

FIELD MAINTENANCE AIRBORNE MATERIEL

L-17

USAF AIRCRAFT

NOTE: Field maintenance operations listed herein replace, for L-17 Aircraft, the operations listed in Section IV of Technical Order 00-25-45.

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SECTION I

PURPOSE AND SCOPE

PURPOSE.

The purpose of this technical order is to outline the scope of maintenance which is authorized for accomplishment by field maintenance activities on airborne materiel for Model L-17 aircraft.

2. GENERAL.

a. The extent of maintenance repairs authorized in this technical order are the responsibility of the field maintenance activities to accomplish as indicated and will be consistent with mobility requirements of combat organizations and in accordance with economical practices. While the extent of many repair operations listed in this

technical order are broad in scope, the actual degree of accomplishment by each field maintenance activity is contingent upon the maintenance and technical capabilities of the unit involved. Management and operating personnel at field level maintenance must exercise vigilance and maintain close surveillance over the initial and continuous application of the maintenance operations authorized.

b. Maintenance and/or repair operations on items listed herein will serve as a basic flexible guide for determining the extent of field maintenance, other than normal organizational and field maintenance functions established in the aircraft and equipment maintenance, and inspection re-

quirements handbooks, in addition to replacement of complete assemblies and sub-assemblies. Authorized operations listed herein which are applicable to a specific command or commands will be identified by suffixing the statement of operation with the command abbreviation symbol. Operations which are not so identified will be applicable to all commands. However, these instructions will not be construed as to prevent dispatching of any work to the depots beyond the technical capability of field maintenance activities. On items where the authorized operations are equivalent to depot overhaul, they will be so noted and authority is granted for field maintenance activities to zero the time on the concerned equipment in the same manner as the depots. Activities accomplishing depot overhaul will, on items returned to stock, stamp or insert the notation "OVERHAULED" on the back of Air Force Form 50B under "ADDITIONAL INFORMATION". This authority is granted only when the complete operation is accomplished in every respect. Depot Level Maintenance requirements of this nature will be identified by the abbreviation DLM in parentheses at the beginning of the requirements. For example "(DLM) 1. Generators - Complete overhaul and necessary replacement of component parts (MATS)". On items not specifically covered within scope of maintenance authorized, activities will accomplish this work based on similar items requiring similar tools and equipment. Repairable assemblies requiring depot maintenance will be forwarded to the appropriate specialized repair depot in accordance with the provisions of T.O. 00-25-11.

c. The proper use of Air Force Form 50D, Repairable or Rework Tag, by organizational and field maintenance activities is of vital importance. This form is a key document in maintenance and supply as it contains, when properly completed, essential information upon which certain action is predicated. Incorrect and misleading entries may lead to action which will result in needless expense, waste of time, manpower, and materials. Therefore, it is imperative that the provisions of T.O.

00-25-139 be followed for proper accomplishment of this form by all affected activities.

d. This technical order will not be interpreted as prohibiting the major repair of USAF materiel by activities outside the Zone of Interior (Reference Technical Order 00-25-116), nor will it be interpreted as prohibiting the requisitioning of parts by technical schools where such parts are required for instructional purposes. Requisitions for such parts will clearly indicate the purpose for which the parts are required.

e. Appropriate handbooks outlining maintenance repair and functional test procedures will be followed in accomplishing work authorized in this technical order for the materiel concerned. Applicable handbooks have been referenced where possible to delineate authorized maintenance.

f. To insure maximum utilization of USAF materiel and available resources, it is imperative that each activity establish an effective bench checking procedure of reparable in accordance with the policy established in Air Force Regulation 66-27, "Repair Policy for Air Force Property", and T.O. 00-25-139 "Maintenance Processing of Repairable Property".

3. SCOPE.

a. The scope of this technical order is tailored to reflect the maximum extent of field maintenance that may be accomplished by field maintenance activities in accordance with their capabilities. Each statement suffixed with abbreviation(s) of the command and/or commands indicates that authority to accomplish the maintenance work is extended to those commands. When all commands are authorized to accomplish the operation, no command abbreviation will be suffixed.

b. Field and organizational maintenance responsibilities for L-17 aircraft.

