

TECHNICAL BULLETIN



Customer
Support

SUBJECT: Ignition - Distribution - Igniter CH34739 Cleaning, Inspection, Testing

ATA SYSTEM: 74-20

T.B. NUMBER: T.B.CH34739-74-20-03-001

DESCRIPTION.

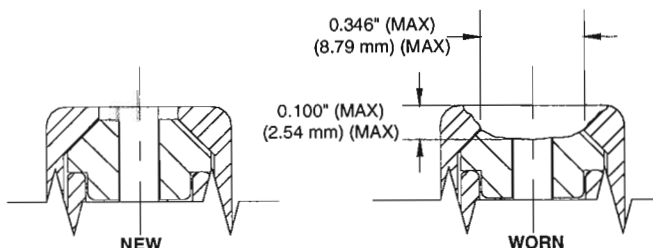
The CH34739 igniter plug is a surface gap igniter for Rolls-Royce RB199 engines. It consists of an input terminal contact, retained insulator, installation flange gasket, and spark gap. A silicon carbide semiconductor bridges the spark gap area, allowing the igniter to spark at relatively low voltages. Threads are provided on the outer body for attachment to the engine and ignition lead. The insulator is made of aluminum oxide ceramic. This material has excellent dielectric characteristics which can withstand high temperatures and resists cracking.

CLEANING.

- (1) Wipe combustion deposit from exterior with a lint-free cloth.
- (2) DO NOT DISTURB THE COMBUSTION DEPOSITS IN THE GAP AREA.
- (3) The terminal well may only be cleaned with a felt swab saturated with isopropyl alcohol, using caution not to damage the terminal button.

INSPECTION.

- (1) Visually check igniter for mechanical damage. Reject igniter for the following conditions: signs of impact damage, connector well insulator or firing end semiconductor is cracked or loose, terminal button exhibits heavy erosion or pitting.
- (2) Check firing end shell for chafing or fretting wear. This wear is not to exceed .015" (0.38 mm) for wear more than one-half the circumference of the shell.
- (3) Reject if shell body is swollen or distorted.
- (4) Check igniter plug for spark erosion. Use calipers to determine if ground electrode wear exceeds 0.346" (8.79 mm) maximum. Reject igniter if measurement is greater than 0.346". Measure depth of semiconductor and center electrode from the tip face. Reject if either is greater than 0.100" (2.54 mm).



TESTING.

- (1) Spark test at normal open air pressure using standard engine ignition unit, including lead.
- (2) Connect ignition unit and lead to igniter.
- (3) Clamp igniter with firing end in the upward position. Apply one (1) drop of jet fuel to the tip.
- (4) Switch "ON" ignition unit. Test fire igniter for 15 seconds. If misfiring or irregularity in spark occurs, discard igniter.
- (5) 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.

- (6) Wait at least one (1) minute for stored energy to dissipate. Disconnect igniter from ignition lead and unclamp igniter.

