

Model 6810: Replacing an Old (Brown) Partial Radome with the New (White) Style

Step 1: Remove the bay assembly from the feedline

WARNING

Whenever a rigger is on the tower in the area of the antenna, shut off the power and lock it off so that it cannot be turned on accidentally.

CAUTION

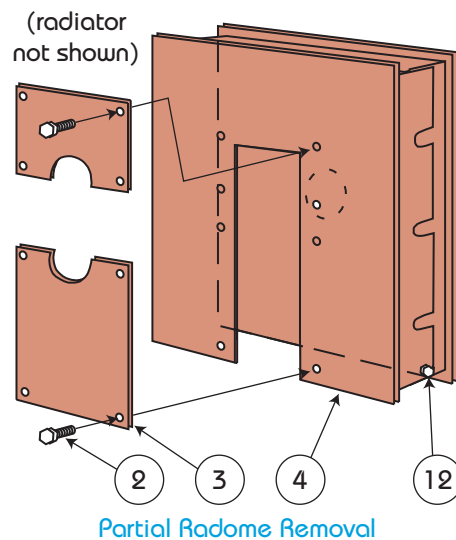
Do not disturb the feed strap (1) at any time during this process. If you do, the antenna will not perform well.

1. Shut off all power to the antenna and any other antennas on the tower.
2. Depressurize the system.
3. Mark each radiator with its position in the array. Radiator number 1 should be at the top. NOTE Closure plate screws are usually 1/4" hex, but may be round-head. If they are round-head and the feed strap is in their way, take great care not to disturb the feed strap.

NOTE

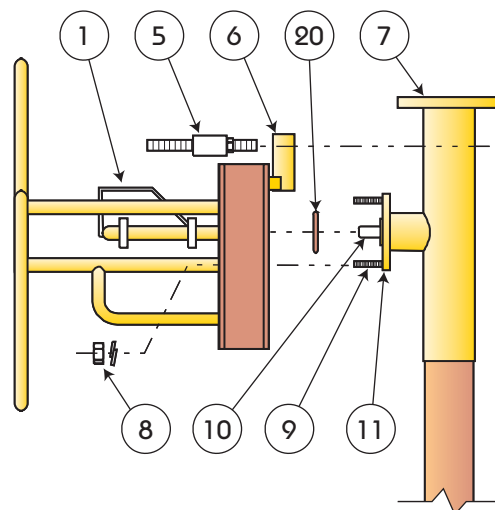
Closure plate screws are usually 1/4" hex, but may be round-head. If they are round-head and the feed strap is in their way, take great care not to disturb the feed strap.

4. For each antenna radiator: remove the screws (2) securing the closure plates (3) to the partial radome (4), and remove the closure plates.
5. Remove the hose clamp (5) securing the saddle (6) to the feedline (7).
6. Inside the partial radome, remove the flange nuts (8) from the feedline studs (9).
7. Remove the entire bay assembly from the feedline.
8. Leave the inner conductor connector (10) in the feedline. If it comes off with the bay assembly, pull it out and re-install it in the feedline.
9. Carefully lower the bay assembly to the ground.
10. Seal the baymount (11) with a protective cover to keep dirt out. If you wish, you may purchase a cap flange from Shively Labs.



Step 2: Remove the old partial radome from the radiator

1. Inside the partial radome, remove the two bolts (1/2" hex) securing the antenna mounting saddle (6) to the antenna radiator.
2. Remove the plastic spacer between the back of the radiator and the partial radome.
3. Remove the two small screws (12) at the sides of the partial radome and spread the radome so that the front clears the antenna arms and the back clears the mounting flange.
4. Lift the partial radome off over the top of the antenna radiator.



Document No.: [ts-6810_partial_radome \(070502\)](#)

Step 3: Install the new partial radome on the radiator

CAUTION

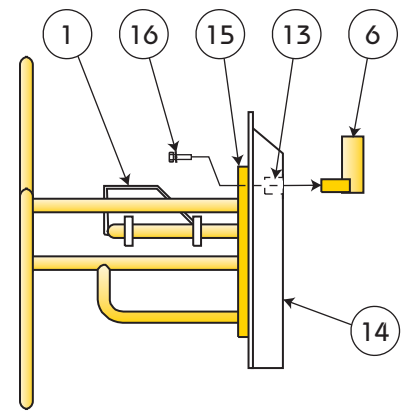
Do not disturb the feed strap (1) at any time during this process. If you do, the antenna will not perform well.

