TECHNICAL BULLETIN

Customer Support

CHAMPION CH31921 IGNITER

The CH31921 igniter is a high voltage igniter used in Honeywell's 331-600, 331-400, and 131-9A series engines. A semiconductive coated insulator bridges the electrodes and augments function of the igniter, if exposed to stressful lighting conditions.

CLEANING.

(1) Clean external surfaces of igniter with a cotton swab moistened with isopropyl alcohol. The firing end of the igniter, between the tip of the center electrode and the metal shell, will usually not require cleaning. Carbon buildup in the spark gap area is not an indication of a defective igniter. If the igniter passes spark testing, the igniter is serviceable.

NOTE: DO NOT TOUCH SURFACE DEPOSITS IN THE GAP AREA. These deposits assist in the proper operation of the igniter.

(2) Clean insulator in terminal well with a cotton swab moistened with isopropyl alcohol.

(3) The terminal contact usually will not need to be cleaned. If it is necessary to clean contact, remove all heavy dirt or carbon-like deposits. If contact pitting is visible, lightly polish surface of contact with 600 grit sandpaper or Emery cloth. Avoid over polishing to prevent changing the angle or dimensions of the contact. Care must be taken to not damage insulator. After using sandpaper or Emery cloth, be sure to remove all grit and loosened material. If excessive contact pitting is present due to arcing impingement, replace with a new igniter and observe for similar pitting on ignition lead contact. If present, replace with new ignition lead.

(4) Ensure that solvents and grit from sandpaper or Emery cloth do not enter internal parts of igniter through space between contact and insulator, or between insulator and metal shell.

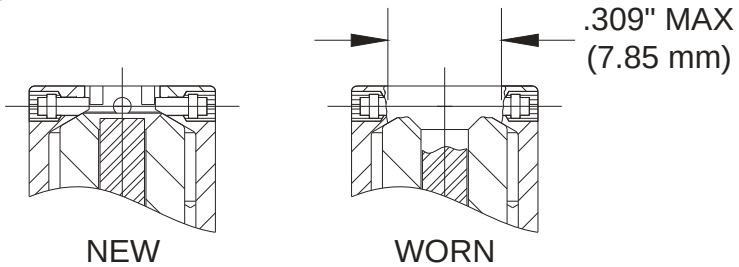
INSPECTION.

(1) Visually check igniter for mechanical damage. Reject igniter if it shows impact damage or if the connector well or firing end insulator is cracked or loose.

(2) Check firing end shell for chafing or fretting wear. This wear is not to exceed .015" (0.38 mm) If the wear is more than one-half the circumference of the shell, reject.

(3) Reject if shell body is swollen or distorted.

(4) Check igniter for electrical erosion. If erosion equals or exceeds this measurement, reject.



TESTING.

(1) Spark test. Test at normal open air pressure using standard engine ignition unit, including the shielded lead and terminal fittings.

(2) Connect ignition unit to the igniter.

(3) Switch “ON” the, allow the igniter to fire consistently for 15 seconds. (If misfiring or irregularity in spark occurs, reject).

(4) Turn “OFF” ignition unit.

WARNING: THE OUTPUT OF THIS IGNITION SYSTEM IS SUFFICIENT ENOUGH TO CAUSE A LETHAL ELECTRICAL SHOCK. DO NOT TOUCH ANY EXPOSED OR LIVE PORTION. ALWAYS DISCONNECT LEADS FROM INPUT POWER SOURCE AND WAIT AT LEAST ONE (1) MINUTE TO PERMIT STORED ENERGY TO DISSIPATE BEFORE WORKING WITH IGNITION.

(5) Wait at least one (1) minute to elapse; disconnect igniter from ignition unit.