

*** THIS TRANSMITTER IS AUTHORIZED
FOR USE ONLY DURING SITUATIONS
OF GRAVE AND IMMINENT DANGER ***

— If the beacon transmits other than in an emergency (test lamp flashing), INFORM THE LOCAL SAR SERVICES of the false alarm to cancel the research operations and stop it immediately.

— In the event of a distress, the presence of the 406 MHz beacon on board must not in any way change normal abandonment procedures even if the distress message is transmitted via the COSPAS-SARSAT system.

It is unlawful to transmit a distress signal unless an emergency exists. Turning this unit on initiates a signal on the international distress frequencies. Any unjustified alert will involve penalties.

- ♦ Temperature range : $-20^{\circ}\text{C} +55^{\circ}\text{C}$
- ♦ Stowage temperature : $-40^{\circ}\text{C} +70^{\circ}\text{C}$
- ♦ Batteries lithium manganese Li Mn O 2 :
 - High energy - To be replaced every 4 years
- ♦ Operating life :
 - 48 hours mini at -20°C or 80 hours at $+20^{\circ}\text{C}$
- Nota : End of autonomy is indicated by 2 red flashes every 50 seconds after each 406 MHz transmission.
- ♦ Housing made of orange polycarbonate with a high resistance against shocks
- ♦ Watertight at 1 bar
- ♦ Dimensions : $\varnothing 150/370$ mm (antenna not deployed)
- ♦ Weight : 1,75 kg
- ♦ Strobe light : 0,75 candela flashing 20 times per minute
- ♦ Battery test

406 MHz SATELLITE TRANSMISSION

- ♦ Frequency : $406,025\text{ MHz} \pm 0.002\text{ MHz}$
- ♦ Frequency stability
 - Short term : ≤ 0.002 parts / million
 - Medium term : - Mean slope : ≤ 0.002 parts / 10^6 / minute
 - Residual noise : ≤ 0.003 parts / 10^6
- ♦ UHF power output : $5\text{ W} \pm 2\text{ dB}$
- ♦ Phase modulation : 1.1 ± 0.1 radians peak
- ♦ Repetition period : $50\text{ secs} \pm 5\%$
- ♦ Transmission time : $440\text{ m sec} \pm 1\%$
- ♦ Coded digital message

121,5 MHz HOMING TRANSMISSION

- ♦ Frequency : 121,5 MHz ♦ Frequency tolerance : 50 parts/million
- ♦ Output power : 75 mW
- ♦ Modulation : 3K20A3N ♦ Modulation duty cycle : 50 %
- ♦ Continuous transmission
- ♦ Complies with the new ICAO recommendations

BATTERY PACK

Reference up to S/N 326999 : SO501586 / Li Mn O 2 / BBA 01425.
Reference from S/N 327000 : SO519512 / Li Mn O 2 / BBA 01417.

HOW TO KEEP THE INSPECTION AND OPERATIONAL BOOKLET AND REGISTRATION CARD

- This booklet must follow the Radio Beacon in all its successive assignments.
- It must be kept on board with the other safety documents and be shown on request to the Maritime Authorities.
- On termination of each periodic inspection carried out by the service station and authorized by the manufacturer, this booklet must be completed and signed.
- The commissioning date is the reference date for periodical service.

REGISTRATION :

The code programmed into the EPIRB and imprinted on the registration card will not be changed during the life of the unit. It is very important that the registration details held by the SAR authorities are up-to-date.

Upon purchase of the KANNAD 406 WH EPIRB, the end-user must complete the registration card supplied to register the NOAA identification code contained on the Epirb label with the National Oceanic and Atmospheric Administration (NOAA)
whose address is :

NOAA, NOAA/SARSAT
Operations Division
E/SP3, Federal Building 4
WASHINGTON DC 20233

PERIODIC INSPECTION LOG

☐ Battery :

Batch date :

Replacement date :

☐ Release system (HAMMAR type) :

Replacement date to be notched two years after installation date

Date :

☐ Housing inspection :

☐ Watertight verification :

☐ Silicagel bags :

☐ 121,5 MHz transmission :

☐ 406 MHz transmission :

☐ Frequency adjustment :

☐ General operation :

NEXT INSPECTION DUE ON :
.....

