PRO III - PROBE BASED VERIFICATION CHECK LIST

Verification CL.doc 8/28 rev1
Paper color Canary

Use this checklist to verify the AOA is loaded with valid calibration data for your aircraft. Some AOAs are shipped with specific aircraft type calibration data pre-installed and some are not requiring manual calibration. Whether the calibration data was supplied by us or created by you, you must confirm that the data is correct for your aircraft. If not, re-calibrate.

The validity and accuracy of the AOA is dependent primarily on the calibration data used, your port locations and the accuracy of your pitot/static system. Do not use the AOA for flight purposes until the following verification has been completed. In the absence of manufacturer's recommendations use this checklist to determine a high AOA warning. All speeds taken in smooth air and 1 "G" flight.

POST INSTALLATION PRE FLIGHT

Blow into GREEN tube at CPU---- Air exits Lower AOA port
Blow into RED tube at CPU---------- Air exits Pitot AOA port
Flaps down ---------- verify flap switch contacts closed*
AIRCRAFT LOG ---------- UPDATED
AIRCRAFT CHECKLISTS ---------- UPDATED
ANNUAL CONDITION CHECK LIST ---------- UPDATED

HANGAR VERIFICATION

Aircraft Location ---------- Hangar
Gear Switch ---------- Down
Flaps ---------- Up
AOA Power ---------- On
After short delay
RED BUTTON ---------- PUSH/RELEASE
---------- Verify Audio "AOA PASS"
BLACK BUTTON ---------- PUSH/RELEASE
RED BUTTON ---------- PUSH/RELEASE
---------- Verify Display is dimmed
After short delay
FLAPS ---------- Position to Down
Verify Audio ---------- no errors and "FLAPS"
AOA Power ---------- Off

"Angle Angle Push" Audio Warning Verification

AIRCRAFT LOCATION --------SAFE ALTITUDE
Gross Weight ----------LOW
AOA Power On ----------ERRORS 11, 12, & 33
FLAPS/GEAR ----------UP
COMPUTE V_{w1} ----------Vs_1 x 1.13 = _____
COMPUTE V_{w2} ----------V_{APP1} x .85 = _____
In a descent, slow the aircraft till onset of "Angle Angle Push" and note the IAS. --- Unless the manufacturer instructs otherwise, the onset IAS must be greater than V_{w1}. Assuming V_{W2} is greater than V_{W1}, the onset shall be less than V_{w2}. If not a re-calibration must be performed.

FLAPS/GEAR ---------- DOWN
COMPUTE V_{w3} ---------- Vso x 1.13 = _____
COMPUTE V_{w4} ----------V_{APP0} x .85 = _____
In a descent, slow the aircraft till onset of "Angle Angle Push" and note the IAS. Unless the manufacturer instructs otherwise, the IAS must be greater than V_{w3}. Assuming V_{W4} is greater than V_{W3}, the onset shall be less than V_{w4}. If not a re-calibration must be performed.

For experimental aircraft without Part 23 certifiable stall characteristics or stability, the larger warning margins are desirable.

Mid Range verification

AIRCRAFT LOCATION --------SAFE ALTITUDE
FLAPS/GEAR ----------UP
COMPUTE V_{PERF1} ---------- Vs_1 x 1.4 = _____
In smooth air, slow the aircraft till onset of first yellow LED or bar. If the IAS is greater than V_{PERF1} proceed. If not a re-calibration must be performed.

FLAPS/GEAR ---------- DOWN
COMPUTE V_{PERF2} ----------Vso x 1.4 = _____
In smooth air, slow the aircraft till onset of first yellow LED or yellow bar. If the IAS is greater than V_{PERF2} proceed. If not a re-calibration must be performed.

Congratulations, your AOA checks OK.

Abbreviations:

V_{PERF} ---------- Performance airspeed
Vso ----------Stalling speed flaps down
Vs_1 ---------- Stalling speed flaps up
V_{w1}, V_{w2}, V_{w3}, V_{w4} ----------AOA Warning limit speeds
V_{APP0} ----------recommended approach speed flaps down
V_{APP1} ---------- recommended approach speed flaps up

* Use a resistance meter to verify that the flap switch contacts are closed. See service instruction SI0201 for exceptions.