

Installation Instructions

100544-000



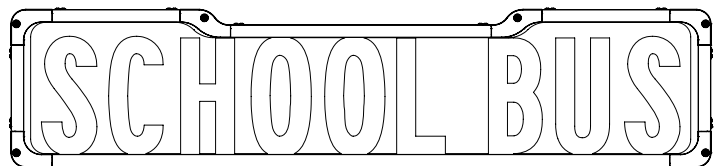
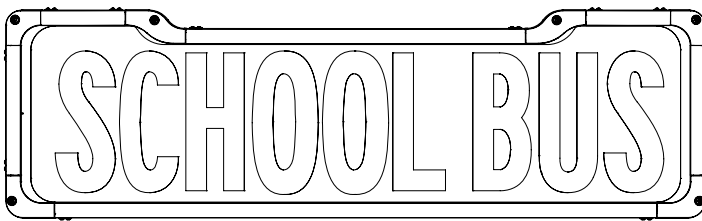
FIRST LIGHT
SAFETY PRODUCTS

ILLUMINATED SCHOOL BUS SIGN THOMAS BUILT BUSES OPEN CAVITY



THOMAS BUILT BUSES OPEN CAVITY-FRONT

THOMAS BUILT BUSES OPEN CAVITY - REAR

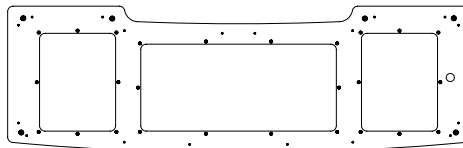


Fully Assembled Sign Unit - Front
A1 x 1

Fully Assembled Sign Unit - Rear
A2 x 1



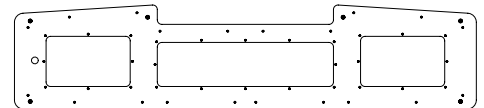
DOW 700 Clear
Silicone Sealant
B x 1



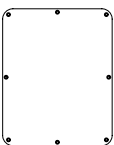
Sealing Plate Frame - Front
C1 x 1



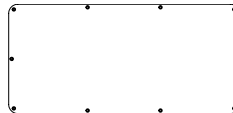
DOW 700 Clear
Silicone Sealant
B x 1



Sealing Plate Frame - Rear
C2 x 1



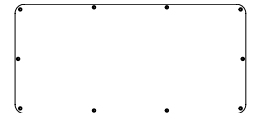
Side Sealing Plate - Front
D1 x 2



Middle Sealing Plate - Front
E1 x 1



Side Sealing Plate - Rear
D2 x 2



Middle Sealing Plate - Rear
E2 x 1

Small Clamping Plate - Front
F x 2



Large Clamping Plate - Front
G x 7



Screw
H x 28



Nut
I x 20



Washer
J x 20



Screw
H x 26

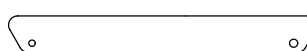


Nut
I x 18



Washer
J x 18

Clamping Plate - Rear
K x 10



Button Head
Cap Screw
L x 6

Thomas Built Buses Open Cavity

BILL OF MATERIALS

THOMAS BUILT BUSES OPEN CAVITY - FRONT	QTY	REF
Fully Assembled Sign Unit - Front	1	A1
DOW 700 Clear Silicone Sealant	1	B
Sealing Plate Frame - Front	1	C1
Side Sealing Plate - Front	2	D1
Middle Sealing Plate - Front	1	E1
Small Clamping Plate - Front	2	F
Large Clamping Plate - Front	7	G
#6-32 X 1/4" Cap Screw	26	H
#8-32 SS Nylock Nut	18	I
#8 x 0.375 OD SS Washer	18	J

THOMAS BUILT BUSES OPEN CAVITY - REAR	QTY	REF
Fully Assembled Sign Unit - Rear	1	A2
DOW 700 Clear Silicone Sealant	1	B
Sealing Plate Frame - Rear	1	C2
Side Sealing Plate - Rear	2	D2
Middle Sealing Plate - Rear	1	E2
#6-32 X 1/4" Cap Screw	28	H
#8-32 SS Nylock Nut	20	I
#8 x 0.375 OD SS Washer	20	J
Clamping Plate - Rear	10	K
#10-32 X .75" Button Head Cap Screw	6	L

