

# TracPhone® V30 Fans Replacement Instructions



The following instructions explain how to replace the fans in a TracPhone V30 antenna.

*NOTE: Your antenna might have parts that differ from those pictured in this document. Such differences have no bearing on the instructions unless noted otherwise.*

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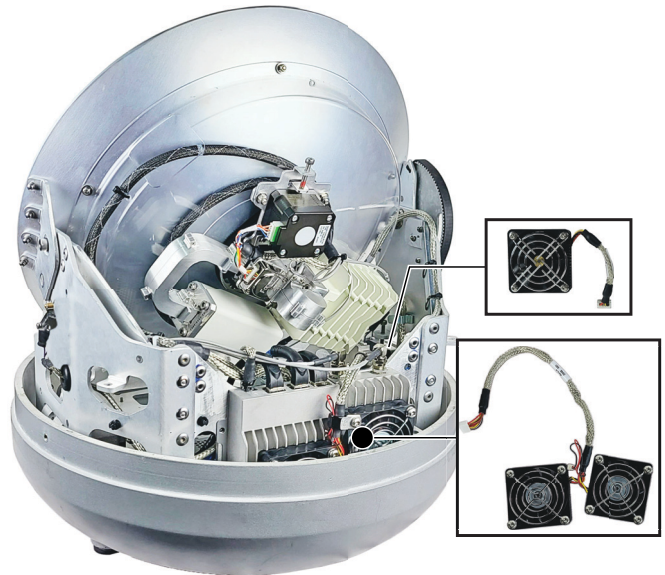
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## Tools Required

This procedure requires the following tools:

- #2 Phillips screwdriver
- Driver with T10 and T20 Torx bits
- Torque driver (adjustable to 9 in-lbs and 10 in-lbs)
- Cutting pliers
- Needle-nose pliers
- 7/16" open-end wrench
- 7/16" torque wrench set to 15 in-lbs

Figure 1: Fans on Main Board and Modem



## Technical Support

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54-1389 Rev. A | 72-0940 and 72-0941

## Remove the Radome

Follow the steps below to disconnect power and remove the radome from the antenna.

1. Power off and unplug the VSAT-Hub to disconnect power from the antenna.



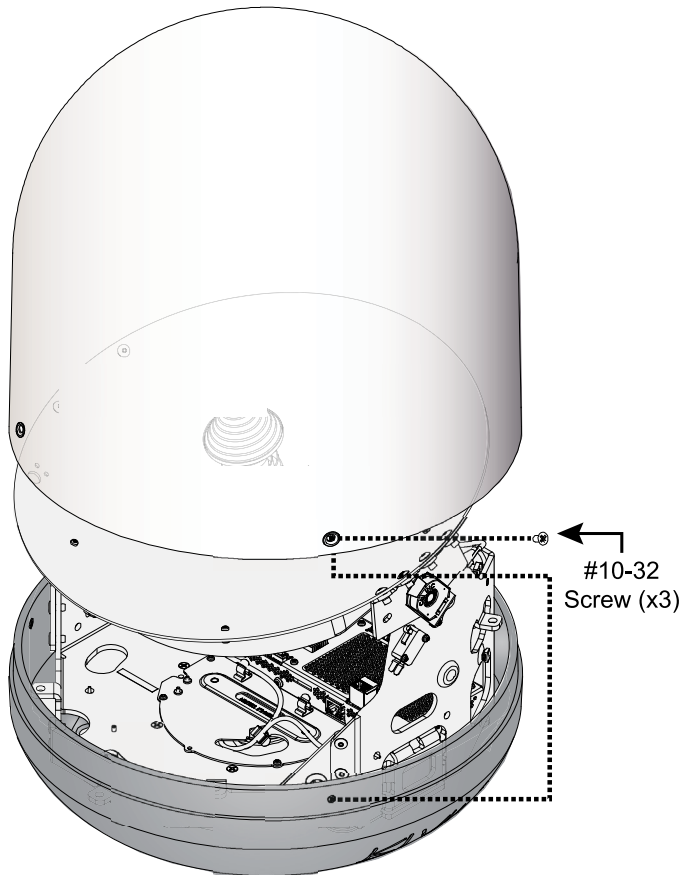
### CAUTION

To prevent injury, be sure to disconnect all power from the antenna before proceeding. Power must remain disconnected for the duration of this procedure.

