

METRO AVIATION, INC.
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F A A APPROVED
HELICOPTER FLIGHT MANUAL SUPPLEMENT # 105M-5
EUROCOPTER DEUTSCHLAND GMBH (FORMERLY MBB) (ECD)
BO-105C, BO-105S, AND BO-105LS A1

REG. _____

SERIAL NO. _____

This supplement must be attached to the LBA Approved ECD Model BO105 Flight Manual when the Metro Aviation 105M-101 Emergency Medical System has been installed according to STC. # SH3663SW.

For limitations, procedures, and performance information not contained in this supplement, consult the basic Flight Manual.

- Section 1. SYSTEM DESCRIPTION - See page 2.
- Section 2. LIMITATIONS - See page 5.
- Section 3. EMERGENCY PROCEDURES - See page 8.
- Section 4. NORMAL PROCEDURES - No Change
- Section 5. PERFORMANCE DATA - No Change

APPROVED



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76101

PAGE 1 OF 8

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(file) 105FLM

**MBB B0105
FLIGHT MANUAL SUPPLEMENT #105M-5**

Section 1. SYSTEM DESCRIPTION

The 105M-101 EMS includes the following components:

105M-370	Equipment Rack
105M-400	IV Rack
105M-700	Isolation Structure
105M-720	Accessory Panel
105M-740	Side Facing Seat
105M-780	Floor Pan
105M-786	Litter Installation

The following additional accessories are optional for the Metro Aviation 105M-101 EMS:

105M-300	Auxiliary Ldg. Light
105M-320	Inverter 110V AC
105M-340	Suction Pump
105M-350	Goose Neck Lamp
105M-371	Cardiac Monitor Mount
105M-745	Side Facing Seat
105M-721	Accessory Panel
105M-762	Oxygen System
105M-768	Oxygen Bottle & Fairing
105M-790	Converter 12VDC
105M-800	PA Horn

The function and operation of the system components are described below:

The 105M-720 or 105M-721 Accessory Panel are mounted at Station 118.2 and serves as a mounting base for the Goose-Neck Light, the Equipment Rack, and miscellaneous equipment. In addition the accessory panel provides a mounting base for AC power, suction, and oxygen controls and outlets. Equipment is to be mounted and stored properly to prevent injury to occupants, during an emergency landing. The Equipment Rack, which is mounted to the accessory panel, provides a mount for a "patient lamp" and items of equipment as labeled on Rack. Equipment is to be properly secured during all phases of flight. Both the Good-Neck and patient lamps incorporate the red lenses to preclude cockpit glare.

F A A APPROVED
DATE APR 21 1995

PAGE 2 of 8

MBB B0105
FLIGHT MANUAL SUPPLEMENT #105M-5

Section 1. SYSTEM DESCRIPTION (cont.)

The AC outlets on the Accessory panel may receive power from two sources. The first source is the external connection on the left side of the aircraft. When an AC cord is plugged into this socket, a switching relay is energized and power is supplied to the medical panel illuminating a red indicator light on the accessory panel. This light also serves as an indicator that the AC cord is attached to the helicopter. The second source is the "on board" inverter located in the aft avionics bay. This inverter comes "on line" when a DC APU is plugged into the aircraft or when both generators are "on line". An amber light on the Accessory Panel provides an indication that the inverter is "on line". Both internal and external indicator lights may be illuminated, but the external 110 vac source has priority until the AC extension cord is removed.

The inverter power input rating is 43A max at 27V DC. The AC outlet power rating is 1000 watts, 60Hz and 110 VAC. The AC outlets are labeled to provide the power rating information. The inverter is protected from overload by two 10 AMP circuit breakers on the Accessory Panel. A 1/2 AMP "INV CONT" circuit breaker on the center console protects a relay that is connected to the auxiliary bus which sheds in the event of either generator failure.

A 35 AMP circuit breaker labeled "MED PANEL" on the center console controls DC power to the Accessory Panel bus.

The EMS system includes a dual litter installation. These litters are mounted in the cargo compartment. The forward end of the litters extends into the cabin to facilitate attention to the patients. Load the stretcher thru the rear clamshell doors using left or right guide rail to guide the litter into the forward stop. When litter is seated fully home forward, move the rear latch from the stowed position up and forward and seat hook firmly against rear of stretcher. To remove, depress rear latch release lever, slide hook to the rear and stow flat, remove stretcher. Slide locking sleeve out of locked position and fold stretcher. Stow accordingly. Failure to ensure litter is installed properly may result in injury to occupants.

Electrical load: n/a

F A A APPROVED
DATE APR 21 1995

PAGE 3 of 8

**MBB B0105
FLIGHT MANUAL SUPPLEMENT #105M-5**

Section 1. SYSTEM DESCRIPTION (cont)

The oxygen system consists of a 76.5 cu. ft. aircraft type oxygen cylinder and regulator assembly mounted to the exterior of the aircraft right side. A push pull shut off cable is located inside the cabin to allow the crew to control the flow of low pressure oxygen to the medical accessory bulkhead. A cylinder contents gauge is located in the cabin above the right-hand opera window to allow the crew to monitor the amount of oxygen available for use. The oxygen cylinder is serviced through a calibrated fill port to a nominal pressure of 1850 PSI @ 75° F. Low pressure oxygen is supplied on demand at 45 to 65 PSI depending on altitude temperature and remaining contents in the cylinder.

Electrical load: n/a

The KGS model UC28-14 converter provides 12 volt DC power to the accessory panel through one three pin locking connector (15 amp max). This provides a source of 12 volt DC power for carry-on life support equipment.

Electrical load: 8.7 AMPS max.

MBB B0105
FLIGHT MANUAL SUPPLEMENT #105M-5

Section 2. LIMITATIONS (cont).

REQUIRED PLACARDS (See option list, page 2)

AUX LDG LIGHT CONTROLLED
BY COLLECTIVE TRIGGER

Located on instrument panel in
full view of pilot

DISCONNECT EXTERNAL
110 VAC SOURCE
BEFORE FLIGHT

Located on instrument panel in
full view of pilot

OXYGEN PULL-ON

Located adjacent to control
handle

OXYGEN CONTROL LOCATED ON FLOOR,
R/H AFT OF PILOTS SEAT PULL-ON

Located on instrument panel in
full view of pilot

Located on accessory panel
adjacent to R/H outlet

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DATE APR 27 1995

MBB B0105
FLIGHT MANUAL SUPPLEMENT #105M-5

Section 2. LIMITATIONS (cont).

REQUIRED PLACARDS (cont)

NO SMOKING AT
ALL TIMES

Located on top centerline
of accessory panel

SEAT BELTS MUST BE SECURED
DURING TAKE-OFF AND LANDINGS

Located on top centerline of
accessory panel

MAX LOAD PER INSERT 10 LBS.
SOFT ITEMS ONLY IN OPEN PANEL
MOUNTED CONTAINERS

Located on top centerline of
accessory panel

OCCUPIED LITTERS ARE TO BE
SECURED IN RESTRAINTS DURING
ALL PHASES OF FLIGHT

Located on top centerline of
accessory panel, and in rear
tunnel are in full view of
crew when loading stretcher

MBB B0105
FLIGHT MANUAL SUPPLEMENT #105M-5

Section 3. EMERGENCY PROCEDURES

In flight fire - Discontinue use of oxygen using shut-off valve.

Loss of engine power - Discontinue use of oxygen. Turn all non-essential EMS equipment off.

Generator failure - Failure of either generator will result in automatic shedding of the 28 VDC power to the Medical Panel.

Section 4. NORMAL PROCEDURES

No Change

Section 5. PERFORMANCE DATA

No Change