

ThruCure™ UV Light Box

Introduction

The ThruCure UV light box is designed to mount on a CoolWave 2 UV 3.1 focus or flood-type lamphead. The light box is fitted with reflectors to provide a 360 degree cure for products conveyed through the box. An alternate configuration is available with the cover and plenum reversed. See Figure 1 for the shipped configuration, and for the alternate configuration.

The end plates and channels of the entrance and exit light shields can be machined by the customer to allow product to move through the light box without excessive light leakage. When machining the light shields, allow enough clearance for the product to pass through the light box, but the opening should be minimized as much as possible to avoid excessive light leakage. Figure 2 shows a product moving through the light box.

This instruction sheet provides only safety, lamphead installation, and parts information for the light box. Contact your Nordson representative at (800) 433-9319 for all other information.

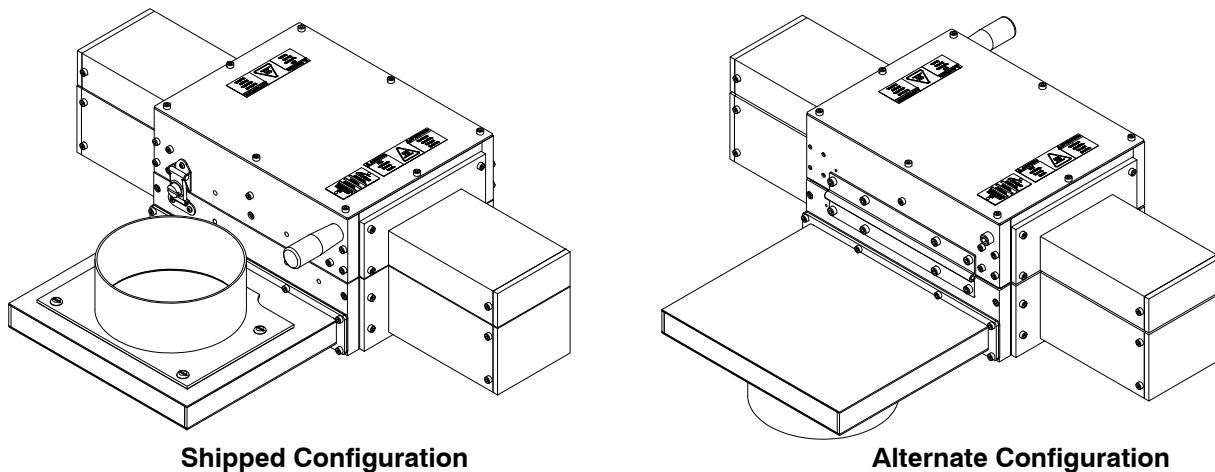


Figure 1 UV Light Box



Figure 2 Product moving through Light Box using the Shipped Configuration

Safety



WARNING: Turn off the UV lamp before opening the light box!

Ultraviolet light is a form of electromagnetic radiation and can be harmful if exposure exceeds recommended levels. Protect eyes and skin from direct exposure to UV light. All equipment or areas where UV light is used must be adequately guarded, shielded, and interlocked to prevent accidental exposure.



WARNING: UV curing systems generally run at extremely high temperatures. Follow these guidelines to avoid equipment damage or personal injury:

- Make sure the light box is connected to an exhaust system and that the exhaust system is operating whenever the lamphead is running.
- Make sure the light box safety latch is secured while the lamphead is operating.
- Avoid touching the light box while the lamphead is operating.
- Always shut off the lamphead and allow the light box to cool before performing any adjustments or repairs.
- Always use the lid handle to open the light box.
- Refer to your lamphead manual for more safety information.

Installation

Switching Pressure Ports

Switching Pressure Ports

External blower lampheads are shipped with the pressure transducer connected to the top port. Internal blower lampheads are shipped with the transducer connected to the front port.

Use this procedure to switch the hose connection from the top or front port to the bottom port.

See Figures 3 and 4.

1. Remove the lamphead cover.
2. Disconnect the pressure hose and unscrew the barbed fitting from the top or front pressure port.
3. Install the barbed fitting in the bottom pressure port, then feed the hose through the lamphead and connect it to the barbed fitting.