2. Remove and discard the three #10-32 screws securing the radome to the baseplate (see Figure 2). Carefully lift the radome straight up until clear of the antenna assembly and set it aside in a safe place.

*NOTE: If you keep the radome topside, secure it with a lanyard to prevent it from falling overboard. Also, do not place the radome on a hot steel deck – the heat may warp the radome.*

Figure 2: Radome Screws

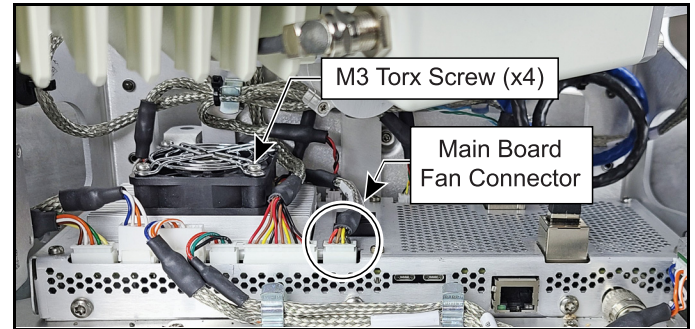


## Replace the Main Board Fan

Follow the steps below to replace the main board fan.

1. Disconnect the fan cable from the main board (see Figure 3). **Be sure to disconnect by grasping the connector body; do not pull on the wires.**

Figure 3: Main Board Fan Screws and Cable Connector



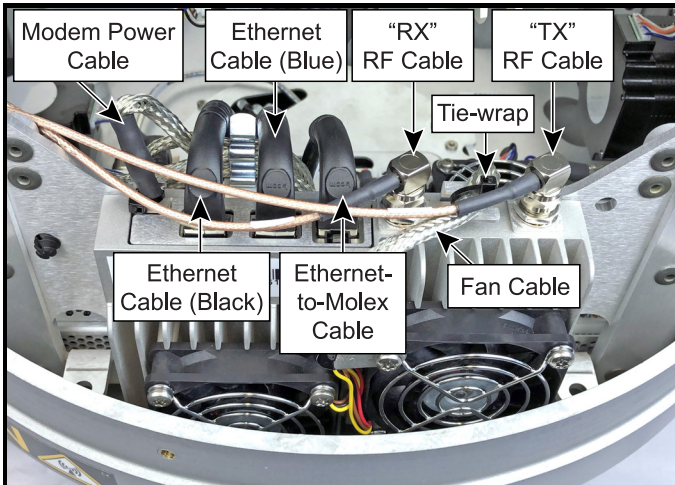
2. Using a T10 Torx screwdriver, remove the four M3 Torx screws and flat washers securing the fan and grill cover to the main board (see Figure 3).
3. Discard the old main board fan.
4. Using four new M3 Torx (T10) screws and washers (*supplied in kit*), attach the new grill cover and fan, label facing down, to the main board. Be sure to orient the fan so that its connector wire faces the rear right-hand side of the main board. Then tighten the screws to 9 in-lbs of torque.
5. Reconnect the fan cable to the main board.

## Replace the Modem Fans

Follow the steps below to replace the modem fans.

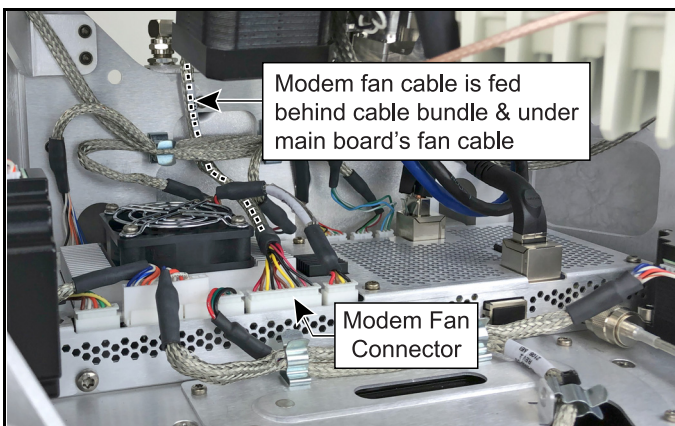
- Using a 7/16" wrench, disconnect the two RF cables from the modem. To avoid stressing the cables, hold the tops of the connectors while loosening (see Figure 4).