THOMAS BUILT BUSES OPEN CAVITY-SET-FRONT AND REAR	QTY	REF
Fully Assembled Sign Unit - Front	1	A1
Fully Assembled Sign Unit - Rear	1	A2
DOW 700 Clear Silicone Sealant	1	B
Sealing Plate Frame - Front	1	C1
Sealing Plate Frame - Rear	1	C2
Side Sealing Plate - Front	2	D1
Side Sealing Plate - Rear	2	D2
Middle Sealing Plate - Front	1	E1
Middle Sealing Plate - Rear	1	E2
Small Clamping Plate - Front	2	F
Large Clamping Plate - Front	7	G
#6-32 X 1/4" Cap Screw	54	H
#8-32 SS Nylock Nut	38	I
#8 x 0.375 OD SS Washer	38	J
Clamping Plate - Rear	10	K

REQUIRED TOOLS

- Marker
- 5/32" and 1/8" Allen keys
- 25/64" and 3/4" Drill
- 7/8" Wrench
- 11/16" Wrench or socket
- Screwdriver set



DISCLAIMER

IMPORTANT: PLEASE READ ALL THE INSTRUCTIONS CAREFULLY BEFORE INSTALLING, FAILURE TO DO SO MAY CAUSE PERSONAL INJURY OR DAMAGE TO PRODUCT AND/OR PROPERTY.

This manual has been created for basic informational purposes only. The activities described herein can be dangerous unless proper safety precautions are taken. If you are not comfortable or are inexperienced with the processes and tools described in this manual, you should not attempt to install the product. These instructions do not purport to cover all details or variations in the equipment and do not claim to provide for every possible contingency met in connection with the installation. Installation of this product should always be performed by a qualified technician and in accordance with safe work procedures. First Light Safety Products (a division of Smartrend Supply Ltd., hereinafter "First Light Safety Products") shall not be held responsible for any errors or omissions respecting installation as they are the responsibility of the installing technician and/or the customer. First Light Safety Products does not make any representation, warranty, guarantee or condition respecting third-party installation or any other service provided by a third-party, and any such representations perceived by the reader/customer are hereby fully disclaimed.

Any reliance on this manual is solely at the risk of the customer/reader. First Light Safety Products assumes no responsibility for other's use of this manual and hereby expressly disclaims any and all liability to any party for any direct, indirect, implied, punitive, special, incidental or other consequential damages arising directly or indirectly from any improper or incorrect use of this manual.

Visit our website for video instructions and additional supporting documentation:

www.firstlightsafety.com/resources

If further help is needed, please contact us:

Technical Support

Monday - Friday, 8 a.m. to 5 p.m. CST

E: techsupport@firstlightsafety.com

P: 866.216.2605

Thomas Built Buses Open Cavity

STEP 1 - PRE-INSTALLATION VEHICLE PREPARATION

- i. Disconnect electrical power to the vehicle.
- ii. Remove existing sign and rubber seal.
- iii. Clean any remaining adhesive and residue left from the rubber seal.

NOTE: A clean, flat surface is necessary to ensure proper sealing of the sign, preventing water intrusion.

STEP 2 - DISCONNECT EXISTING ELECTRICAL CONNECTOR

- i. *Front only* - Remove the passenger side upper red/amber lights to find the connector for the existing light power supply and disconnect it.

NOTE: Plastic may be brittle if cold. It is best to perform this installation at room temperature.

STEP 3 - SILICONE (B) PERIMETER OF OPENING

- i. Apply a continuous bead of Silicone (B) around the opening.

NOTE: Ensure the bead is continuous for a weather resistant seal.

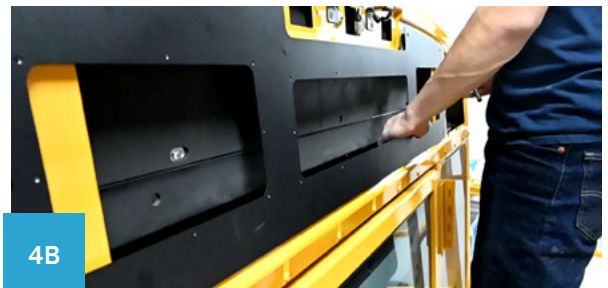
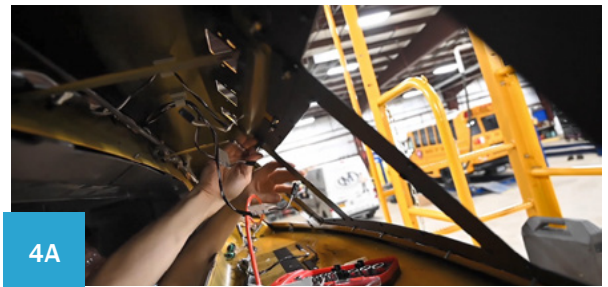
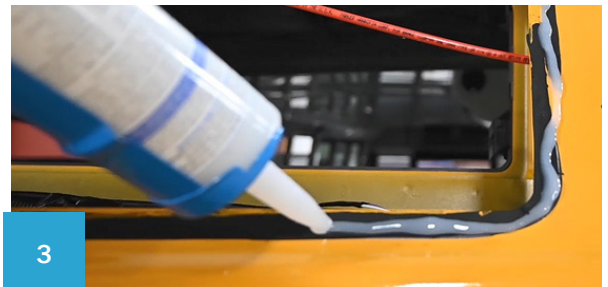
STEP 4 - INSTALL SEALING PLATE FRAMES