SECTION II RESPONSIBILITIES

1. CLASS 01. AIRCRAFT AND AIRFRAME STRUCTURAL COMPONENTS.

a. All repairs as prescribed in technical orders which specify compliance by field maintenance activities.

b. Minor repairs pertaining to skin or minor structural members as prescribed in T.O. 1L-17A-3, Handbook of Structural Repair Instructions to the extent possible with existing facilities.

c. Control Surfaces - Repair skin or minor structural members when facilities are available; replace component parts or assemblies. T.O.'s 1L-17A-2 and 1L-17A-3.

d. Metal Tanks - Oil, Hydraulic, Alcohol, and Water.

(1) Repair magnesium and aluminum tanks manufactured from 2S or 53S material by welding in accordance with approved procedures when facilities are available; test; replace.

(2) Repair damaged or stripped threads in tank bosses, by welding or tapping in accordance with approved procedures.

e. Canopies, Windows, Windshields.

(1) Replace plexiglas; repair cracks, nicks, and scratches in accordance with applicable handbooks.

(2) Install handles, window guides, and seals.

f. Exhaust Systems - Replace cracked and damaged parts.

g. Metal Air Ducts and Carburetor Intake Scoops - Repair cracks and broken welds; patch or replace damaged, burnt, or broken sections; replace bushings, bearings, linkage and fittings.

2. CLASS 02. AIRCRAFT ENGINES AND MAINTENANCE PARTS.

a. Cylinder Assemblies - Replace complete cylinder assemblies, spark plug heli-coils, valve springs, rocker arms, rocker box covers, gaskets, pushrods, pushrod housings, hose, and packings; as prescribed by applicable technical orders.

b. Cylinder Air Deflectors or Baffles - Repair to the extent possible with existing facilities.

c. Intake Pipe or Manifold Assemblies.

(1) Repair to the extent of removing dents or smoothing mating surfaces; or replace.

(2) Replace hose, gaskets, packing, packing nuts, clamps, and backfire screens.

d. Oil Pump Assemblies - Replace oil pump assemblies and oil pressure relief valves.

e. Oil Screen, Filter, and Strainer Assemblies - Clean or replace defective discs or elements as required.

f. Propeller Shaft - Replace crankshaft seal assembly; remove nicks and burrs from crankshaft seal race with crocus cloth.

g. Studs - Replace external studs (except studs that would require separation of crankcase sections) in accordance with applicable technical orders. This does not include cylinder hold-down studs.

h. Engine - Replace complete power plant assembly. T.O. 1L-17A-2.

3. CLASS 03-A. AIRCRAFT PROPELLERS AND RELATED ACCESSORIES.

a. Propellers.

(1) Replacement and maintenance in accordance with T.O. 1L-17A-2.

(DLM)(2) Overhaul with exception of blade straightening. T.O. 3H4-8-3.

b. Propeller Governors, Regulators, and Controls.

(1) Remove, install and maintain in accordance with T.O. 1L-17A-2.

(DLM)(2) Overhaul hydraulic element and valve assembly. T.O. 3H4-8-3.

4. CLASS 03-B. AIRCRAFT WHEELS AND BRAKES.

a. Aircraft Wheels and Brakes.

(1) Replacement; lubrication; adjustment; and Zyglo inspection; replacement of component parts when facilities are available. T.O.'s 1L-17A-2, 4W-1-61, and 4B-1-31.

(2) Minor corrosion and surface treatment.

5. CLASS 03-C. AIRCRAFT ELECTRICAL EQUIPMENT.

a. Starters, Generators, Motors, Actuators, Converters, Inverters, and Related Equipment.

(1) Minor repair, i.e., replacing brushes,

terminal blocks, radio noise filters, filter brackets; cleaning commutators, and components without disassembly of the unit.

(DLM) (2) Overhaul, if equipment is available.

b. Voltage Regulators.

(1) Replace; adjust, calibrate and test.

(DLM) (2) Overhaul if equipment is available.

c. Generator Reverse Current Relay.

(1) Differential Type - Test only to see if relay is operating satisfactorily. No adjustment or disassembly authorized. Replace defective relays.

(2) Fixed Voltage Type - Test; adjust; replace.

