



# HUILA



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## SPARK PLUG

# ANALYSIS

Tech Tips:  
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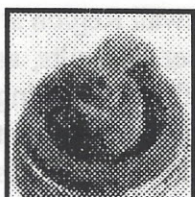


The correct diagnosis of the appearance of a spark plug can be an effective method for determining the proper plug heat range, general condition, fuel mixture, or component failure within an engine. Deleterious symptoms revealed by the spark plugs can lead to disastrous results if the problems are not immediately corrected. Early detection of a simple problem can save you a great deal of time and money. Following is a *quick reference* photo gallery which can help you analyze spark plug, and engine conditions



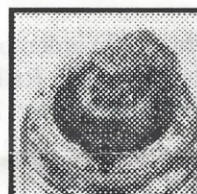
### NORMAL

Appearance: light gray or tan deposits, and slight electrode erosion.



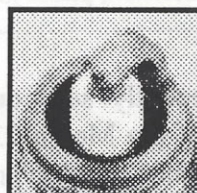
### CARBON FOULING

Appearance: dry, soft black carbon on the insulator and electrode. Results: poor starting, misfiring, or faulty acceleration. Possible causes: incorrect fuel mixture (over-rich), retarded ignition timing, worn ignition leads, or plug heat range too cold.



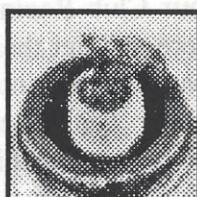
### OIL FOULING

Appearance: wet, oily black deposits on the insulator and electrodes. Results: poor starting or misfiring. Possible causes: worn piston rings, cylinders or valve guides; new or recently overhauled engines.



### OVER HEATING

Appearance: An extremely white insulator with small black deposits, and premature electrode erosion. Results: loss of power at high speeds or heavy loads. Possible causes: plug insufficiently tightened, engine insufficiently cooled, ignition timing too advanced, plug heat range too hot, or severe detonation.



### PRE-IGNITION

Appearance: a melted or burned center, and/or ground electrode, blistered insulator, and aluminum or other metallic deposits on insulator. Results: loss of power which causes engine damage. Possible cause: pre-ignition takes place when combustion begins before the timed spark occurs.