INSPECTION SERVICE :

.....

Date :

Signature and Stamp

TEST PROCEDURE

EVERY 6 MONTHS

The Epirb should be tested every 6 months by the end-user.

- Press test button
 - After 5 seconds, the self test starts to check battery voltage and 406 MHz power.
 - If red flashing light flashes regularly every 1/2 second, the beacon operates correctly.
 - If red flashing light flashes in an irregular fashion :
 - one of the 2 parameters controlled may be weak (battery voltage or 406 MHz transmission power).
- In this case :*
- Repeat 3 times to confirm defect before contacting agent.
 - A negative test does not necessarily mean that the Epirb is defective.
- The self test stops automatically and does not exceed 40 seconds.

EVERY YEAR

Annual control performed by Navigation Inspector, the security officer on board or a representative of the manufacturer.

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PERIODIC INSPECTION LOG

☐ Battery :

Batch date :

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Date :

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☐ 406 MHz transmission :

☐ Frequency adjustment :

☐ General operation :

NEXT INSPECTION DUE ON :

INSPECTION SERVICE :

Date :

Signature and Stamp

OPERATION PROCEDURES KANNAD 406 WH - FLOAT FREE TYPE

PERIODIC INSPECTION LOG

on insertion

The container is fixed to the wheelhouse
(see installation instructions p. 4).

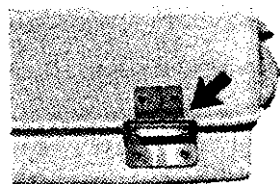
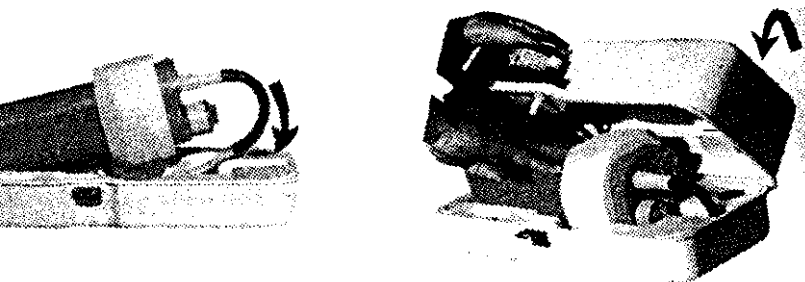
Place beacon in container according to position indicated (fig. 3-1).
The antenna must be folded over the switch and flash under the
Epirb and placed in the groove at the bottom of the container.
The label this "side up" must be seen when opening the container.
Do not touch switch protected with tamper proof seal.
The KANNAD 406 WH Epirb is already armed in position
READY for water activation when submerged in water.

While maintaining the beacon inside the container, put the hinges
into place and close the lid (fig. 3-2 - fig. 3-3).

Slide the release pin through the axle to lock the container (fig. 3-4).

Warning : Do not use Epirb inside a liferaft to enable good connection
with satellites, as wet canopy or canopy material with carbon component
may shield the signal from the Epirb. Best results are obtained when Epirb
is in water.

Fig. 3-2



6



Fig. 3-4

☐ Battery :

Batch date :

Replacement date :

☐ Release system (HAMMAR type) :

Replacement date to be notched two years after installation date

Date :

☐ Housing inspection :

☐ Watertight verification :

☐ Silicagel bags :

☐ 121,5 MHz transmission :

☐ 406 MHz transmission :

☐ Frequency adjustment :

☐ General operation :

NEXT INSPECTION DUE ON :

.....

INSPECTION SERVICE :

.....

Date :

Signature and Stamp

INSTALLATION INSTRUCTIONS KANNAD 406 WH

WARNING

The container should be installed on the wheelhouse and comply with following instructions :

Preferably in horizontal position

Clear area to allow the beacon to rise to the surface, should the ship sink. Watch rigging, antenna or shroud that could build obstacles (fig. 2-1)

Easy access to the crew for manual operation

Solidly fixed to the deck with 4 screws as shown (fig. 2-2).

