

ARCS PROCEDURE	REPLACING STANLEY AERI HATCH WITH DUFF-NORTON AERI HATCH	PRO(AERI)-012.000
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Replacing Stanley AERI Hatch with Duff-Norton AERI Hatch

I. Purpose:

This procedure describes the actions necessary to replace a “Stanley” design AERI hatch system with a “Duff-Norton” design AERI hatch system.

II. Cautions and Hazards:

The replacement essentially involves removal of each component of the hatch system from the roof of whatever shelter within which the AERI is housed, followed by direct replacement with the corresponding components of the “Duff-Norton” design hatch system. In particular, all external components (i.e., the hatch lid, the actuator mechanism, a steel “chimney,” external cables, and precipitation sensor) must be removed from the roof of whatever shelter houses the AERI. The existing stovepipe or chimney on the roof of the shelter is also no longer needed and must be removed. In addition, the hatch controller inside the shelter must be exchanged for the one designed to control the Duff-Norton actuator.

III. Requirements:

Tools required:

- 2 socket wrenches, one for each opposing side of nut and bolt
- Socket heads: $\frac{7}{16}$ ”, $\frac{3}{4}$ ”
- Hack saw or reciprocating saw (if available)
- Slotted and Phillips screwdrivers
- Scraper
- Pry-bar or crowbar
- Small sledgehammer
- UV-resistant RTV or silicone caulk

IV. Procedure:

A. Removing Stanley AERI Hatch System

1. Removing the lid:
 - a) Remove the two bolts fastening the Stanley garage door opener to the frame of the lid, separating the lid from the actuator mechanism.

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- b) Position the lid frame in an upright manner so that the bolts fastening the lid frame to the roof are accessible.
 - c) Remove the $\frac{3}{4}$ " bolts that hold the lid mechanism to the roof of the enclosure. The threaded anchors for the bolts are supposed to be cemented into the roof, but if the cement does not hold, it will be difficult or impossible to unscrew the bolts. If this happens, simply remove all the bolts that can be unscrewed and then pry the entire lid frame from the roof surface with a crowbar. The holes produced will be sealed with RTV or silicone caulk later.
2. Remove the steel chimney:
 - a) Remove the $\frac{3}{4}$ " bolts that hold the chimney to the roof. The bolts are anchored in RTV and if the threads in the anchor strip the bolts can be pulled out or removed with the chimney.
 - b) Remove any caulk surrounding the chimney.
 - c) Remove the chimney by prying it loose with a screwdriver or pry bar. If those fail, use a sledgehammer to loosen it.
 3. Remove the inner fiberglass chimney:
 - a) Use a saw to cut off the fiberglass inner chimney, leaving a lip of $\frac{1}{2}$ " - 1" above the roof surface. The amount remaining is not critical. The lip should be lower than the new hatch height of about 2" - 3".
 4. Remove the housing for the hatch mechanism.
 5. Remove the mounting frame for the Stanley garage door opener.
 6. Remove all cables and connectors necessary:
 - a) Remove the housing that covers the hatch drive mechanism by removing the $\frac{7}{16}$ " bolts holding the cover to the roof. The bolts are set in RTV. If the RTV threads become stripped, pull out the bolts or remove them with the housing.
 - b) Pry off the housing using a pry bar or screw driver. Pry off any bolts that could not be removed.
 - c) Remove all electrical connections after you make sure that the power is off. The electrical connectors pass through a narrow PVC tube. Most of the connectors can be removed more easily by removing the plug and passing the wire from the enclosure up to the roof. Select the easiest way to remove the connections. You will use this PVC tube to pass the new electrical connections through to the new housing.
 - d) Remove the four $\frac{3}{4}$ " bolts that hold the drive assembly to the roof and remove the drive assembly.

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e) Fill all the holes in the roof with RTV or caulk.

B. Installing Duff-Norton Hatch System

The new hatch mechanism consists of the hatch cover and drive module on a base. The power cable is a single piece that contains ten wires. It does not contain a snap-off connector. The power cable ends at the control module.

1. Locate the 10 wire-leads in the control module.
2. Label all wires.
3. Disconnect all wires.
4. Pull the cable with the wires out and free from the control module.
5. Cover the base of the hatch mechanism with a bead of caulk or RTV.
6. Place the new hatch mechanism over the ½" - 1" lip of the fiberglass chimney.
7. Place the back of the mechanism so that it is close to the PVC pipe.
8. Drill holes through the base of the hatch mechanism and into the roof of the enclosure. Fill the holes with RTV.
9. Drill holes through the base of the hatch mechanism and into the roof of the enclosure. Fill the holes with RTV.
10. Run the electrical cable through the PVC pipe.
11. Fill the hole of the PVC tube with RTV or caulk so precipitation cannot enter the enclosure.
12. Reconnect the wires in the cable to the control module.

V. References:

None.

VI. Attachments:

None.