

RESTRICTED

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**DRIVER'S
INSTRUCTION CARD
for
PERISCOPE AVII L7A1
(Passive Night Driving)
fitted in
PERISCOPE L16A1-for CVR(T)
FITTED WITH AN NBC COWL**

JUNE 1979

**SAFETY PRECAUTIONS,
OPERATION, INSTALLATION, REMOVAL
AND
MAINTENANCE INSTRUCTIONS**

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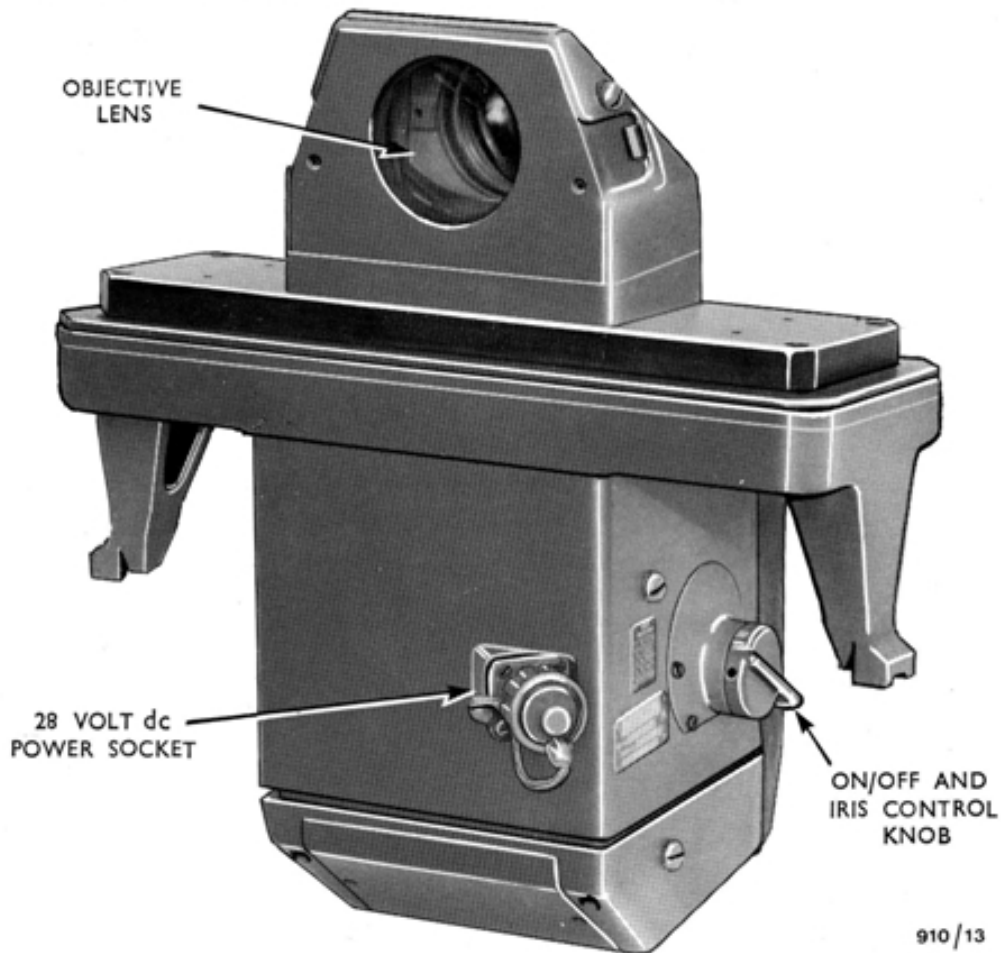
PERISCOPE AVII L16A1

SAFETY PRECAUTIONS

1. DO NOT open the iris of the periscope when exposed to the sun or other bright light, as this will damage the image intensifier tube.
2. NO attempt must be made to open the casing assembly or tamper with the RED painted screws. The periscope is a sealed unit and the screws are for use by REME only.
3. Switch 'OFF' the periscope if the RED fault indicator warning light illuminates and return it to REME for repair.
4. The Training Filter, dark glass, MUST always be used when the periscope is being operated during daylight simulated night operational training. It clips over the objective forward viewing lens.
5. Use of the periscope during daylight without the training filter is permitted ONLY IN AN EMERGENCY. UNDER THESE CONDITIONS IT MUST BE USED WITH THE IRIS CLOSED DOWN TO THE SMALLEST APERTURE. THE CONTROL KNOB MUST BE SET TO THE FIRST CLICK STOP ONLY. HIGHER SETTINGS ARE NOT TO BE USED.
6. Always ensure that the periscope is switched 'OFF' before installing or removing it from the vehicle.
7. Always ensure that the periscope is switched 'OFF' when not in use, including when disconnected from the power supply.
8. Dirt or moisture entering the periscope will badly affect its performance. Should this occur return it to REME for repair.
9. Take great care to avoid scratching the glass surface during cleaning operations and when installing or removing the periscope. Keep it clean by observing the servicing procedures given on pages 3/4 of this instruction card. Dust, moisture or finger prints on the lens surfaces will reduce the performance of the periscope.

