OLYMPUS 201/301 SERIES

SECTION 4

Fuel System Servicing

1. Bleeding the Fuel System

It is essential that the fuel system is bled under the following circumstances:-

(i) Before starting after engine installation.

(ii) When de-inhibiting the engine.

(iii) After any part of the system has been removed.

(iv) When L.P. cocks have been closed and engine is still rotating.

(v) Following complete draining and subsequent filling of aircraft fuel tanks.

Method

(a) L.P. Fuel Cock 'On'.

(b) Turn tank booster pump 'On'.

(c) Ensure throttle lever in H.P. cock "SHUT" position.

(d) Bleed L.P. fuel filter using suitable hose with bubble free fuel issues.

(e) Remove hand turning gear covers and fit keys.

(f) Bleed L.P. and H.P. compressor driven fuel pumps from remote bleed valves. Rotate both L.P. and H.P. compressors during this operation.

(g) Bleed rate reset valves from two bleed points.

(h) Bleed the fuel flask on the combustor at the bleed point on the rear bulkhead.

(j) Lock all bleed valves.

(k) Switch 'OFF' booster pumps.

(l) Replace gear covers.

(m) If instability of the engine is experienced during any subsequent ground run, bleed the fuel governors whilst the engine is running at idling R.P.M.

2. Fuel Pump Governor Adjustment

The L.P. Fuel pump governor acts as the 'CRUISE' and 'TAKE OFF' datum governor on this engine. The governor on the H.P. fuel pump is for emergency only and must not be adjusted. Adjustments to the L.P. fuel pump governor may be carried out.

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(i) On a newly-installed engine.

(ii) When the take-off setting is low or high.

(iii) When a replacement fuel system is fitted.

(iv) When the cruise setting has been disturbed.

Method

(a) Drain door tanks, open and secure engine bay doors.

(b) Ensure that 'CRUISE' adjustments are carried out first.

Cruise

(c) Push Hexagonal shaped adjuster in an upward direction and rotate it clockwise to increase. One whole turn equals 25 rpm approx. (approx. 0.4% rpm). LIMITER OUT

(d) Pull the adjustor downwards to disengage the serration and lock the adjustment.

Take-Off

(e) Turn adjustor clockwise to increase the rpm and vice-versa. This is a clicker adjustment and one click of the adjustor gives a change of 13 rpm (0.2% rpm). LIMITER IN

(f) Run the engine to ensure that the two rpm's are satisfactory.

(g) Close and tighten engine bay doors.

3. Idling Trim Adjustment

Method (301 Engines) 201 ALTERNATOR 'ON' 301 — " — 'OFF'

(a) Throttle control - IDLING (engine warm).

(b) Generator switch - 'OFF'.

(c) Check that the rev/min are within the limits given using graph reference AP 4783A, Vol. 1, Sect. 3, Chap. 2, as follows:-

(i) Obtain ambient pressure in millibars.

(ii) Apply pressure reading to graph and read the corresponding limits of speed between lines of outer band.

(d) If necessary adjust idling speed until it is within the setting limit set out on graph.

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Method (201 Engines)

(a) Throttle control - IDLING (engine warm).

(b) Generator switch - 'ON'.

(c) Release cap-nut and using key adjust anti-clockwise to increase.

(d) The change in rpm will be slow re-acting therefore allow engine rpm to settle before further adjustment is made.

(e) Tighten and lock adjusting screw cap-nut.

(f) Stop engine.

NOTE On engines with knurled type adjustor no releasing of cap-nut or locking is necessary.