Each vessel is particular, one will have to adapt to each case and possibly make adjustment parts.

Caution : The beacon lanyard is intended to tie the Epirb to the liferaft when floating. To enable good operation of automatic release system, do not tie lanyard to ship to ensure Epirb is released.

Before installing Epirb on board, please ensure that your ship station license includes appropriate authorization for an Epirb (406 - 406,1 MHz).

If not, application for license renewal needs to include this category of transmitter.

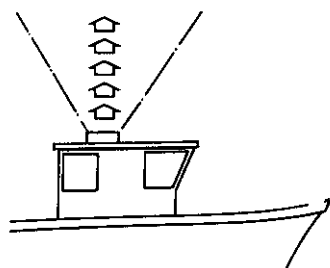
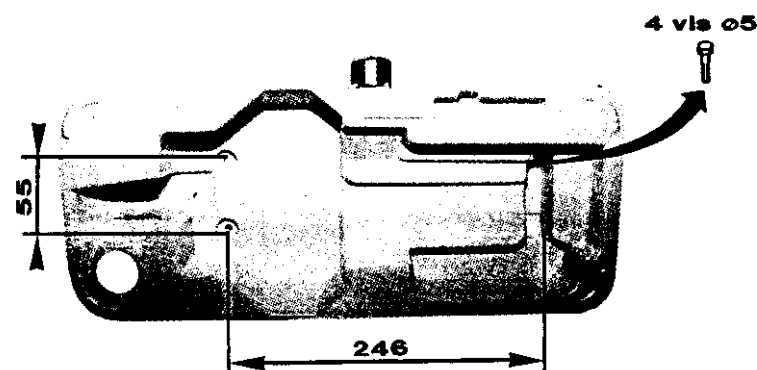


Fig. 2-1



2-2

DESCRIPTION OF THE COSPAS-SARSAT SYSTEM

NOTES

COSPAS-SARSAT is a global distress warning system operating on an exclusive frequency (406,025 Mhz) used to determine the vessel position, transmit its identification and alert the Search And Rescue Services (S.A.R.).

It consists of :

- Five satellites on 100 minute polar orbits
- Local user terminals (LUT's)
- Mission and Rescue Control Centers (MRCC's)
- Satellite emergency position indicating radio beacons (EPIRB's).

When operating, the beacon transmits a 0,44 second long message carrying the vessel identification code or serial number every 50 seconds. This message which is kept in the receiving satellite memory is retransmitted when the satellite is in view of a L.U.T.

After data processing, the L.U.T. decodes the identity of the Vessel in distress and calculates its position to an accuracy of 1 nautical mile. This information is then transmitted to the MRCC.

The beacon simultaneously transmits a continuous signal on the aeronautic 121,5 MHz frequency. This frequency makes rescue operations easier through a "Homing" procedure.

EMERGENCY INSTRUCTIONS

- 1) Remove Epirb from float free container.
- 2) Secure Epirb with tether line and throw in water.

MANUAL ACTIVATION

- 1) Remove Epirb from its container.
- 2) Unfold antenna.
- 3) Unscrew transparent cap.
- 4) Switch to ON.
- 5) Red light and strobe are illuminated.
- 6) Screw transparent cap back on.
- 7) Install Epirb in open area, antenna in vertical position ;
or
Secure Epirb to the liferaft with tether line and throw in water.

TO STOP EPIRB

Remove from water and switch back to READY position.