FILTERS

10. Two filters are issued with the periscope. A daylight Training Filter, made from dark glass fitted into a yellow mounting and a Nuclear Flash Filter made from clear heat resistant glass, fitted into a drab olive mounting. Both filters are attached directly to the objective, forward viewing lens assembly by means of the two toggle catches on the mounting which engage with the hookplates of the periscope housing. The filters are stored in individual laminated nylon pouches, toggle catches facing the rear of the pouch, when not in use.



OPERATION

11. The 'ON/OFF' Iris control knob must NOT be turned beyond the first click stop during DAYLIGHT operation without the Training Filter. At NIGHT the control knob should be adjusted to the stop setting which provides the best viewing brightness.

12. Daylight Training. When the Training Filter is fitted the control knob should be turned to the maximum click stop (No 5) to provide the largest sight aperture during simulated night conditions.

13. The Nuclear Flash Filter is only fitted when instructed. During DAYLIGHT use the 'ON/OFF' Iris control knob must NOT be turned beyond the EMERGENCY DAY SETTING (the first click stop).

14. Switching 'ON' (first click stop) connects the battery supply to the periscope and enables the operator to use the periscope during daylight as an EMERGENCY day sight. At night the setting required is dependent on the amount of natural light, ie moon and starlight present. In the event of sudden increased illumination, ie flares, the periscope will automatically reduce the brightness received to maintain a constant screen brightness. Should this additional light become excessive, the picture will become white and temporarily unusable. Continued use of the periscope under these conditions will result in a black-out of the screen and permanent damage.

15. The eyepiece heater should be switched 'ON' when necessary to prevent misting.

16. If the RED fault indicator warning light operates at any time it indicates a short circuit failure. The periscope will continue to function for a short period only before it becomes damaged and ceases to operate. It is IMPORTANT that, as soon as possible after the warning operates, the periscope is switched 'OFF' and returned to REME for repair.

CLEANING AND FUSE REPLACEMENT

17. The exposed objective lens and filters should be swabbed with plenty of clean water and a clean cloth in order to remove dirt and mud. A small quantity of detergent added to the water will assist in removing oil film and finger marks. A moist chamois, soft dry cloth or lens cleaning tissue should be used to dry the windows. Cleaning of these items can be assisted by breathing on the surface and wiping with lens cleaning tissues, after ensuring the absence of any abrasive particles. Great care MUST be taken to avoid scratching the glass surface during cleaning and handling.

18. Methylated spirits, gasoline or other cleaning agents should NOT be used as they can cause deterioration of the sealing and bonding materials.

19. NO attempt should be made to strip or tamper with the periscope as it is a sealed unit. Repairs MUST be carried out by REME.

20. When visibility is poor check that the glass surfaces of the periscope and filters if in use, are clean and free from mist.

21. All electrical cables, plugs, sockets and contact surfaces should be kept clean and dry. The periscope body and vehicle mounting recess should be kept clean and lightly oiled with OML3.

22. In the event of the periscope failing to operate when switched 'ON', the fuses on the right-hand side of the periscope should be unscrewed, inspected and replaced if necessary. If the periscope still fails to operate and the vehicle power supply is functioning correctly, it requires repair by REME.

INSTALLATION

23. To install the periscope, follow the sequence below:

a. Support the driver's day periscope and unscrew the two knurled retaining nuts.

b. Turn the retaining clamps sideways and lower the day periscope clear of the mounting aperture. Place it in the stowage bin.

c. Check that the mounting aperture is clean, free of mud, grit and sand.