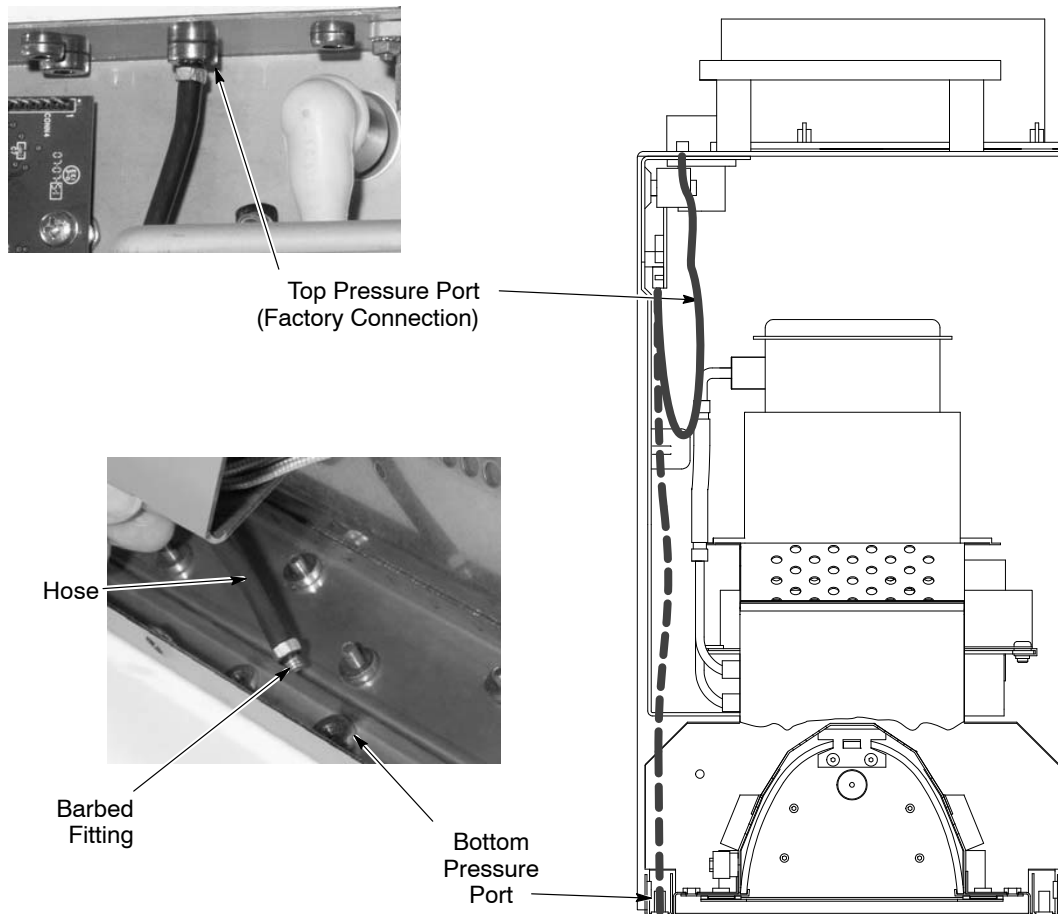


Figure 3 Pressure Port Connections – External Blower Version

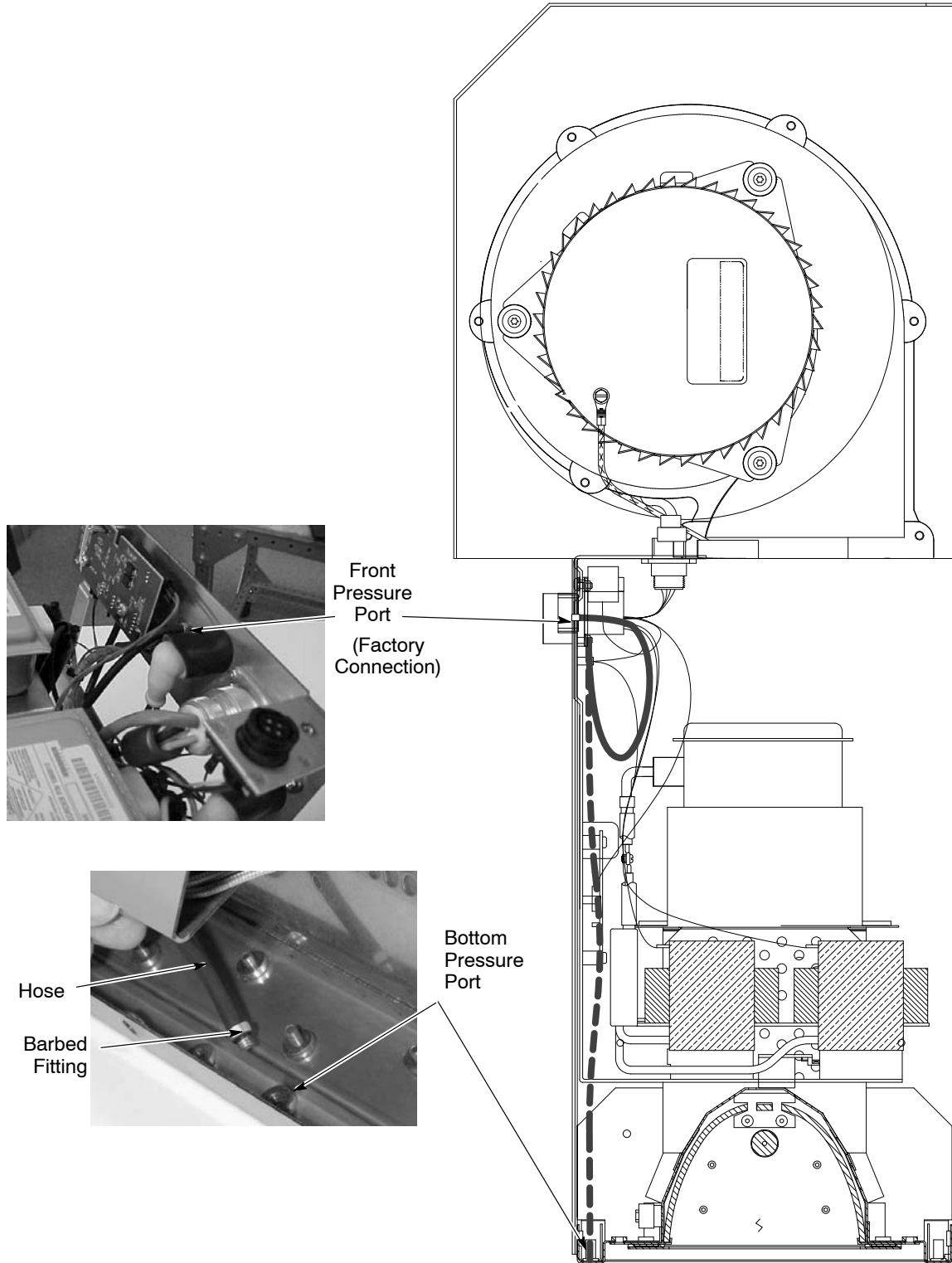


Figure 4 Pressure Port Connections – Internal Blower Version

Light Box

If using the alternate light box configuration, modifications need to be completed before beginning installation procedures. See the *Light Box Modification* section to convert the light box to the alternate configuration shown in Figure 1.

1. See Figure 5. Mount the light box on the lamphead as shown, using eight M4 x 75 standard socket-head screws included with the light box. Torque the screws to 4.5–5 N•m (40–45 in-lbs).
2. Connect exhaust ductwork to the exhaust plenum. The following specifications must be maintained for all applications at all times or the life of the lamphead will be greatly reduced with the possibility of failure:
 - unimpeded and unrestricted flow of cooling air through the lamphead
 - constant static pressure of 7-in. water column measured from the inside of the lamphead to ambient or the lamp face
 - 350 CFM of airflow through the lamphead

Refer to the CoolWave 2 manual for air flow requirements.

