

## SECTION II

## CENTRAL FIRE CONTROL SYSTEM

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**2-1. CENTRAL FIRE CONTROL SYSTEM.**

(See figure 2-1.)

2-2. GENERAL. The B-26B and B-26C airplanes are provided with a central fire control system which consists of an upper and lower turret, both remotely controlled from one sighting station. Mounted in each turret are two .50 caliber machine guns, type M-2. The turrets are operated and the guns are fired electrically by the gunner at the sighting station. The system consists of the following components: sel-syns, control box, junction box, dynamotors, ampli-dynes, servo-amplifier, sighting station, upper turret assembly and lower turret assembly. (Refer to figure 2-2 for simplified diagram.)

2-2A. For air or ground operation of the central fire control system, under low temperature conditions, a 5 to 10-minute warm-up period is necessary. During a mission when the turret is not in continuous operation, the turret should be operated for at least 10-minutes each hour.

**Note**

This turret system will operate satisfactorily at temperatures as low as  $-40^{\circ}$  to  $-54^{\circ}\text{C}$  ( $-40^{\circ}$  to  $-65^{\circ}\text{F}$ ). A slight loss of speed may be encountered but not enough to affect reliability.

**2-3. TROUBLE SHOOTING.**

TROUBLE	PROBABLE CAUSE	REMEDY
TURRET DYNAMOTOR FAILS TO OPERATE.	Defective connector plug.	Check connector plug and socket prongs. Replace defective connector plug.
	Binding armature.	Replace dynamotor.
	Defective circuit wiring.	Locate and correct circuit wiring.
	D-C brushes improperly seated.	Seat brushes properly.
TURRET DYNAMOTOR OPERATES, BUT NO AC IS GENERATED.	Improper a-c circuit wiring.	Locate and correct improper wiring.
ERRATIC OR SLUGGISH TURRET DYNAMOTOR OPERATION.	Improper brush position.	Correct setting of brushes.
TURRET DYNAMOTOR HAS LOW OUTPUT VOLTAGE.	Low input voltage.	Check power supply.
	Defective dynamotor.	Replace dynamotor.
AMPLIDYNE FAILS TO OPERATE.	Defective connection.	Locate and correct defective connection.
	Binding armature.	Replace amplidyne.
	Improperly seated brushes.	Remove and reseat brushes properly.
AMPLIDYNE HAS ERRATIC OPERATION, DISCONTINUOUS OUTPUT SATURATION, NO GENERATOR VOLTAGE.	Defective brushes.	Replace brushes.
	Defective commutator.	Replace amplidyne.
	Defective bearing.	Replace amplidyne.
TURRET HUNTS CONTINUOUSLY, HUNTING CENTERED ABOUT POSITION OF CORRESPONDENCE.	Defective anti-hunt connection.	Locate and repair connection.
	Reversed anti-hunt connections.	Correct connections.
	Anti-hunt capacitor too small.	Replace with capacitor of greater capacity.
	31-speed selsyn control transformer rotor leads reversed.	Correct connections.