TD-3 MICROWAVE RADIO
TRANSMITTER-RECEIVER BAY
TESTS
GENERAL

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SECTION	TITLE
411-400-501	In-Service Checks
411-400-502	Level Diagrams

1. SCOPE

1.01 This section is reissued to include the following:

(a) An index to the sections which provide descriptive and operating information on the transmitter-receiver bay.

(b) Flow charts describing the order of testing and the practices involved for routine maintenance.

(c) A brief description of the overall approach to be followed for maintenance of the radio bays.

Since this is a general revision, arrows ordinarily used to indicate changes have been omitted.

2. GENERAL MAINTENANCE PROCEDURE

2.01 Maintenance personnel should become familiar with the TD-3 descriptive and operating sections listed below before attempting maintenance on the transmitter-receiver bay. All tests described are performed on an out-of-service basis with the exception of the in-service checks.

SECTION	TITLE
411-400-100	Description
411-400-301	Turnon and Turnoff Procedures

2.02 In general all maintenance starts with the In-Service Checks, Section 411-400-501. The Equipment Test List, Section 411-001-011, specifies the interval at which the in-service checks are to be performed on a routine basis. If trouble has developed and/or a check is being made due to an alarm condition, the in-service checks section should be consulted as a guide to the source of trouble. These in-service checks utilize the meters on the transmitter and receiver control panels to measure important voltages and currents in the various bay circuits.

2.03 Chart 1 shows the order of testing and the appropriate sections to be used for normal routine testing of the transmitter-receiver bay. The Equipment Test List specifies the interval at which the return loss, transmission, and noise figure tests are to be performed.

2.04 Charts 2 and 3 show the order of testing for the radio transmitter and receiver, respectively. The major test sections are shown in shaded blocks. The remaining blocks show all related sections that might be used if directed by the requirements given in the major test sections.

2.05 If the requirements for a unit are not met in the major test sections, the procedures call for either the replacement of the unit or further in-bay testing of the unit using the related practice. If a unit is replaced, it should be sent to the maintenance center for repair and realignment using the TD-3 test bench and related repair practices.

2.06 All transmitter-receiver bay tests are performed with the J68392A transmitter-receiver test set. This test set is furnished with almost all of the equipment required for bay testing. The remaining items required are specified on ED-50514-( ) Test Equipment, Special Tools, and Maintenance Spares.

2.07 The performance of a high-capacity system such as TD-3 is very dependent upon the transmission performance of each radio bay. Many of the requirements given in the maintenance sections are very tight compared to the requirements of some of the earlier radio systems. However, these tight requirements are necessary if the TD-3 system is to meet its overall noise and baseband response objectives. Maintenance personnel should adhere to the procedures and requirements given in the sections to ensure good performance of the radio repeater portion of the overall system.