3. Connect the lamphead to the power supply as described in the CoolWave 2 manual.

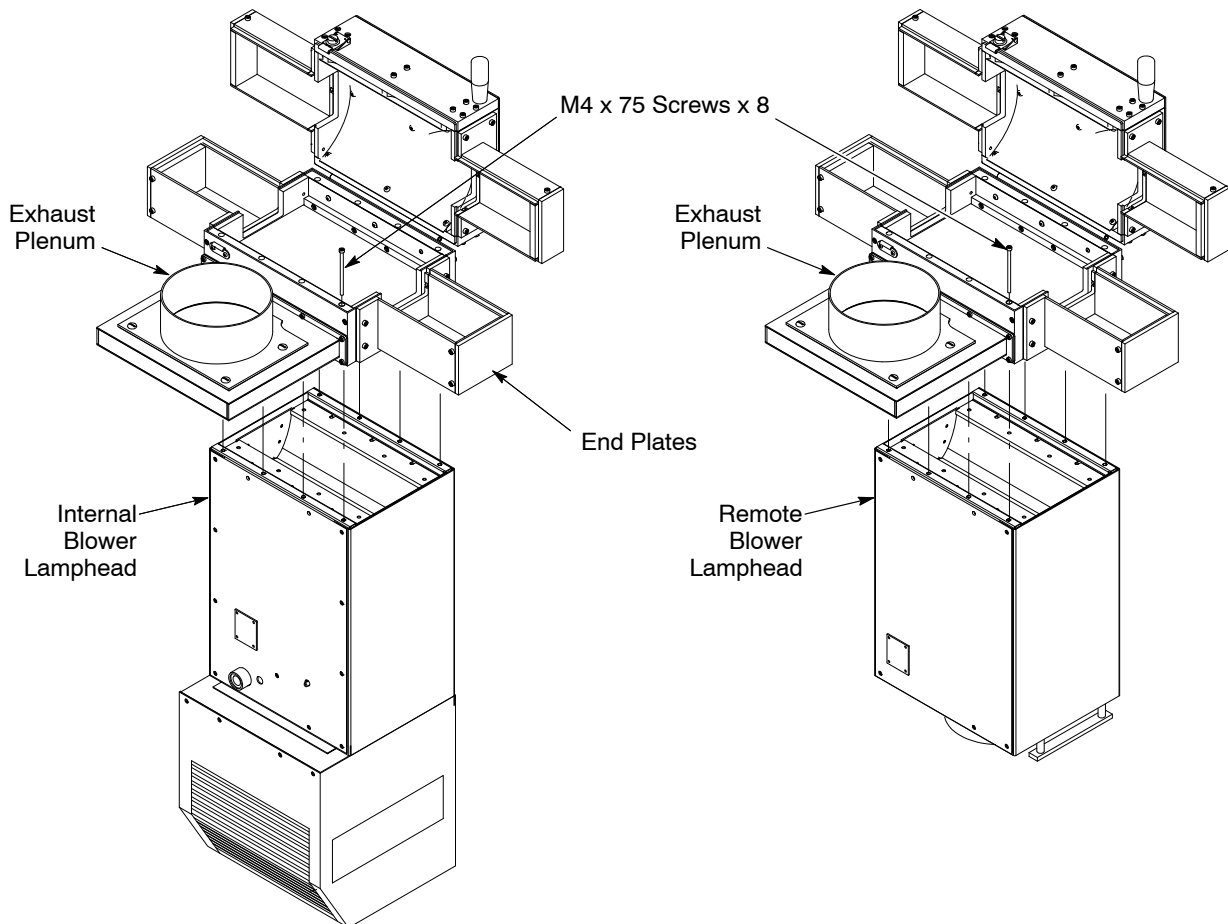


Figure 5 UV Light Box Installation on Lamphead

Light Box Modification

Use this procedure to modify the light box to the alternate configuration shown in Figure 6.

1. Remove the handle and the two latches from the one side of light box.
2. Remove the hinge and the handle plug from the other side of the light box.
3. Mount the handle, latches, hinge, and handle plug on the opposite side from their original orientation.

NOTE: The exhaust plenum can also be modified by removing the M4 x 12 screws and re-mounting the exhaust plenum upside down.