(DLM) (3) Overhaul if equipment is available.

d. Lights and Related Equipment.

(1) Replace cannon plugs, defective wires, sockets, light bulbs, and similar parts, when facilities are available, in accordance with applicable technical orders.

(DLM) (2) Landing lights may be overhauled if equipment is available.

6. CLASS 03-D. AIRCRAFT CARBURETORS.

a. Carburetor Assembly.

(1) Replacement of external, parting, and mounting gaskets; replacement of carburetor assembly; all adjustments and replacement of sub-assemblies for which facilities exist, in accordance with applicable technical orders.

(2) Adjust or replace control linkage.

7. CLASS 03-F. MISCELLANEOUS AIRCRAFT ACCESSORIES.

a. Heaters - Replace assemblies; minor repair.

b. Seats - Replace or repair to the extent possible with existing facilities.

c. Fire Extinguishers - Recharge and weigh.

8. CLASS 03-G. AIRCRAFT HYDRAULIC STRUTS AND ACTUATING CYLINDERS.

a. Hydraulic Struts and Actuating Cylinders.

(1) Polish exposed portion of pistons with a fine stone in order to remove corrosion and scratches, and similar minor repairs not requiring disassembly.

(2) Complete disassembly is not authorized. Readily accessible "O" rings and chevron seals may be replaced if necessary facilities are available.

b. Shimmy Dampers - No repairs other than linkage adjustment.

9. CLASS 03-H. AIRCRAFT IGNITION SYSTEM ACCESSORIES.

a. Ignition Harness - Replace cable and terminals; and such tests as are possible with available equipment.

b. Spark Plugs - Replace in accordance with T.O.'s 8E2-6-1-32, and 8E2-6-1-37.

c. Magnetos and Distributors.

(1) Replacement of primary condensers, contact point assemblies or breaker assemblies, and caps; and such tests as are possible with available equipment, in accordance with applicable technical orders.

10. CLASS 03-I. AIRCRAFT FUEL, OIL, VACUUM, HYDRAULIC, AND DE-ICER SYSTEMS.

a. Lines or Tubing.

(1) Tubing manufactured from 24ST or 52SO up to and including 1½ inch diameter may be fabricated; tubing over 1½ inch diameter made of 24ST or 52SO, and all tubing made of 61ST or 75S stainless steel, fabrication is not authorized.

b. Pumps.

(1) Replace oil seals, fittings and similar minor parts not requiring disassembly; test to the extent possible with available equipment.

(2) Replace defective oil pressure relief valves.

c. Valves.

(1) Replace defective fuel, oil, and hydraulic valves.

(2) Minor repair; adjustment; test of air shut-off valves.

d. Hydraulic Hand Pumps - Replace.

11. CLASS 03-J. VIBRATION MOUNTS.

a. Vibration Mounts - Remove; inspect; replace defective components. T.O. 2RA3-2-3.

b. Battery - Perform service maintenance; test. T.O.'s 1L-17A-6, 8D2-1-31.

12. CLASS 04-C. RUBBER CASINGS, TIRES, AND INNER TUBES.

a. Aircraft Casings - No repairs.

b. Aircraft Inner Tubes - No repairs.

13. CLASS 04-D. ANTI-FRICTION BEARINGS.

a. Airframe Bearings - Inspect and maintain in accordance with T.O. 44B-1-2.

b. Wheel Bearings - Inspect and maintain in accordance with T.O. 44B-1-3.

14. CLASS 05-A, 05-C, 05-D, 05-E, 05-G, 05-H, AND 05-I. AIRCRAFT AND TRAINING AIDS INSTRUMENTS AND ELECTRICAL METERS.

a. Aircraft and Training Aids Instruments and Electrical Meters.

(1) Disassembly of calibrated units not authorized.

(2) Disassembly of hermetically sealed units not authorized.

(3) Lubricate; clean; adjust; calibrate; test in accordance with T.O. 5-1-1.

15. CLASS 16. COMMUNICATION EQUIPMENT, COMPONENTS, ACCESSORIES AND MAINTENANCE PARTS.

a. All Applicable Equipment.

(1) Repairs and replacement of components, and sub-assemblies as prescribed in T.O. 12-1-5 for field maintenance activities.

END