Distributed by

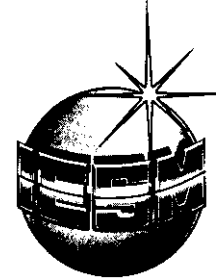
Manufacturer : **SERPE / I.E.S.M.**
Z.I. des Cinq Chemins - 56520 GUIDEL - FRANCE
Phone : +33 (0) 2 97 02 49 49 - Fax : +33 (0) 2 97 65 00 20
Telex : 950 535

Model : **FLOAT FREE - KANNAD 406 WH**
Automatic water activation - CATEGORY 1

FCC ID N° :

IESM Serial number :

UNIQUE IDENTIFIER NUMBER (15 characters)



INFORMATIQUE ELECTRONIQUE SÉCURITÉ MARITIME

INSPECTION AND OPERATION BOOKLET

**SATELLITE EMERGENCY POSITION
INDICATING RADIO BEACON**

KANNAD 406 WH

FLOAT FREE TYPE

Category 1

Automatic water activation

COSPAS SARSAT

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Pages

2	Description of the COSPAS-SARSAT system
3	KANNAD 406 EPIRBs - General
4	Installation instructions KANNAD 406 WH
5-7	Operation procedures KANNAD 406 WH
8/9	Test procedure
10	How to keep the inspection and operation booklet and the registration card.
11	Recommendation
12	Warning
13	KANNAD 406 technical specifications
14	Pre-delivery inspection log
15 - 19	Periodic inspection log
20	Warranty
21	Warning
22	Registration and identification card
23-24	Notes

WARRANTY

KANNAD 406 EPIRB carries a 12 month warranty for any in-service defects proven to have been caused by faulty materials or workmanship. The warranty period will commence from the date of purchase and excludes the battery pack.

See your dealer.



OPERATION PROCEDURES KANNAD 406 WH - FLOAT FREE TYPE

Operating principle

This container is used to protect an EPIRB (Emergency Position Indicating Radio Beacon) of the KANNAD 406 type and to ensure that it is released and that it operates automatically in the event of a boat sinking. It should be installed on the wheelhouse horizontally, so that the beacon can rise easily to the surface.

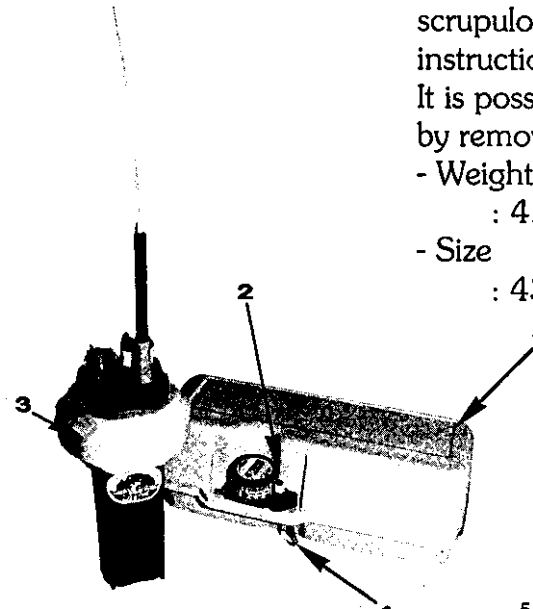
The CAL 89 [1] makes an envelope that gives excellent protection to the beacon. This envelope is made of IMPAX, a polycarbonate material extremely resistant to shocks, according to the double skin technique filled with polyurethane foam. The release device used is the Hammar H20 hydrostatic release [2].

At a depth of 4 to 12 ft, the release system operates and cuts the bolt. The top cover is freed and allows the beacon to rise to the surface [3] : the beacon is automatically activated when it is submerged **in water and out of its container**.

It is absolutely necessary to follow scrupulously the installation and operation instructions.

It is possible to open the container manually by removing the release pin [4].

- Weight of container
: 4,5 kg or 9 lb (Epirb and container).
- Size
: 435 x 220 x 160 mm.



PERIODIC INSPECTION LOG

attery :
date :
placement date :

release system (HAMMAR type) :
placement date to be notched two years after installation date
:

ousing inspection :

watertight verification :

ocagel bags :
1,5 MHz transmission :
6 MHz transmission :
frequency adjustment :
eneral operation :

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OPERATION PROCEDURES KANNAD 406 WH - FLOAT FREE TYPE

MANUAL ACTIVATION INSIDE CONTAINER

CAUTION

This procedure requires that the container is installed in a clear area.

