

# EGT

## EXHAUST GAS TEMP

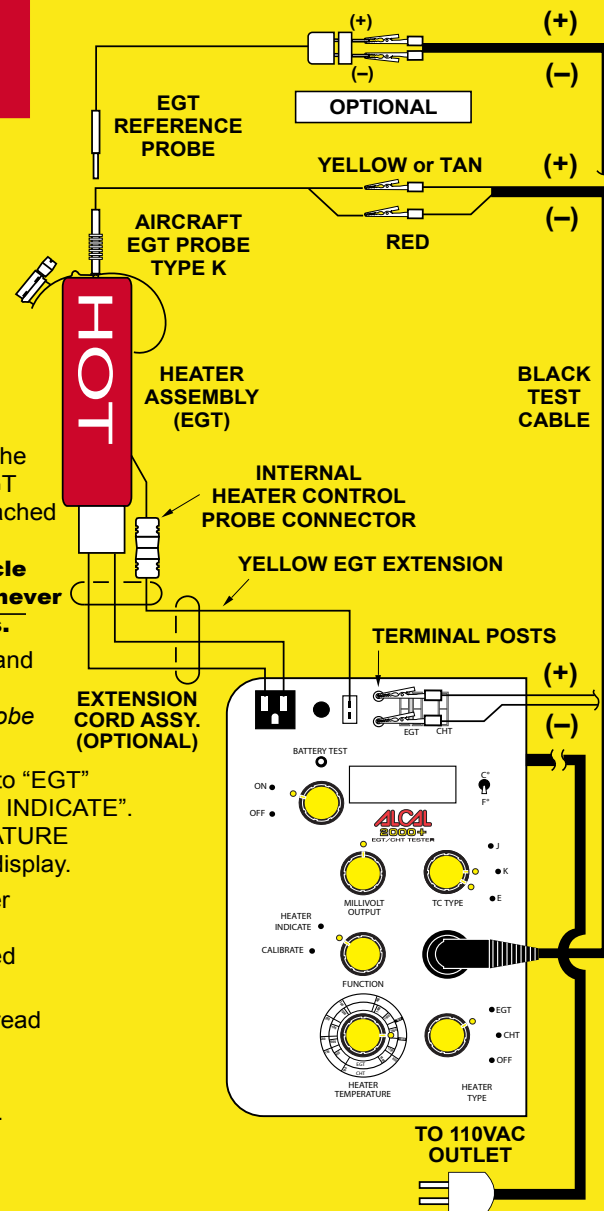
TYPE K

TYPE E

### PROBE TEST PROCEDURE

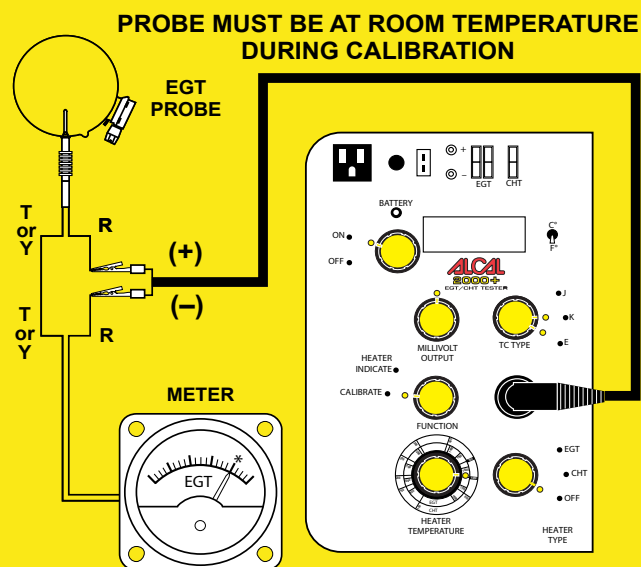
1. Plug **ALCAL**® into 110VAC outlet.
2. Plug EGT heater into 110VAC receptacle on unit and plug the heater thermocouple into "CU" receptacle. If testing entire EGT System while on aircraft, use 110VAC extension cord and attached yellow extension lead and refer to the methods used for CHT.
- CAUTION: Never plug heater into any 110VAC receptacle without connecting internal heater thermocouple and never place heater in close proximity to flammable materials.**
3. Attach black test cable connector to circular inlet on panel and attach alligator clips to terminal posts as shown.  
*OPTIONAL* For greater accuracy attach clips to reference probe as shown for optimal temperature measurement.
4. Turn **ALCAL**® power switch "ON". Place "HEATER TYPE" to "EGT" position, TC TYPE to "K" and FUNCTION switch to "HEATER INDICATE". Watch for heater light to come on. Adjust HEATER TEMPERATURE to desired temp. and monitor temperature rise with **ALCAL**® display.
5. When temperature stabilizes to desired temperature (heater light flashes) remove optional reference probe if installed and fully insert probe to be tested. Select type of probe to be tested with TC TYPE switch, either "E" or "K".
6. Reconnect test leads to probe being tested as shown and read temperature after it stabilizes.
7. Compare temps noted when test lead clips are on terminal posts and then when clips are attached to probe being tested.  
*OPTIONAL: Compare temps between terminals of reference probe removed and probe tested.*

BLACK TEST CABLE CLIPS MUST BE CONNECTED FOR CORRECT READING ON DISPLAY



### METER CALIBRATION PROCEDURE

1. Turn **ALCAL**® power switch to "ON" and FUNCTION switch to "CALIBRATE".
2. Adjust TC TYPE knob to "K" or "E" according to type of system being tested:  
Type K - Chromel Yellow (+) Y  
Alumel Red (-) R  
Type E - Chromel Tan (+) T  
Constantan Red (-) R
3. Disconnect connection between probe and lead and attach test lead clips as shown. NOTE: Lead and probe must be included in test loop to induce the correct amount of resistance for proper calibration.
4. Adjust "MILLIVOLT OUTPUT" knob to desired meter reading and read **ALCAL**® display. \*Asterisk represents 1600° F factory calibration for most front adjust meters.
5. Adjust aircraft meter to match **ALCAL**® display.



