

ABSTRACT

After the pre-aligned and locked steering mirror/mounts have been removed from the Pcal Periscopes, the mirrors are removed from the mounts and installed in storage containers.

The following procedure enables the mirrors of each Periscope to remain matched to their respective mounts, with repeated orientation within the mounts, as is required to maintain the precise pre-alignment of the Periscopes. The procedure regards the Ifo3 X-Arm Periscope as example.

The steps of mirror Removal & Storage are covered. For mirror/mount rebuilding, these steps are to be followed precisely in reverse, referring to Mirror Storage Records created in the Removal & Storage steps contained herein.

CLEAN TOOL LIST

5/64 Hex Key
3/32 Hex Key
6" Steel Rule

PROCEDURE (Ifo3 X-Arm Example)

2" MIRRORS – REMOVAL & STORAGE:

1. Lay an empty and uncovered 2" mirror Storage Container, D1201049-V2, on the work bench with its engraved numbering upright and facing you.
2. Record the engraved P/N and S/N of the Storage Container, e.g. D1201049-V2 S/N 004.
3. Lay a 2" mirror/mount on the work bench with the mirror facing upward and the engraved mirror/mount designation toward you.
4. Record the engraved mirror/mount designation with the P/N, S/N, and cell of the Storage Container, e.g.

STORED	FROM MOUNT / CELL
D1201049-V2 S/N 004	U2 X05 up

Where U2 X05 is the mirror/mount designation, and "up" denotes the Storage Container cell which faces upward when the Storage Container's engraving is upright.

5. Loosen the mount's mirror retaining set screw about 4 turns.
6. Make sure that the up-facing Storage Container cell's set screw is also well backed off.
7. As the mirrors tend to stick to their side contact points in the mounts, it is usually necessary to free them at this point in the process. To do this, carefully use a thin, stiff metal object such as a 6" steel rule to pry the mirror free.
8. Carefully minding the mirror's orientation (clocking), remove the mirror from the mount, flip it over sideways (left to right, not top to bottom), and insert it (HR side downward) into the up-facing Storage Container cell.
9. Secure the mirror in the Container cell by tightening the cell's set screw fairly snugly against the mirror, then applying the Container Cover, D1201050. For Storage Container Assembly details see drawing D1201066.
10. Flip the Storage Container over, keeping its engraved numbering toward you but now upside down.
11. Starting with the next 2" mirror/mount, repeat steps 3 through 9. With the Storage Container now full, its storage record will have a form such as:

STORED	FROM MOUNT / CELL
D1201049-V2 S/N 004	U2 X05 up
	L2 X05 down

12. Continue the above procedures to store 5 2" mirrors in 3 Storage Containers.

13. For each Periscope, post on DCC a complete Mirror Storage Record for the 5 2" mirror/mounts, and 4 rectangular mirror/mounts (see "RECTANGULAR MIRROR/MOUNTS" below).

2" MIRROR/MOUNTS - REBUILDING:

To correctly rebuild the 5 2" mirror/mounts, use the Periscope's Mirror Storage Record created in the Removal & Storage procedures above. Follow the Removal & Storage procedures precisely in reverse. When securing the mirrors into the mounts, make sure that the backs of the mirror substrates are kept well seated within the mounts.

RECTANGULAR MIRROR/MOUNTS:

Using a similar step-wise procedure as for the 2" mirror/mounts, remove & store the rectangular mirrors in Storage Containers D1201173-V1, preserving mirror/mount designation and orientation. Use covers D1201174, and see Storage Container Assembly drawing D1201175.

Two Storage Containers will be used to contain 4 rectangular mirrors. Each rectangular mirror Container's storage record will have a form such as:

STORED	FROM MOUNT / CELL
D1201173-V1 S/N 003	CU1 X05 up
	CL1 X05 down

To correctly rebuild the 4 rectangular mirror/mounts, use the Periscope's Mirror Storage Record created in the Removal & Storage procedures above. Follow the Removal & Storage procedures precisely in reverse. When securing the mirrors into the mounts, make sure that the backs of the mirror substrates are kept well seated within the mounts.