1. Assemble the new partial radome, including the two closure plates, over the radiator. Install enough of the hardware to ensure that the radome is in position, centered over the mounting flange in the back and the end seal in the front.
2. Using the holes in the indentation (13) in the new partial radome back section (14), drill two 5/16" holes through the back channel (15).

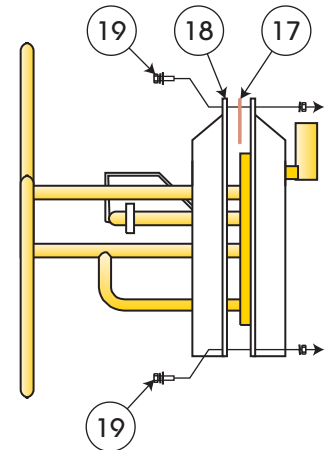
CAUTION

If any metal chips remain inside the assembly, arcing may occur and damage your antenna.

3. Disassemble the partial radome and thoroughly clean any chips from the interior of the antenna bay and radome.
4. Install the radome back section (14). Bolt the mounting saddle to the back channel, using two 1/4-20 bolts with lock washers (16) through the back channel and the radome into the saddle block.
5. Apply a very small bead of silicone sealant (17) between the radome sections, across the top and down about 3 inches on each side. Install the radome front section (18) and tighten the screws (19).



Saddle Installation



Radome Assembly

Step 4: Install the bay assembly on the feedline.

1. As you reinstall the bay assembly, observe the following precautions:

CAUTION

Be sure the number of the bay matches its position in the array. (Bay number 1 is at the top). If bays are switched, your antenna performance and VSWR will degrade.

Be sure each bay is mounted right-side-up, with the saddle at the top.

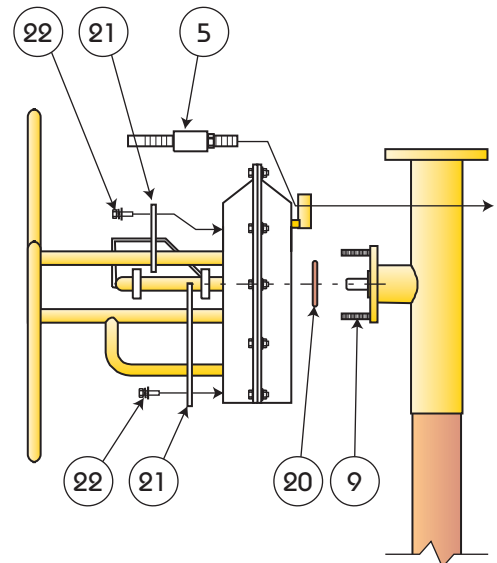
Do not use silicone grease on the O-ring, as this will soften the silicone O-ring and cause air leakage. We use petroleum jelly.

Use only a light lubricating coat of petroleum jelly; too much may hamper electrical contact and contaminate the interior of the system.

Be sure the O-ring is properly seated in its groove and not pinched between the flange contact surfaces.

Be sure the radiator's inner conductor connector fits cleanly over the baymount's inner conductor connector. If any of the fingers of the connector are forced outside the radiator's inner conductor (a "split bullet"), this may cause arcing and damage to the antenna.

2. If you have lost track of which bays is which, or if any damage has occurred to the radiators or feedstraps, stop now and call Shively Labs for assistance. We have records of your antenna's bay sequence and feedstrap positions.
3. Carefully lift the bay assembly into position.
4. Install a lightly greased O-ring (20) in the groove on the baymount flange surface.



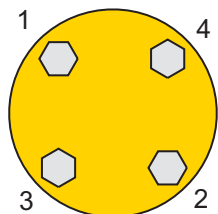
Final Assembly

5. Align the radiator flange with the mounting studs (9) on the feedline. Install the lock washers and flange nuts (8) snugly, but do not tighten them yet.
6. Install a new heavy-duty hose clamp (5) to secure the saddle to the feedline.

CAUTION

Don't overtighten the flange bolts. Tighten 5/16-18 bolts to 12 ft-lb (16 N-m), or 3/8-16 bolts to 21 ft-lb (28 N-m).

7. Tighten the hose clamp and tighten the flange nuts (8) in the order shown.
8. Install the closure plates (21) and tighten their screws (22).



Flange Nut Tightening