

LEED

Restricted

Air Force Head-Quarters

NENE INSTRUCTION No. 7

Technical Order

Application: Nene 2-VH

FUEL SYSTEM - METHOD OF PRIMING

Introduction

1. This instruction sets out the method of priming the fuel system to remove all air (or inhibiting oil) from the system when an engine is first installed in an aircraft or whenever any point up to and including the high pressure cock has been disconnected. Similarly, this operation will be necessary whenever the low pressure cock has been inadvertently closed during the engine "run down", or when the fuel tanks have been drained.

2. The priming operation is carried out in two stages:-

- (a) Priming the low pressure section.
- (b) Priming the high pressure section.

Priming the Low Pressure Section

3. During this operation both pumps may be bled simultaneously or separately as follows:-

- (a) Remove the blanking caps from the upper bleed valve on each of the fuel pumps.

Note: The remaining bleed valve on each pump is to be disregarded.

- (b) Screw the special bleed tool BL.3384 into the upper bleed valve on each of the pumps. *Bleed the lower pump first*
- (c) OPEN the low pressure cock. *This cock can then remain open and need not be closed except in case of emergency or for work on the fuel system*
- (d) Ensure that the high pressure cock is CLOSED.
- (e) Check that the boost coil isolating switch is in the OFF position.
- (f) Switch the interlocked S.C. safety switch to the ON position.
- (g) When the fuel pressure light goes out screw down the bleed tool plunger until the fuel flow from the bleed valve is free from oil and/or bubbles. Bleed the fuel into a suitable container.

Note: The bleed tool plunger must be fully screwed down so that oil and/or air is removed from both sides of governor diaphragm.

- (h) Switch OFF the interlocked S.C. safety switch.
- (i) Remove the bleed tool BL.3384 from the bleed valves, replace the blanking caps and secure with stainless steel lockwire.

Priming the High Pressure Section

4. The high pressure section is to be primed as follows:-

- (a) Plug in fully charged ground starting equipment.
- (b) Disconnect the H.T. leads from the torch igniter.
- (c) Remove the lockwire from the union nut securing the right angled fuel elbow at the base of the Barometric Pressure Control.
- (d) Ensure that throttle is in CLOSED position.
- (e) ~~OPEN~~ the low pressure cock. *is OPEN*
- (f) OPEN the high pressure cock.
- (g) Switch ON master switch.
- (h) Switch ON the interlocked S.C. safety switch.
- (i) Switch ON the boost coil isolating switch.
- (j) When the fuel pressure warning light goes out, press the engine starter button for approximately 2 seconds.
- (k) While the engine is turning over, slacken off the union nut below the Barometric Pressure Control, to allow the fuel to emerge. When the fuel flows freely re-tighten the union nut.
- (l) When a steady mist of fuel appears from the exhaust unit close the high pressure cock. This occurs after approximately 15 seconds.
- (m) After the engine has ceased turning, ~~close the low pressure cock and~~ switch OFF the interlocked S.C. safety switch and boost coil isolating switch.
- (n) Switch OFF the master switch.
- (o) Re-fit the torch igniter H.T. leads.
- (p) Re-lockwire the union nut securing the right angle fuel elbow at the base of the Barometric Pressure Control.

3. NENE INSTRUCTION NO. 7

- (q) After the fuel has stopped flowing from the drains, remove the surplus fuel from the exhaust unit by raising the nose of the aircraft or by mopping up.
- (r) Ground run engine in accordance with NENE Instruction No. 1. During run inspect fuel system assemblies for leaks.

Note: It may be necessary to bleed the low pressure section of the fuel system a second time to eliminate further air. This will be apparent from inconsistent governed R.P.M. If this is necessary disconnect the ground starting equipment and repeat the procedure laid down in paragraph 3, followed by a further ground run of engine.

- (s) On completion of priming and ground running carry out final check of fuel line unions for tightness and security of lockwiring.

Reference: File R.A.A.F. 150/4/8214.

Date of Issue: 19th October, 1951.

This file was downloaded
from the RTFM Library.

Link: www.scottbouch.com/rtfm

Please see site for usage terms,
and more aircraft documents.