Figure 4: Modem Cable Connections



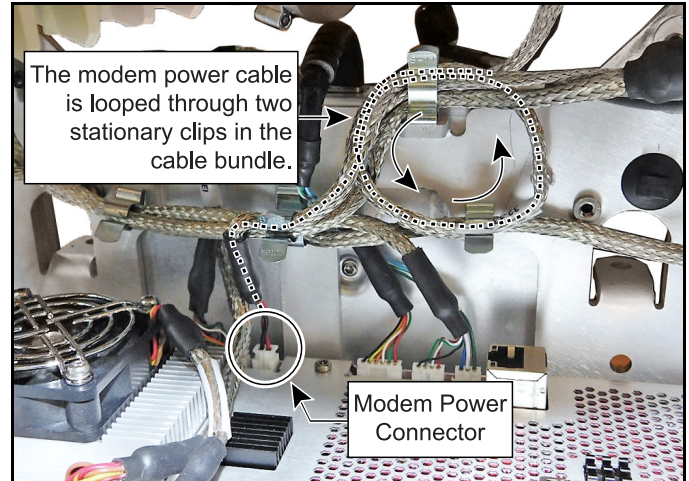
- Disconnect the three Ethernet cables from the modem (see Figure 4).
- Cut and remove the tie-wrap securing the fan cable to the modem (see Figure 4).
- Disconnect the modem fan cable from the main board (see Figure 5). **Be sure to disconnect by grasping the connector body; do not pull on the wires.** Then carefully extract the modem fan cable by pushing the connector up behind the cable bundle.

Figure 5: Modem Fan Cable Routing and Connection



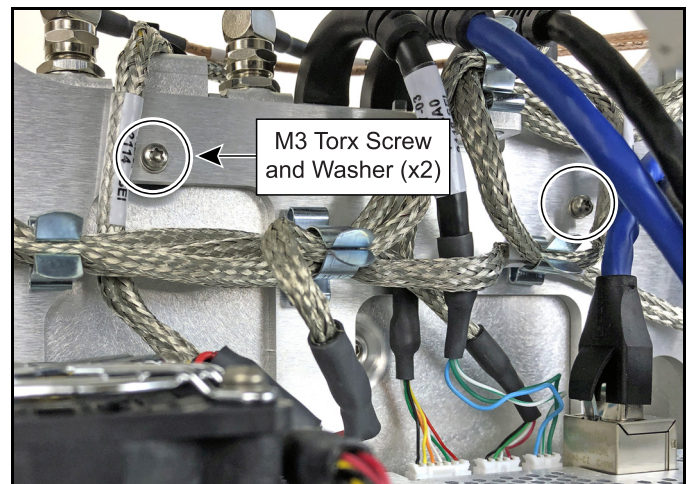
- Disconnect the modem power cable from the main board (see Figure 6). **Be sure to disconnect by grasping the connector body; do not pull on the wires.** Then carefully extract the modem power cable from the clamps and the cable bundle loop.

Figure 6: Modem Power Cable Routing and Connection



- Using a T10 Torx screwdriver, remove and discard the two M3 Torx screws and washers securing the modem to the antenna frame (see Figure 7).

Figure 7: Modem Mounting Screws



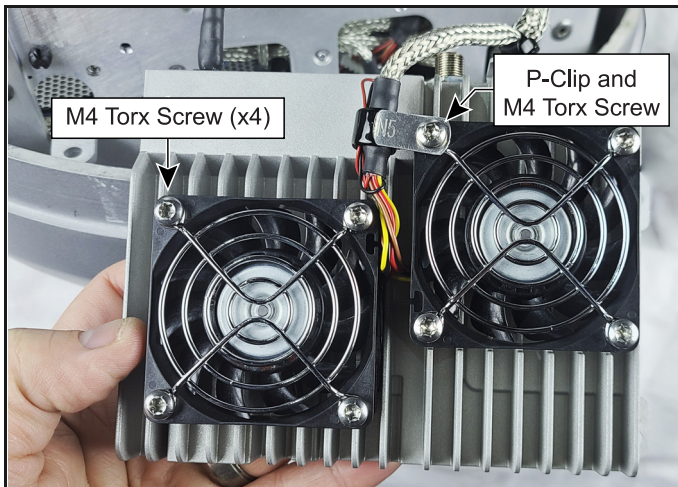
- Slide the modem straight up to detach it from the two mounting posts on the frame.

**IMPORTANT!**

It is critical to support the weight of the modem, as well as the fans, while performing steps 8-10 (and steps 14-16). The in-line connector between the fan assembly and the modem is very delicate and can be easily damaged by excessive strain.