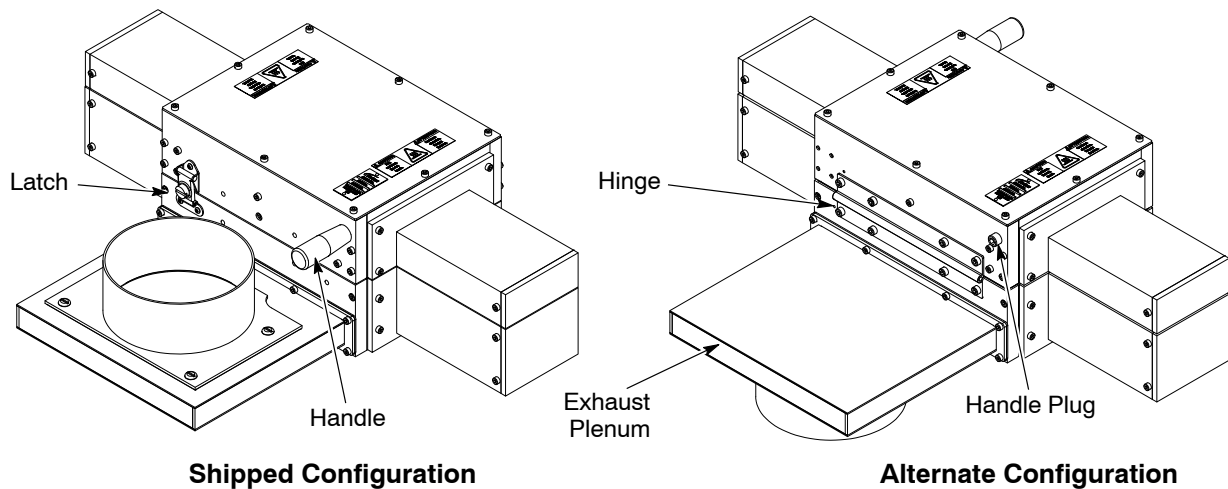


Figure 6 UV Light Box Configurations

Parts

To order parts, call the Nordson Industrial Coating Systems Customer Support Center at (800) 433-9319 or contact your Nordson representative.

See Figure 7.

Item	Part	Description	Quantity	Note
-	1601934	CHAMBER, CoolWave 2, ThruCure	1	
1	1103656	• LATCH, butterfly, tool operated	1	A
2	982341	• SCREW, pan head, recessed, M3 x 10, zinc	4	A
3	1100968	• HANDLE, chamber, light box	1	
4	1100962	• REFLECTOR, chamber, main, light box	1	D
5	982337	• SCREW, pan head, recessed, M4 x 8, zinc	15	
6	1100963	• REFLECTOR, chamber, side, CW2, light box	2	
7	1101137	• GUIDE, lens, chamber, light box	2	
8	982466	• SCREW, socket, cap, M4 x 12, black	16	
9	1101628	• SCREW, socket head, M4 x 75, zinc	8	
10	1101348	• GASKET, plenum, chamber, light box	1	
11	1600784	• LENS, quartz, CW2, light box, 10.57 LG	1	
11	1100965	• LENS, quartz, CW2, light box, 10.37 LG	1	C
12	1051620	• ADAPTER, air duct, 6 inch round	1	
13	146007	• TAG, caution, surface temperature	2	
14	1103618	• CHANNEL, upper	2	
15	1103619	• CAP, end, upper	2	
16	110321	• CHANNEL, lower	2	
17	1103622	• CAP, end, lower	2	
18	982025	• SCREW, socket head, M4 x 14, black	12	
19	982594	• SCREW, socket head, M4 x 10, black	12	
20	345790	• SCREW, cap, socket head, 0.312-18 x 0.50, steel, black	1	B
<p>NOTE A: Original latch was hand-operated. To replace it, order P/N 1100967 latch and 982308 screws. Screw hole pattern for hand-operated latch is different than tool-operated latch.</p> <p>B: Used to block alternate tapped hole for cover handle.</p> <p>C: The shorter 10.37 LG lens is used with obsoleted single-slotted versions of the ThruCure Chamber (part number 1100919).</p> <p>D: Before installation, remove the protective film from the reflector.</p>				

