERSAL USE

- ★ Vehicles and Power Tools



### ERGONOMIC DESIGN

- ★ Exclusive gripper hook and test memory mode, allows you to easily work alone



- ★ Reset button allows an additional test without the need to remove CHECKSPARK from the plug wire under test



### EASY ONE PERSON OPERATION

- ★ Clip and Crank Design

Self attaching clip and innovative spark memory circuit make **CHECKSPARK** easy to use by just one person, great for troubleshooting an engine alone

- ★ Auto On

Simply clip the **CHECKSPARK** tester on the spark plug wire and briefly crank the engine

- ★ Auto Off

Removing **CHECKSPARK** from the plug wire automatically turns tester off

### INNOVATIVE TECHNOLOGY

- ★ Simply connect the **CHECKSPARK** tester to the plug wire of non-running engine and firmly pull recoil starter or energize electric start long enough to turn engine over several times



### TROUBLESHOOTING CHART

- ★ LED's on the **CHECKSPARK** tester light to accurately detect condition of the ignition system

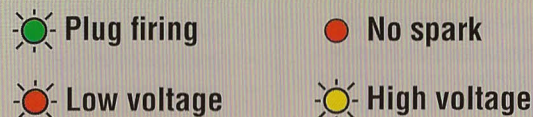
LED	What's Happening	Why	What to Do
	Plug firing	Spark OK	Check or change fuel Check choke setting
	No spark	Bad ignition	Check engine kill switch Contact engine mfr
	Low voltage	Plug short or flooded engine	Change spark plug or Wait on flooded engine
	High voltage	Bad spark plug or broken wire	Change spark plug or Check spark plug wire



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### SIMPLE, SAFE, DIAGNOSTIC ANALYSIS

- ★ Clip on plug wire and crank engine
- ★ One of three LEDs will light indicating spark condition



# TESTS ALL GAS ENGINES

## VEHICLES

CARS • TRUCKS • WATERCRAFT • MOTORCYCLE • ATV



## SMALL GAS POWERED ENGINES

LAWN MOWER • WEDEATER • CHAINSAW • EDGER •  
SNOW BLOWER • PRESSURE WASHER • POWER TILLER •  
LEAF BLOWER • GENERATOR • POWER TRIMMER •  
OUTBOARD MOTOR • GO CART / MOPED •  
ANY SMALL GAS POWERED TOOL!



### Product Specifications

- One AAA 1.5 volt alkaline battery (included)
- Operating Temp 0°F to 130°F (-18°C to 55°C)

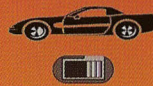
# USER GUIDE

MODEL CS-2020

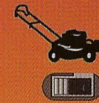


## USING CHECKSPARK™

1. **IMPORTANT** - For correct CHECKSPARK operation, always set engine-type slide switch to the proper engine type being tested



For Vehicles



For Small Gas Engines

2. Connect CHECKSPARK to plug wire of a non-running engine (Fig. 1)
3. Push gripper lever forward to open plug wire hook
4. Place open gripper hook on plug wire and release gripper lever
5. Red LED lit indicating unit is ready for test
6. Disconnecting CHECKSPARK from plug wire will reset the internal circuit
7. CHECKSPARK may also be reset (if a second test is desired) by momentarily pressing the reset button without the need to remove the tester from the plug wire (see Fig. 2)



Fig. 1



Fig. 2

## ELECTRONIC IGNITION ENGINES



1. Insure engine is ready for starting (see owners manual if necessary)
2. Energize electric start only long enough to turn engine over several times, **if engine starts turn off engine**
3. Observe LED status on the CHECKSPARK tester (see Fig. 2)

## PULL START ENGINES



1. Insure engine is ready for starting (see owners manual if necessary)
2. Firmly pull the recoil starter one time, **if engine starts turn off engine**
3. Observe LED status on the CHECKSPARK tester (see Fig. 2)

# DIAGNOSTIC GUIDE



## AFTER ATTEMPTING TO START ENGINE

LED on CHECKSPARK tester will now show condition of the spark (see Fig. 2)

- OK** – **GREEN (flashing)** Proper voltage, ignition is OK
- HIGH** – **YELLOW (flashing)** High voltage (see chart for possible causes)
- LOW** – **RED (not flashing)** No voltage (see chart for possible causes)
- LOW** – **RED (flashing)** Low voltage (see chart for possible causes)

## DIAGNOSTIC CHART

LED STATUS LIGHTS

<p> <b>Flashing GREEN (OK)</b></p> <ul style="list-style-type: none"> <li>• Spark voltage is OK</li> <li>• Compression is good</li> <li>• No start problem could be</li> <li>• Lack of fuel, bad fuel, improper choke setting, defective carburetor or fuel injector</li> </ul>	<p> <b>Solid RED (LOW)</b></p> <ul style="list-style-type: none"> <li>• No spark detected</li> <li>• Engine kill switch not in run position</li> <li>• Defective points (mechanical ignition)</li> <li>• Defective trigger switch (electronic ignition)</li> <li>• Defective spark coil</li> <li>• No primary voltage at coil (electric start engines)</li> <li>• Open plug wire at coil output</li> </ul>
<p> <b>Flashing YELLOW (HIGH)</b></p> <ul style="list-style-type: none"> <li>• Spark voltage is too high</li> <li>• Broken spark plug</li> <li>• Internal resistance of plug too high (resistor type plug)</li> <li>• Plug wire not properly connected/seated on spark plug</li> <li>• Plug wire resistance too high (resistor type plug wire)</li> <li>• Broken or open plug wire</li> <li>• Improper spark plug gap</li> <li>• Check slide switch setting - <b>CHECKSPARK may flash yellow if slide switch not on correct engine type setting</b></li> </ul>	<p> <b>Flashing RED (LOW)</b></p> <ul style="list-style-type: none"> <li>• Spark voltage too low</li> <li>• Flooded engine</li> <li>• Shorted plug</li> <li>• Improper plug gap</li> <li>• Plug wire shorted or arcing to chassis</li> <li>• Defective ignition coil</li> <li>• Low compression</li> </ul>