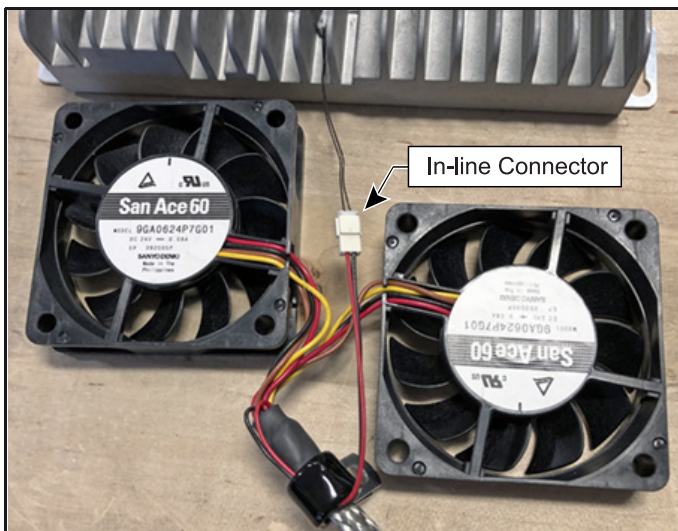
8. While supporting the weight of the modem, using a T20 Torx screwdriver, remove and discard the four M4 Torx screws securing the left-hand fan and grill cover to the modem (see Figure 8). **Do not remove the fan from the modem yet.**

Figure 8: Modem Fan Assembly Screws and P-Clip



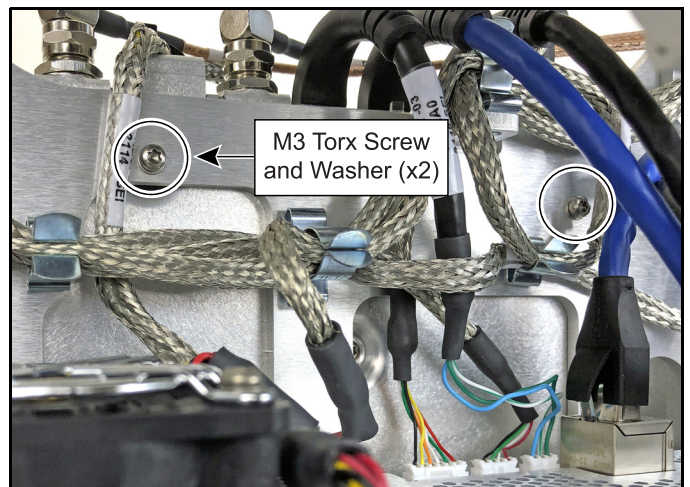
9. Remove the four screws securing the right-hand fan and grill cover (see Figure 8). Removing the top left-hand screw will also detach the P-clip.
10. Carefully flip both fans over together towards the bottom of the modem, allowing access to the delicate in-line connector between the fans and the modem (see Figure 9). Disconnect the in-line connector.

Figure 9: Modem-to-Fan Assembly In-line Connector



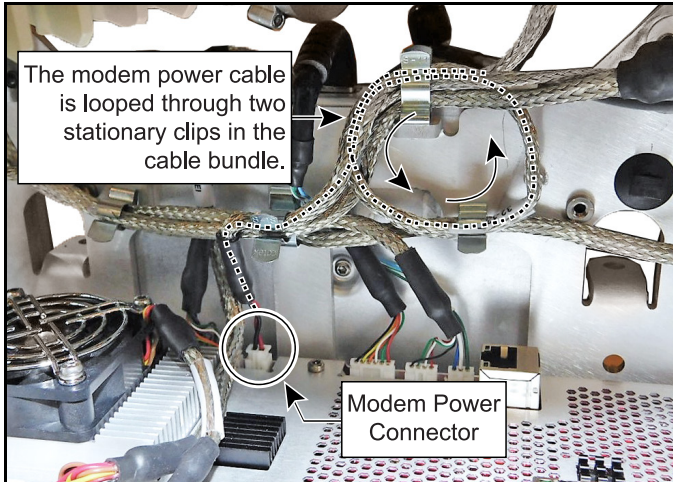
11. Discard the old fan assembly.
12. Position the new P-clip around the new fan assembly's cable as shown in Figure 9.
13. Connect the modem's in-line connector to the new fan assembly.
14. Flip the fans right-side-up and position the fans onto the modem, fan labels facing down. Be careful not to pinch any wires under the fans.
15. Attach the right-hand fan, grill cover, and P-clip to the right-hand side of the modem, with four new M4 Torx (T20) screws (*supplied in kit*). Position the P-clip as shown in Figure 8. Then tighten the screws to 10 in-lbs of torque.
16. Attach the left-hand fan and grill cover to the modem, with four new M4 Torx (T20) screws. Tighten the screws to 10 in-lbs of torque.
17. Position the modem upright against the frame and engage the two slotted holes at the base of the modem with the mounting posts on the frame.
18. Secure the modem to the frame using two new M3 Torx (T10) screws and washers (*supplied in kit*) (see Figure 10). Tighten the screws to 9 in-lbs of torque.

