LIGHT AIRCRAFT PISTON ENGINE OVERHAUL PERIODS

1. Applicability

For the purposes of this Notice, a light aircraft piston engine means either:

(a) an engine installed in an aircraft below 2730 kg MWTA or
(b) an engine of 400 hp or less

NOTE: For the purpose of this ‘Notice’ engine is defined to include those components and equipment necessary for satisfactory functioning and control. The propeller and its associated equipment are excluded except where agreed by DCA in writing.

2. Normally, for a light aircraft piston engine, the DCA will accept the engine constructor's overhaul period recommendations, which have been promulgated under a system approved by the responsible airworthiness authority.

3. Some constructor's publications permit operation beyond the overhaul periods recommended, at the discretion of the owner/operator, if the condition of the engine shows it to be justified. In certain instances the recommended overhaul periods are associated with particular rates of engine utilization, service bulletin/modification configuration or types of operations. DCA policy in respects of engines used in light aircraft is set out in paragraphs 4 to 9 and in the Appendices to this Notice.

4. Continuation in service shall be in accordance with paragraph 4.1 as qualified by subparagraphs 4.1.1 to 4.1.3 as appropriate.

4.1 Engines may be operated to the hours between complete overhauls which have been recommended by the constructor and promulgated under a system approved by responsible airworthiness authority, provided they conform to the appropriate service bulletin/modification configurations and types of operation. All such overhaul period recommendations by the constructor constitute a recommended overhaul period for the purpose of this Airworthiness Notice, including recommendations by the constructor to reduced overhaul periods with particular types of operation or particular service bulletin/modification configurations.

4.1.1 Where any overhaul period recommendation is stated in terms of both operating time and calendar time limitations, an engine which becomes restricted initially by calendar limitation may continue in service until the operating time limitation is reached, subject to inspection in accordance with paragraph 4 at the calendar time limitation, and subsequently at 100 hours or yearly intervals, whichever occurs first, in order to assess its condition. Calendar time periods run from the date on which the appropriate release document was signed, by the manufacturer in the case of a new engine, or by the overhauler in the case of an overhauled engine, unless it can be established that the engine was adequately inhibited/stored up to the time of installation.

4.1.2 Engines which have completed the recommended overhaul period may continue in service for a further period of operation not exceeding 20% of the hours recommended, subject to the following:

(a) Compliance being shown with the appropriate limitations specified in Appendix 1 to this Notice.

(b) Compliance being shown with any Airworthiness Directive which requires compliance at engine overhaul, unless otherwise agreed by DCA

(c) The engine must have been operated in an aircraft registered in Malaysia for a period of at least 200 hours immediately prior to completion of the engine constructor's overhaul period recommendation.
(d) The engine being inspected in accordance with Appendix 1 to this Notice in order to assess its condition immediately prior to the increase, and subsequently at 100 hour or early intervals, whichever occurs first. For engines operated in crop spraying aircraft the inspection must be repeated at 50 hours intervals.

4.1.3 Engines installed on aircraft not exceeding 2730 kg issued with Private Category Certificate of Airworthiness, or otherwise not used for Public Transport or Aerial Work role and which have completed the 20% extension of paragraph 4.1.2 may continue in service indefinitely, subject to the following:

(a) Compliance being shown with the appropriate limitations specified in Appendix 1 to this Notice.

(b) The engine being inspected in accordance with Appendix 1 to this Notice in order to assess its condition before exceeding 120% of the recommended overhaul period and subsequently being inspected and reassessed at 100 hours or yearly intervals whichever occurs first.

4.2 In the event that the inspection referred to in paragraphs 4.1.1, 4.1.2 and 4.1.3 results in rejection, the affected assembly, e.g. cylinder must be completely overhauled.

5. In no case shall any mandatory restrictions be exceeded, and the compliance with mandatory bulletins/modifications shall be completed at the specified times.

6. In the case of engines not incorporating all the service bulletins/modifications which would enable it to qualify currently for any recommended overhaul period as defined in paragraph 4.1 of this Notice, or of engine types not included in the constructor's bulletins, a specific recommendation in writing must be sought from the constructor, and if this is not obtainable, application made to the DCA

7. For clarity, the requirements of paragraphs 4 are presented in tabular form in Appendix 2.

8. Procedure

8.1 The following procedural requirements must be complied with:

(a) a written request must be submitted to the DCA for approval of any proposed TBO extension, irrespective of the certification category of the aircraft that the engine is installed in.

(b) engines must not be operated beyond the current approved TBO until DCA has given written approval of the request, which will be notified to both operator and nominated maintenance organizations.

(c) engines installed in aircraft certificated in the Transport or Aerial Work Categories will be limited to an extension of 20% only on the TBO approved by the DCA. When the 20% increase in TBO has been fully utilised, continued operation of the aircraft in which the engine is installed will only be permitted if the Certificate of Airworthiness is downgraded to Private Category. Operators must ensure that the necessary arrangements for change of Category are made with the DCA to avoid the risk of operating with an invalid Certificate of Airworthiness.

(d) All inspections associated with initial, and continuing, approval of the TBO extension must be certified by an appropriately Licensed Aircraft Maintenance Engineer or an appropriately approved organisation.

NOTE: Operators are reminded that the DCA is only concerned with the airworthiness implications of TBO extensions. The assessment of cost-benefits in terms of extended life versus possibly high overhaul costs rest with the operator.

9. Cancellation

This Notice cancels Airworthiness Notice No. 35 Issue 3, dated 1 July 1997, which should be destroyed.

DIRECTOR GENERAL
DEPARTMENT OF CIVIL AVIATION
MALAYSIA.