A - INSTALL FRONT SEALING PLATE FRAME (C1)

- i. Locate the Sealing Plate Frame (C1) to the opening and press it into the Silicone (B).
- ii. Install Washers (J) to all the studs on the Sealing Plate Frame (C1).
- iii. Locate Large Clamping Plates (G) to the outer studs on the top and bottom of the Sealing Plate Frame (C1) and secure using Nuts (I).
- iv. Ensure the Sealing Plate Frame (C1) is level and straight before tightening the fasteners. Recommended torque is 25-40 in-lbs.
- v. Locate the Small Clamping Plate (F) to the studs on the sides of the Sealing Plate Frame (C1) and secure using Nuts (I) torqued to 25-40 in-lbs.
- vi. Locate the remaining Large Clamping Plates (G) to the remaining middle studs on the top and bottom of the Sealing Plate Frame (C1) and secure using Nuts (I) torqued to 25-40 in-lbs.

B - INSTALL REAR SEALING PLATE FRAME (C2)

- i. Locate the Sealing Plate Frame (C2) to the opening and press it into the Silicone (B).
- ii. Install Washers (J) to all the studs on the Sealing Plate Frame (C2).
- iii. Locate Clamping Plates (K) to the outer studs on the top and bottom of the Sealing Plate Frame (C2) and secure using Nuts (I).
- iv. Ensure the Sealing Plate Frame (C2) is level and straight before tightening the fasteners. Recommended torque is 25-40 in-lbs.
- v. Locate Clamping Plates (K) to the studs on the sides of the Sealing Plate Frame (C2) and secure using Nuts (I) torqued to 25-40 in-lbs.
- vi. Locate the remaining Clamping Plates (K) to the remaining studs on the top and bottom of the Sealing Plate Frame (C2) and secure using Nuts (I) torqued to 25-40 in-lbs.



Thomas Built Buses Open Cavity

STEP 5 - INSTALL SEALING PLATES (D1/D2, E1/E2)

- i. Apply a continuous bead of Silicone (B) around the 3 access ports in the Sealing Plate Frame (C1/C2).
- ii. Locate the Middle Sealing Plate (E1/E2) to the middle access port in the Sealing Plate Frame (C1/C2) and secure using Screws (H). Recommended torque 10-20 in-lbs.
- iii. Locate the Side Sealing Plates (D1/D2) to the side access ports in the Sealing Plate Frame (C1/C2) and secure using Screws (H). Recommended torque 10-20 in-lbs.

STEP 6 - RUN POWER HARNESS THROUGH HOLE

- i. Run the Power Harness from the Sign Unit (A1/A2) through the harness hole in the Sealing Plate Frame (C1/C2).

STEP 7 - SEAT GROMMET

- i. Ensure the grommet seats properly with the installed Sealing Plate Frame (C1/C2) to form a weather resistant seal.

STEP 8 - MOUNT SIGN (A1/A2)

- i. Mount the Sign Unit (A1/A2) using the frame's integrated screws.

NOTE: Recommended torque is 25-40 in-lbs.

STEP 9 - ELECTRICAL CONNECTION

- i. Connect the Sign Unit (A1/A2) to the existing light power supply connector.

STEP 10 - TURN ON SIGN UNIT (A1/A2)

- i. Ensure no wiring has been damaged and once safe, restore electrical power to the vehicle.

 1. If wired directly to a 12V circuit powered by the ignition switch: turn the vehicle on and ensure the Sign Unit (A1/A2) illuminates.
 2. If wired through a manual switch to a 12V circuit powered by the ignition switch: turn the vehicle on, turn the switch on, and ensure the Sign Unit (A1/A2) illuminates.

STEP 11 - RE-INSTALL RED/AMBER LIGHTS.

- i. *Front Only* - Re-install the passenger side upper red/amber lights.

