the five months from July to November 1943 the total output was 810 aircraft, the monthly figure jumping from 116 aircraft during August to 265 aircraft in October. This total did not merely entail normal routine upkeep services in respect of aircraft held; a very large number of modifications were also continually being carried out.

Almost throughout the first four years of war, the India Command's priority for equipment has been low. Inadequate stocks over most of the ranges of equipment have had a direct bearing on the output from repair units. Tools, certain types of engine spares, dopes, American spares and ground equipment, marine craft spares and practically all items of ordnance supply were short. M.T. spares and domestic and barrack equipment were practically unobtainable. Thus in November there were over 160,000 demands which had not been met.

Although after August a slight improvement appeared, the situation continued poor owing to the demand for spares continuing to increase.

44. *Maintenance and Repair of M.T. Vehicles and Marine Craft of the R.A.F. and I.A.F.*

The administrative difficulties peculiar to the maintenance and repair of aircraft in this Command apply equally in the case of M.T. and marine craft of the Air Forces but in general the problems have not proved so formidable. West of Calcuta (by using the available civilian capacity), it has been possible to decentralise the repair of M.T. to the main towns. East of Calcutta, mobile repair units, known as M.T. Light Repair Depots have been formed and operate as a part of the field maintenance organisation.

The formation of this completely new organisation has been necessary now that the second and third line maintenance of Air Force vehicles has become too large a responsibility for the Army who formerly undertook this task.

As regards marine craft, prior to this period no arrangements existed to deal with their maintenance and repair. Since then, however, contact has been established with the Directorate General of Shipbuilding and Repair, and the naval authorities, and satisfactory arrangements have been made.

45. *Research and Development Work for the Air Forces.*

Research and development work for the Air Forces is now carried out in Air Headquarters, India Command; at the Scientific Industrial Research Laboratories, Delhi, and at the ordnance laboratories, Cawnpore. These bodies deal also with the problem of indigenous manufacture. In addition, research work is carried out at Bangalore for electrical and radar development, at Chaklala for airborne forces, and again at Cawnpore for armament modifications.

Among the achievements of the Research and Development Section of the Air Forces in this Command are:—

The development of new parachute material which has eased the production problem and improved the performance of the supply-dropping parachute.

The production of a new type of supply-dropping container.

A roller conveyor for use in supply-dropping operations.

An enlarger for microgram negatives.

Substitute proofing lacquer for carburettor floats.

A substitute for duplicator stencils.

Satisfactory aircraft dopes which can be manufactured indigenously.

The manufacture of petrol-resisting tubing in this country which has now been developed to a point where the product is little inferior to that produced in the United Kingdom.

The production of various types of jettison tanks, including one design which utilises locally produced jute and shellac.

In addition the more important India Command Modifications which have been prototyped are:—

Self-sealing long-range tanks inside the wings of Hurricanes Mark IID and IV.

The redesigning of the fuel system on the Vengeance aircraft, and provision for them of jettison tanks.

A bomb-cum-jettison tank modification for Hurricane aircraft.

Compregnated wooden blades for fitting to a propellor.

Certain modifications to Dakota aircraft.

Modifications to the Spitfire VIII pressurised fuel system.

46. *Administrative Development in various Ancillary Services of the Air Forces.*

The Balloon Branch, the Air Sea Rescue, the Meteorological Service and the Flying Control Organisation have all expanded and made important progress. The operational work of the first three has already been referred to above.*

All were handicapped in their development by lack of equipment, shortage of personnel and absence of training facilities, while in the Meteorological Service the issue was complicated by the existence already of separate Civil and U.S.A.A.F. organisations working in the same sphere.

THE PROBLEM OF THE MEDICAL SERVICES IN NORTH-EAST INDIA.

47. *General.*

The period covers the annual malarial season, and was therefore one of anxiety.

The sick rates as a whole were consistently high. They varied from a maximum of fifty per thousand per week from all causes for British troops in July, to twenty-five per thousand per week for Indian troops—the lowest figure recorded for fighting personnel during the period.

There was no remarkable rise in the autumn rates—indeed for a time in August, when sickness is usually expected to increase, a general fall in the sick rate took place. This was probably due to the widespread and thorough anti-malarial measures that had been in progress since the previous year. At the same time active operations during the period were on a small scale. The worst exposure to infection therefore (i.e., that occasioned by lack of opportunity to take precautions against malaria and other diseases), affected very few.

* *See* Part II paragraphs 14 to 25