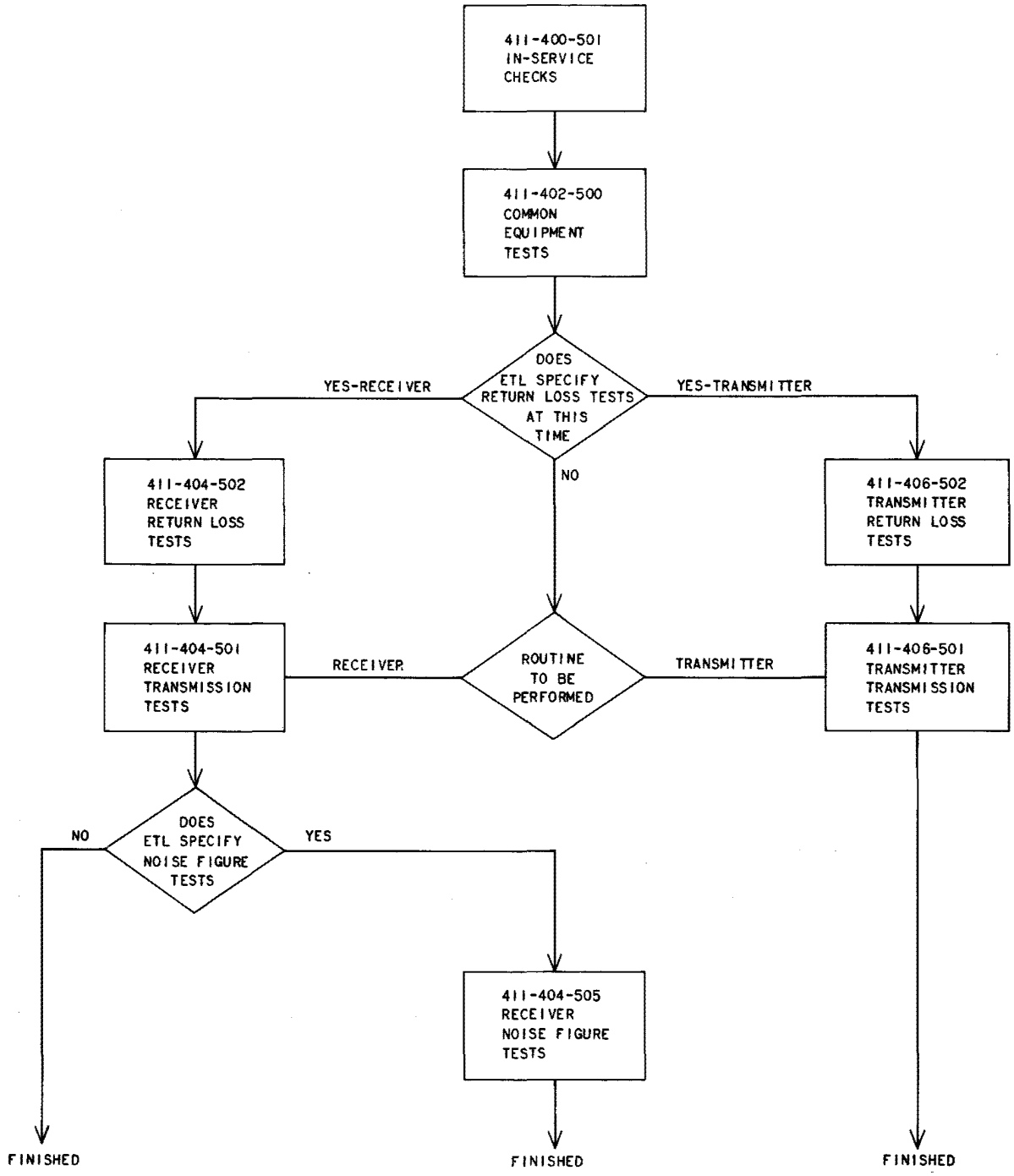

Chart 1—BSP Usage During Normal Routine Maintenance

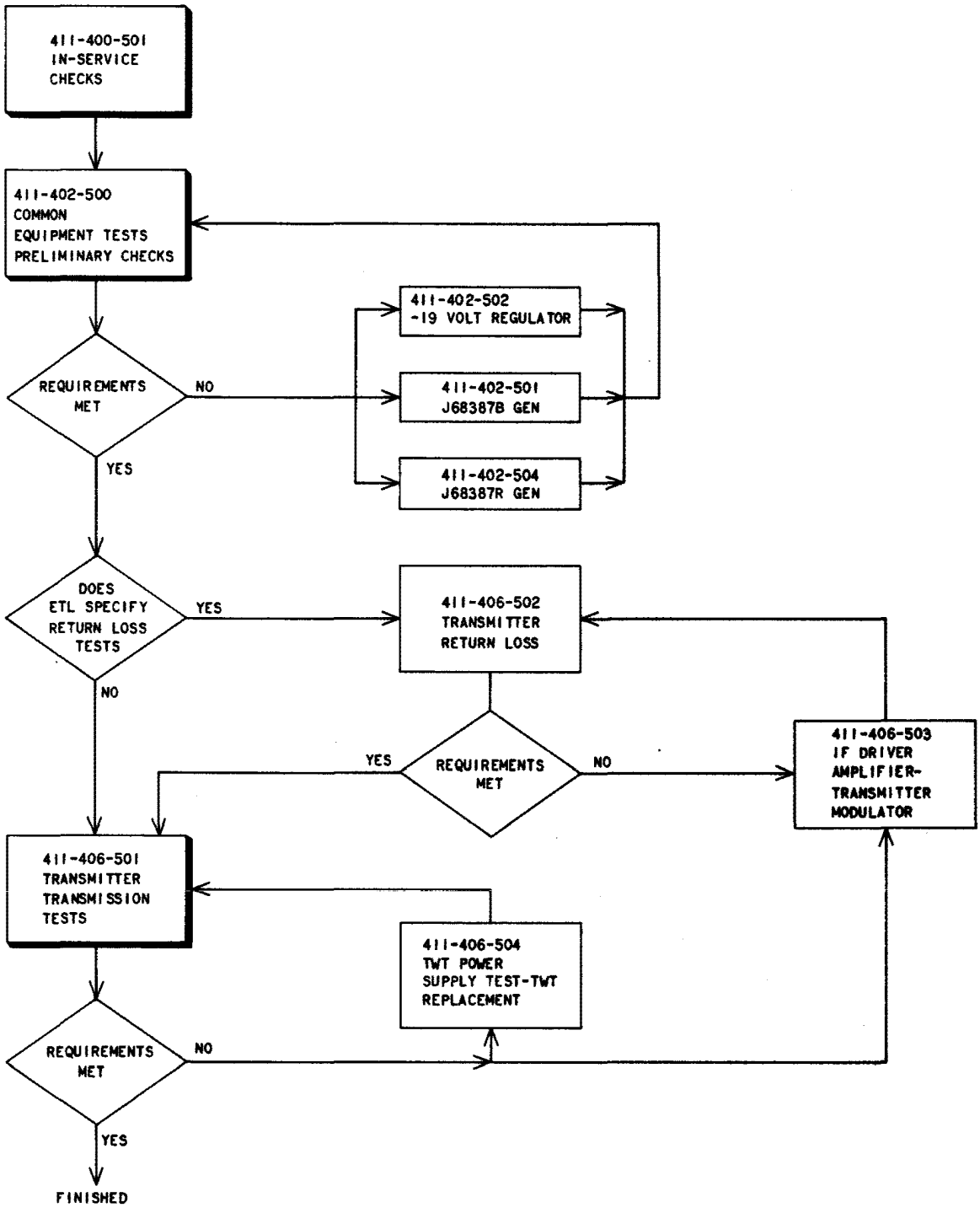