# CHT

## CYLINDER HEAD TEMP

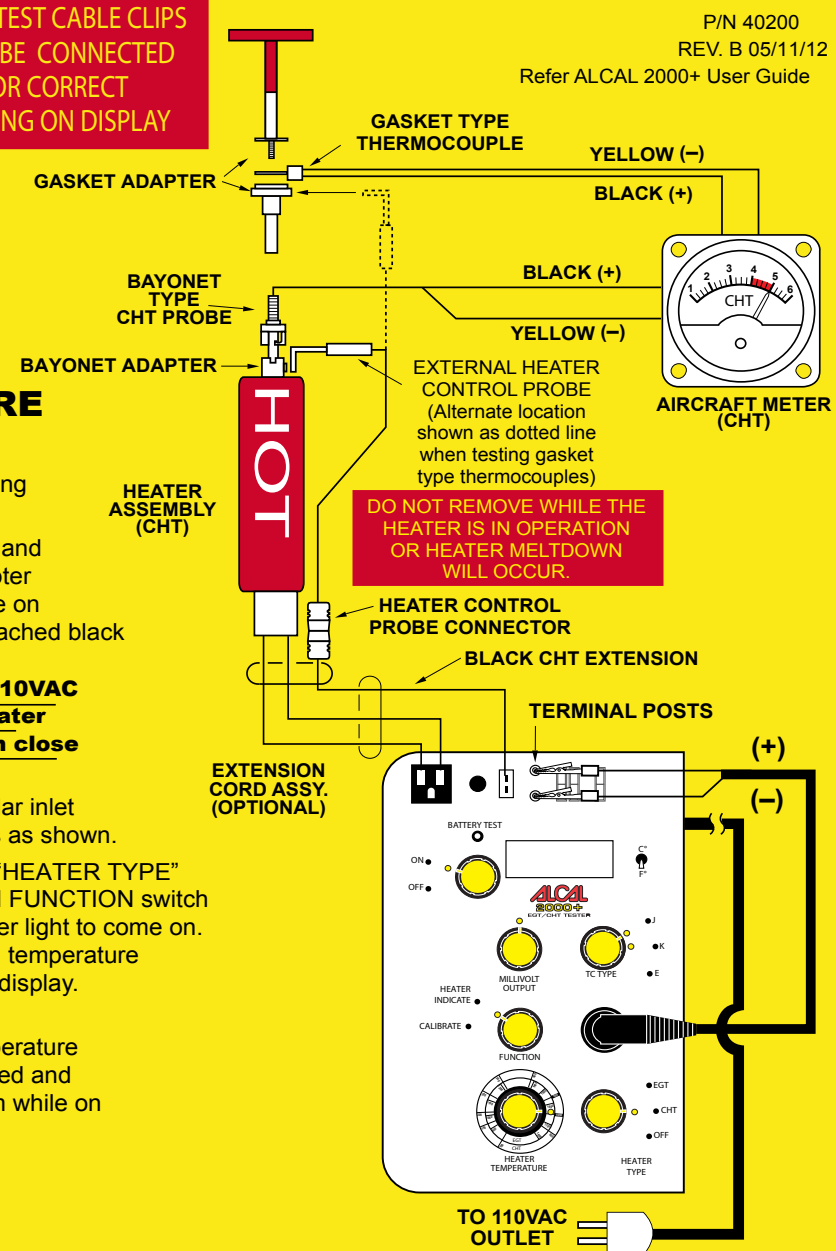
TYPE J

TYPE K

### PROBE TEST PROCEDURE

1. Plug **ALCAL**® into 110VAC outlet.
2. Insert probe to be tested and corresponding adapter into CHT heater.
3. Plug CHT heater into 110VAC receptacle and plug heater control probe into heater or adapter as shown. If testing entire CHT system while on aircraft, use 110VAC extension cord and attached black extension lead.
- CAUTION: Never plug heater into any 110VAC receptacle without connecting CHT heater control probe and never place heater in close proximity to flammable materials.**
4. Attach black test cable connector to circular inlet on panel and alligator clips to terminal posts as shown.
5. Turn **ALCAL**® power switch "ON". Place "HEATER TYPE" to "CHT" position, TC Type to "J" or "K", and FUNCTION switch to "HEATER INDICATE" and watch for heater light to come on. Adjust HEATER TEMPERATURE to desired temperature and monitor temperature rise with **ALCAL**® display.
6. When temperature stabilizes to desired temperature (heater light flashes) note temperature and move test lead clips to probe being tested and note difference. If testing entire CHT System while on aircraft then recalibrate the meter to match **ALCAL**® display.

BLACK TEST CABLE CLIPS MUST BE CONNECTED FOR CORRECT READING ON DISPLAY



P/N 40200  
REV. B 05/11/12  
Refer ALCAL 2000+ User Guide

### METER CALIBRATION PROCEDURE

1. Turn **ALCAL**® power switch to "ON" and FUNCTION switch to "CALIBRATE".
2. Adjust TC Type to "J".  
Type J - Iron Black (+) B  
Constantan Yellow (-) Y
3. Disconnect connection between probe and lead and attach test lead clips as shown. NOTE: Lead and probe must be included in test loop to induce the correct amount of resistance for proper calibration
4. Adjust "MILLIVOLT OUTPUT" knob to desired Meter reading and read **ALCAL**® display.
5. Adjust aircraft meter to match **ALCAL**® display.

