Chapter 3

RECTIFICATION OF CORROSION

CONTENTS

Introduction

1 Minor repairs to protective finish can be difficult and time consuming. The rectification of advanced corrosion, including restoration of the finish, has been known to occupy thousands of man hours on a single aircraft. It is not uncommon to spend longer on these items during major servicing than on all other serviced items. The aircraft's operational capability is drastically reduced. Under severe conditions, for every hour of flight five hours can be spent on treating corrosion.

2 Much of the effort at second, third and fourth line servicing can be avoided, and substantial savings made, by good design and thorough corrosion preventive measures by user units. If the protective film or coating is broken, not only does the exposed metal become corroded but corrosion products form under the adjacent film or coating, loosening it and enlarging the damaged area.

3 Chapters 3-1 and 3-2 cover the procedures to be adopted for:

3.1 Cleaning, paint stripping, removal of corrosion products and restoration of surface finish.

3.2 Removal and neutralization of contaminants likely to cause corrosion.

4 Chapters 3-1 and 3-2 describe only the standard methods of rectifying corrosion damage and restoring protection for different aircraft materials. The special features of each type of aircraft, including the safe limits beyond which repair is not permitted and replacement is needed, are included in the Topic 6, 'Aircraft Repair and Reconditioning Manual', for specific aircraft.

5 The information complements the aircraft Topic 6. In all cases of confliction, the Topic 6 is to be regarded as the overriding authority.

CAUTIONS...

(1) Many chemicals employed in remedial or corrosion-preventive procedures can cause pollution if discharged into a waterway via a surface-water drainage system. Concentrated solutions may harm or destroy the bacteria essential to sewage treatment, therefore they must be either neutralized or diluted sufficiently before discharge into a water drainage system.

(2) As local regulations vary, persons responsible for disposal of effluent at an RAF station should consult the resident Superintendent of the Property Services Agency (PSA).

WARNING, GUIDED WEAPONS...

BEFORE ATTEMPTING ANY CORROSION RECTIFICATION ON GUIDED WEAPONS, PERSONNEL ARE TO ENSURE THAT IT IS SAFE TO DO SO BY REFERRING TO THE EQUIPMENT SERVICING SCHEDULES. UNDER NO CIRCUMSTANCES MAY LIVE WEAPONS, AMMUNITION, WARHEADS OR ANY SIMILAR ORDINANCE, BE SUBJECTED TO MACHINING, GRINDING, WELDING OR ANY OPERATION LIKELY TO PRODUCE HEAT OR VIBRATION.