

# Right-Hand Boom Shut-Off Installation Guide

**Overview:** This installation guide provides step-by-step instructions on installing the Right-Hand Boom Shut-Off. Excluding the boom and Right-Hand Boom Shut-Off Control Panel, all the parts for installation are listed on Drawing 53054 or 53055, Sheet 1 of 3.

## Latest Version of the "Right-Hand Boom Shut-Off Installation Guide"

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## Safety Information

### Read and Follow Safety Messages

- In these instructions, you may see the heading **⚠WARNING:** and/or the safety alert symbol **⚠**. They indicate a hazardous situation that, if not avoided, could result in death or serious injury. The safety messages provide information to identify a hazard associated with potential injury.
- Read and understand this manual and all the warnings below before installing, operating, or performing maintenance or service. FAILURE TO DO SO MAY CAUSE IRREVERSIBLE DAMAGE TO YOUR SYSTEM.
- When the word "item" is used in this installation guide, it is referencing the item list on Drawing 53054 or 53055.
- Keep this manual and all related safety information with the manuals for your aircraft.

### ⚠WARNING:

- Turn off power before connecting or disconnecting wires. Failing to do so can damage the system.
- Plan your installation by considering the following: 1) wire lengths, 2) clearance space, 3) power source, 4) aircraft structure, and 5) visibility.
- Consider using existing hardware and hardware locations. Avoid drilling holes that may damage other equipment (such as structural frame members, electrical cables, or fluid lines).
- Do not obstruct the view of, or access to, other instruments or the flying visibility of the operator.
- Do not route cables alongside power generator wire and other high-noise electric sources. This will cause interference.
- Do not kink or force cables into sharp bends. This can damage the cable.
- Store excess cable length with at least a 6-inch bend radius.
- Do not coil the cables. This will introduce noise in the system.
- Avoid high-temperature exposure (for example, exhaust manifold) when routing wires.
- Do not allow anyone to operate without instruction.



A drill and drill bits are required for this installation.

## Installation Instructions

1. Unpack the kit and identify the required parts as shown on Drawing 53054 or 53055, Sheet 1 of 3.
2. If PN 25050 is installed for the 50% or 60% Boom Shut-Off, then the Right-Hand Boom Shut-Off kit needs to be connected to the "**FULL RH**" switch, on that panel. Otherwise, choose a mounting location in the cockpit for PN 25053 (Right-Hand Boom Shut-Off Control Panel). The optimal position to mount PN 25053 is the cockpit wall on the left-hand side. Ensure all cockpit switches are easily accessible to the pilot and there is room for wiring.
3. Turn off power before connecting or disconnecting wires. Failure to do so can damage the system.

4. Assemble boom and shut-off valve and secure onto boom hangers.



Do not modify any wing structure for this installation.



Do not hit any wires or unintended structure while drilling. Check the backside of the aircraft skin before drilling.

**To Install PN 25053, Follow Steps 5-7(If not installing PN 25053, skip to Step 8**

5. Drill three holes (which are different in size) that are horizontally 1.25" apart. The first hole needs 1/2" drill bit. The second hole needs a 29/64 drill bit. The third hole needs 1/2"drill bit.
6. Place the placard over the holes and then install the test lamp, circuit breaker, and 3PDT switch.
7. Depending upon which control is installed, the kit must be connected to the aircraft's power and ground according to the included drawing. If using only the Right-Hand Boom Shut-Off, refer to Drawing 25053, Sheet 3. For a 50% or 60% and Right-Hand Boom Shut-Off, refer to Drawing 25050, Sheet 3 of 3.
8. Determine a location on the belly skin of the aircraft, along the center boom support nearest the right-hand valve, where the wiring will exit the aircraft's interior.
9. Drill a 7/16" hole in the predetermined location, according to Drawing 53054 or 53055, Sheet 2 of 3.
10. Install the included grommet in the drilled hole.
11. Run wiring (PN 81555) to the right-hand boom shut-off valve from the installed control panel.
12. In the aircraft's interior, secure wiring to the aircraft frame using PN 85141.
13. Along the aircraft's exterior, secure wiring with PN 85141 onto the nearest center boom support, locating as necessary per Drawing 53054 or 53055, Sheet 2 of 3.
14. Secure the excess wire or trim wire to final necessary operating length.
15. Install the male and female housing to the ends of the ran wire according to Drawing 53054 or 53055, Sheet 3 of 3. Items 3, 4, and 5 are for male housing. Items 6, 7, and 8 are for female housing.
16. Crimp pins and sockets to the correct wire ends as dictated by Drawing 53054 or 53055, Sheet 3 of 3. Use CP-463 or equivalent crimp tooling.
17. Connect the male plug running from the RH valve to the female plugs of the wiring installed along the aircraft.
18. Connect the male plug of wiring into the female plug of the control panel.

**To Install Item 9 (part used while the boom is uninstalled), Follow Steps 19-21**

19. Once the wiring has been run, select locations for item 9 (per guidelines on Drawing 53054 or 53055, Sheet 2 of 3 to reduce slack in the wiring when disconnected from item 1.
20. Once the location is determined, mark one hole.
21. Drill a hole with a size 9 drill bit into the belly skin and fasten the dust cap with items 10, 11, and 12.



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