Figure 10: Modem Mounting Screws



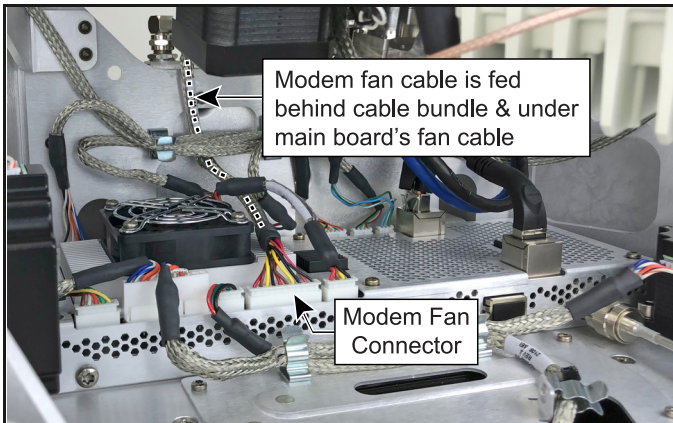
19. Route the modem power cable through the cable bundle loop and secure it to both stationary clips (see Figure 11).

Figure 11: Modem Power Cable Routing and Connection



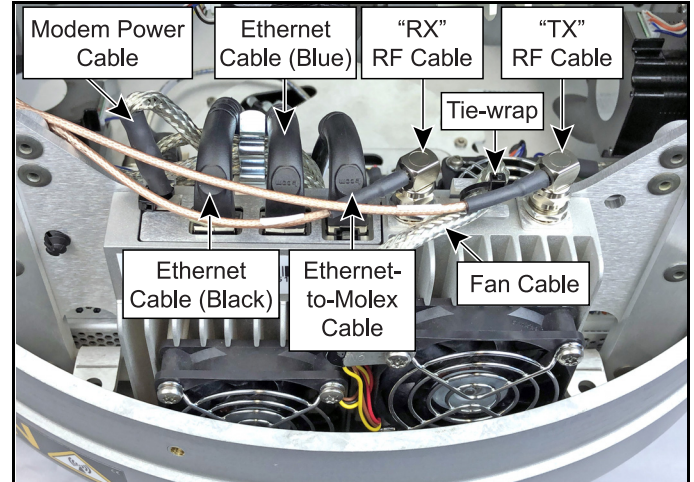
20. Connect the modem power cable to the main board and secure the cable in the third stationary clip above.
21. Route the modem fan cable behind the cable bundle and under the main board's fan cable and connect it to the main board (see Figure 12).

Figure 12: Modem Fan Cable Routing and Connection



22. Secure the modem fan cable to the modem with a new tie-wrap (supplied in kit) at the location shown in Figure 13. Tighten the tie-wrap and trim the excess.

Figure 13: Modem Cable Connections



23. Reconnect the Ethernet cables to the modem as shown in Figure 13.
24. Apply some silicone grease inside the connectors of the RF cables and reconnect them to the modem, orienting the connectors as shown in Figure 13. Be sure to connect the RF cable labeled "TX" to the connector on the right. Then tighten the connectors with a 7/16" torque wrench set to 15 in-lbs.
25. Slowly rotate the RF feed assembly in all directions to ensure nothing restricts movement. Adjust the cable routing, if necessary.
26. Inspect the inside of the antenna to make sure you have not left any tools or debris inside.
27. Reinstall the radome onto the antenna and secure it with three new #10-32 screws (supplied in kit). Tighten the screws to 5 in-lbs of torque.
28. Reconnect power to the VSAT-Hub.
29. Test the system for normal operation. If the problem persists, contact KVH Technical Support.

The replacement procedure is complete!