Chart 2—BSP Usage When Testing a Transmitter

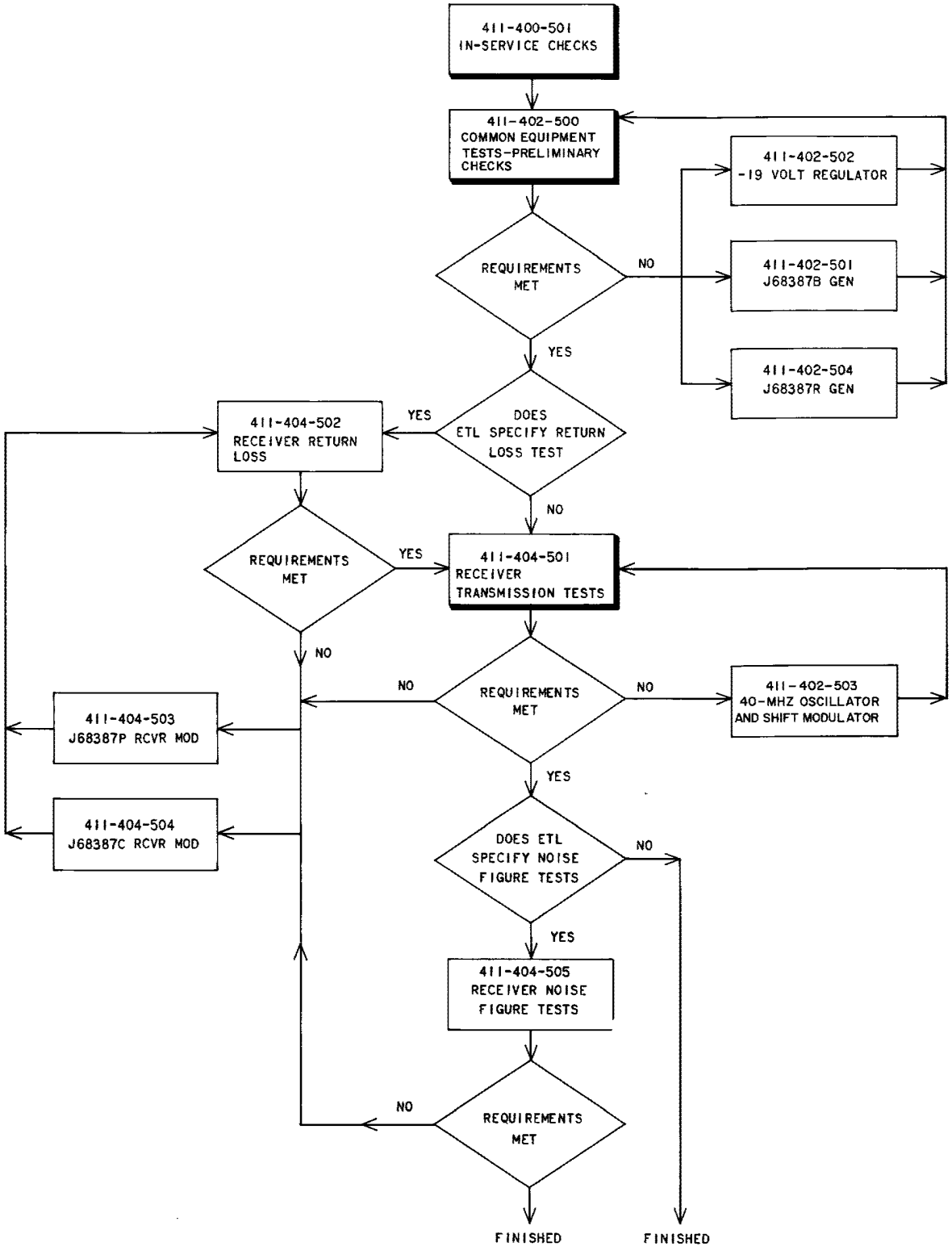

Chart 3—BSP Usage When Testing a Receiver