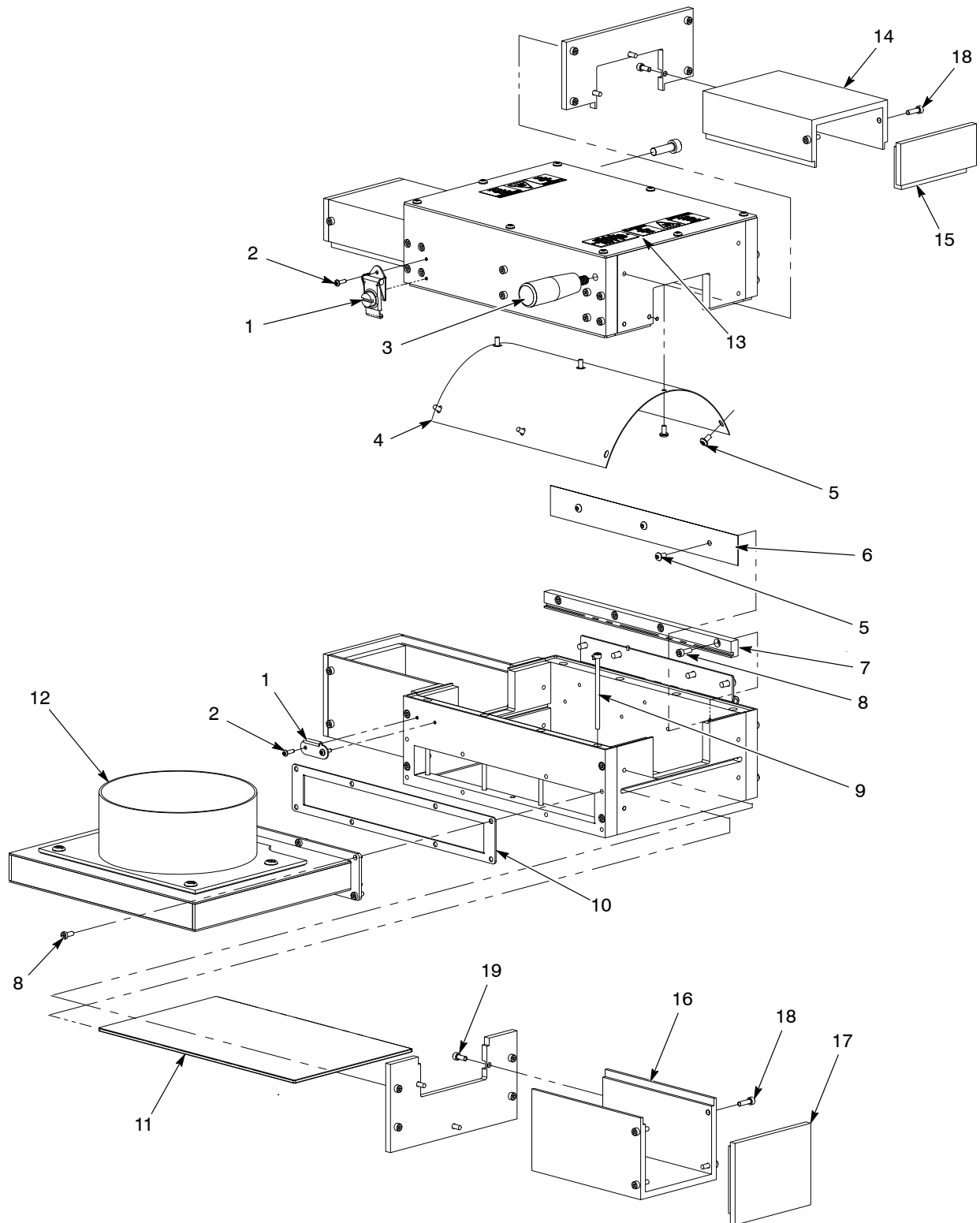


Figure 7 UV Light Box Parts

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