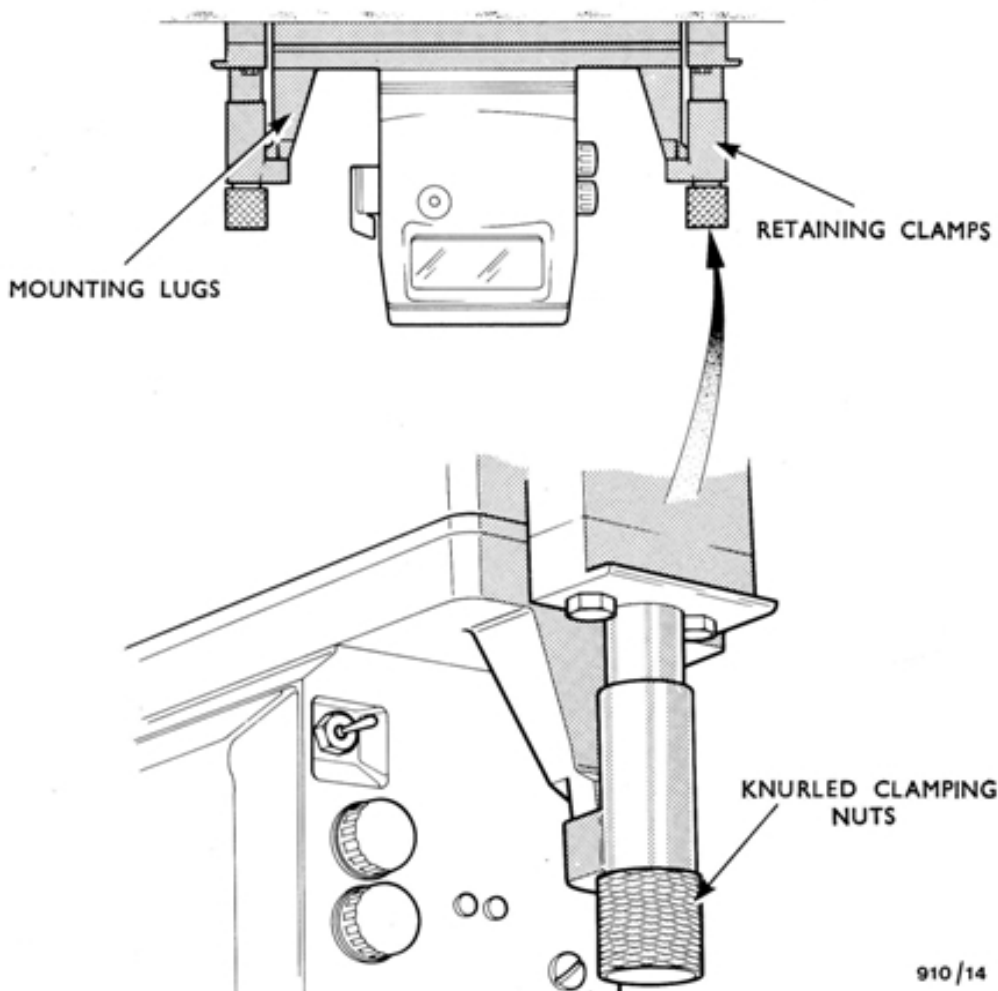
d. Check that the rubber sealing gasket on the mounting flange of the L16A1 passive night driving periscope is serviceable. If installing the periscope for daylight training ensure that the ND Training Filter is fitted, (clipped over the objective lens).

e. Insert the passive night driving periscope into the mounting aperture and turn the retaining clamps inwards. Check that the clamps are in line with the periscope mounting lugs then screw up the knurled retaining nuts.

f. Ensure that the periscope 'ON/OFF' switch and the heater supply switch are both set to 'OFF'.

g. Unscrew the periscope socket protective cap.

h. Connect the power supply lead between the periscope socket and the top socket located on the forward end of the driver's instrument panel.



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TESTING

24. Set the periscope switch to 'ON'. IF FITTING AND TESTING THE PERISCOPE DURING DAYLIGHT ENSURE THAT THE TRAINING FILTER IS FITTED. Rotate the iris control until the required illumination is achieved. If necessary switch the eyepiece heater 'ON' to remove any misting.

REMOVAL

25. To remove the passive night driving periscope:
- a. Ensure that both the periscope ON/OFF and heater switches are set to 'OFF'.
 - b. Disconnect the vehicle supply plug from the periscope socket and replace the protective cap.
 - c. Remove the passive night driving periscope and replace the driver's day periscope following the same sequence as para 23a - e.