- 1) Open container.
- 2) Unscrew transparent cap.
- 3) Switch to ON.
- 4) Red light and strobe are illuminated.
- 5) Screw transparent cap back on.
- 6) Close container.

Caution : Epirb transmission performance may be affected,
but automatic release system will operate as intended.

PERIODIC INSPECTION LOG

Battery :
Installation date :
Replacement date :
Release system (HAMMAR type) :
Replacement date to be notched two years after installation date
:
Bushing inspection :
Watertight verification :
Micagel bags :
21,5 MHz transmission :
06 MHz transmission :
Frequency adjustment :
General operation :

TEST INSPECTION DUE ON :
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INSPECTION SERVICE :
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Signature and Stamp

TEST PROCEDURE

3 — EVERY 2 YEARS

We recommend that servicing should be performed by a recommended agent who will check the beacon completely, change the seals, check the watertightness and change the hydrostatic release system. Work will be carried out on a charge basis for parts and labour, as it is not included in our warranty.

4 — EVERY 4 YEARS

Service performed by recommended agent only with original parts supplied by SERPE-IESM.

The battery pack must be replaced and the beacon operation checked thoroughly. Work will be carried out on a charge basis for parts and labour, as it is not included in our warranty.

The operation described in the 2 year test will also be performed.

WARNING :

The battery replacement must be performed only by a recommended agent who will dispose of it.

- Do not open beacon.
- Do not charge battery.
- Do not throw in fire.
- Do not expose to temperature over 70° C.
- Do not short circuit.

If the beacon is used for other than EPIRB testing, the batteries must be changed irrespective of duration of transmission.

ADVISORY :

Please contact your airline for guidance if you intend to utilize air transport for an EPIRB c/w lithium battery pack.

RE-DELIVERY INSPECTION LOG :

RECOMMENDATION

Battery :
Installation date :
Replacement date :
Release system (HAMMAR type) :
Replacement date to be notched two years after installation date
:
Resizing inspection :
Watertight verification :
Silicagel bags :
21,5 MHz transmission :
06 MHz transmission :
Frequency adjustment :
General operation :

RE-DELIVERY INSPECTION DUE ON :
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INSPECTION SERVICE :
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:

Signature and Stamp

DE-ALERTING SAR FORCES IN EVENT OF INADVERTENT ACTIVATION, OR ASSISTANCE NO LONGER REQUIRED

FALSE ALARMS DIVERT RESCUE FORCES
FROM REAL DISTRESS SITUATIONS.
RESPONDING TO FALSE ALARMS COSTS MILLIONS ANNUALLY.

WE NEED YOUR HELP :

- 1 - REMEMBER : ACTIVATING YOUR BEACON IS THE EQUIVALENT OF TRANSMITTING A MAYDAY.
- 2 - FOLLOW MANUFACTURER PROCEDURES WHEN TESTING YOUR BEACON.
- 3 - **IF YOUR BEACON IS ACTIVATED**
 - **IN A NON-DISTRESS SITUATION, or**
 - **IN A DISTRESS SITUATION, WHICH RESOLVES, AND YOU NO LONGER REQUIRE ASSISTANCE ;**

CONTACT THE NEAREST SAR AUTHORITIES VIA THE MOST EXPEDITIOUS MEANS AVAILABLE WITH THE FOLLOWING INFORMATION :

Beacon ID number (15 character UIN) :
Position (at time of activation) :
Date of Activation :
Time of Activation (time zone) :
Duration of Activation :
Beacon make and model :
Vessel name / ID :
Circumstances / cause (if known) :

PRIMARY U.S. POINT OF CONTACT IS THE U.S. COAST GUARD : PASS BY MOST EXPEDITIONS, DIRECT MEANS TO

For the Pacific :
PACIFIC AREA COMMAND CENTER (510) 437 3700
For the Atlantic / Gulf of Mexico / Atlantic :
ATLANTIC AREA COMMAND CENTER (212) 668 7055
Or from any location : (800) 323 SAFE
(800) 323 7233