



Aviation Technical Bulletin

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CHAMPION CH31876 IGNITER

The CH31876 igniter is a high voltage series igniter, used in the Williams/Rolls Royce FJ44 engine. A semi-conductor material bridges the electrodes and is required for proper function of ignition. Additionally, this igniter has a unique spherical pivot point to allow for movement.

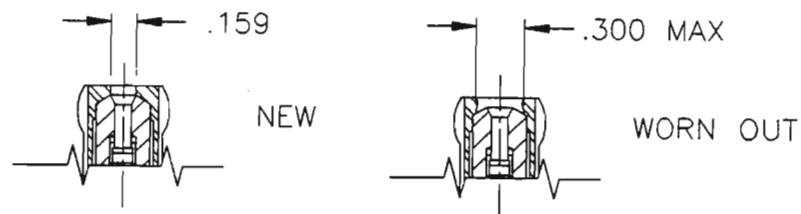
CLEANING

1. Wipe combustion deposits from exterior with a lint-free cloth.
2. **DO NOT DISTURB THE COMBUSTION DEPOSITS IN THE GAP AREA.** Note: If gap area deposits must be removed for closer inspection, remove deposits with a wooden scraper. **DO NOT TOUCH THE SEMI-CONDUCTOR SURFACE DEPOSITS** in the gap area; they aid plug operation.
3. Terminal well may be cleaned with a felt swab saturated in mineral spirits, methyl, wood or methanol alcohol.

INSPECTION

1. Visually check for mechanical damage. Reject 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 deep. 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 plug for electrical erosion. If erosion equals or exceeds this measurement, reject.

SEE ILLUSTRATION:



5. Check spherical pivot to assure proper movement. If binding is apparent, reject.

TESTING

1. Spark test. Test at normal open air pressure using the standard engine ignition unit, including the shielded lead and terminal fittings.
2. Connect the ignition unit to the igniter.
3. Clamp the igniter with the firing end up.
4. Switch on the ignition unit. Wait 30 seconds, then test fire. Allow the igniter to fire consistently for 15 seconds. (If misfiring or irregularity in sparking occurs, reject).
5. Turn off the ignition unit.

WARNING: THE OUTPUT OF THIS IGNITION SYSTEM IS SUFFICIENT 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 MINUTE TO PERMIT STORED ENERGY TO DISSIPATE BEFORE WORKING WITH IGNITION UNIT.

6. Wait for at least one minute to elapse; disconnect igniter from ignition unit, then unclamp the igniter.

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