

ARTEX C406-2 EMERGENCY LOCATOR TRANSMITTER SYSTEM - DESCRIPTION AND OPERATION

1. General

- A. An Artex C406-2 Emergency Locator Transmitter (ELT) System is installed to help rescue teams find the airplane in the event of a crash. It is made such that it can operate in a wide range of environmental conditions and is resistant to the forces caused by many types of accidents.

2. Description

- A. The Artex C406-2 Emergency Locator Transmitter (ELT) system has a transmitter, an ELT/NAV interface, mode S address box, warning buzzer, integral battery pack, an internal G-switch, an ELT antenna, a cockpit ELT control panel, the cable assembly, and an antenna coax cable.
 - (1) The transmitter has an internal battery and internal G-switch. It is installed in a tray and will come on automatically if the G-switch is actuated or if the cockpit panel switch is actuated manually. When the airplane electrical system is on, the microprocessor in the transmitter uses power from the airplane's electrical system. Electrical power from the transmitter's internal lithium battery pack is used for the system test sequence and will also keep the system on in the event of an emergency.
 - (2) The Artex C406-2 system uses an ELT antenna that is installed on the top of the fuselage, at FS 292.44.00 and RBL 15.55 for the 208 and FS 340.44 and RBL 15.55 for the 208B. The antenna is connected to the transmitter with a coaxial cable.
 - (3) A G-switch, installed in the transmitter, and a two-position cockpit panel switch (SZ09) on the right switch/meter panel are used to control the transmitter. The cockpit panel switch lets the flight crew activate, reset or test the system. An ON/OFF toggle switch on the transmitter is set to the ON position for normal system operation, and to OFF during maintenance or service.
 - (4) The Artex ELT ELT/NAV Interface is used to convert the longitude/latitude navigation information into a format that the ELT can recognize. The ELT/NAV unit actively updates and stores this information. In the event of a crash, the ELT will transmit the last known position information. The ELT/NAV interface is connected to the ELT and the navigation system with cable assemblies.

3. Operation

- A. The Artex C406-2 Emergency Locator Transmitter (ELT) System can be activated automatically by the G-switch or manually by one of the two manual control switches.
 - (1) The G-switch will operate and start the transmitter as a result of crash accelerations that are parallel to the longitudinal axis of the airplane in a forward direction.
 - (2) A remote-mounted switch (SZ09) on the right switch/meter panel in the cockpit can be used to manually operate the transmitter when the switch is set to the ON position.
- B. When activated, the ELT transmits on emergency frequencies 121.50, 243.00 and 406 MHz, at the same time with a swept tone at three sweeps-per-second.
 - (1) The 121.50 and 243.00 MHz frequencies are used to send a locator signal that can be followed by those that are receiving it. The 406 MHz frequency is used to activate a satellite tracking system. The Artex C406-2 system is connected to the navigational system of the airplane as well as the transponder system. When the ELT system is in operation, the location and the tail number of the airplane are transmitted on the 406 MHz frequency.
- C. The Artex C406-2 system also has a complete self-analysis program with test routines that are transmitted at reduced power over frequencies 121.50, 243.00 and 406. MHz. The test sequence examines the system microprocessor, antenna and transmitter. The test routine is started when the remote switch is set to the ON position for one second, then moved to the ARM position.