

M59013 FREIGHT TRAIN

Parts List		
DESCRIPTION	QTY	PART NUMBER
30° CRAWL TUBE	1	139229
STEERING WHEEL ASSEMBLY	1	141129
90° ANGLE BRACKET	76	302334
FLOWER PANEL (RED)	1	302812
FLOWER PANEL (BLUE)	2	302813
LEG	3	402066
PLATFORM	2	405181
LEFT PANEL	1	405186
RIGHT PANEL	1	405196
BACK PANEL	2	405187
COCKPIT PANEL	1	405188
ROOF PANEL	1	405189
ROOF RIB	4	405190
SMOKE PANEL	2	405191
BENCH SEAT	1	405192
TRAIN BENCH	1	405193
CAR ROOF	1	405208
LEFT CAR PANEL	1	405209
RIGHT CAR PANEL	1	405210
WHISTLE ASSEMBLY	1	405236
HARDWARE COMPLETE	1	405216
#12 x 1 1/4" PAN HEAD SQ. WOOD SCREW	8	815513*
5/16" x 1" P.B.H.C.S. w/PATCH	12	812042*
5/16" x 1 1/4" P.B.H.C.S. w/PATCH	12	812044*
5/16" LOCK WASHER	24	817330*
5/16" FLAT WASHER (5/8" O.D.)	24	817406*
5/16" T-NUT	24	804555*
3/8" x 3/4" CARRIAGE BOLT	118	800252*
3/8" x 3/4" P.B.H.C.S. w/PATCH	6	812052*
3/8" x 1" P.B.H.C.S. w/PATCH	4	812050*
3/8" x 1 1/2" P.B.H.C.S. w/PATCH	8	812053*
3/8" x 2" LAG SCREW	24	800726*
3/8" x 2 3/4" P.B.H.C.S. w/PATCH	3	812058*
3/8" LOCKWASHER	2	817334*
3/8" FLAT WASHER	17	817410*
3/8" FLAT WASHER (1 1/4" O.D.)	16	817424*
3/8" ACORN NUT	8	804002*
3/8" T-NUT	23	804556*
3/8" BARREL NUT	108	804804*
1/2" I.D. BRONZE BUSHING	3	102820*



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Unless Otherwise Specified, All Units of Measure are Each

Items listed below Hardware Complete line are included with Hardware Complete Number

Warning: During Installation, Hardware And Small Parts Are Choking Hazards For Young Children. Store Unused Parts Appropriately Until Assembly Is Completed. Once Assembly Is Completed, Remove Any Unused Parts From The Play Environment And Dispose/Save Them In A Secure Location. Any bolt end protruding more than two full threads beyond the face of the nut causes risk of clothing entanglement. Promptly cut-off flush, file smooth, and treat to prevent corrosion.

Note: Peen Tee-Nuts and Flatwashers to match radius of pipe after assembly is complete.

Note: Loctite (supplied by others) should be used on any non-patch hardware.

SPECIFICATIONS:

30° CRAWL TUBE:

Tunnel is 24" diameter and 1/4" wall thickness rotationally molded of medium-density polyethylene with UV-stabilizers.

STEERING WHEEL ASSEMBLY:

Shall be made from a welded steering wheel consisting of a .090" thick aluminium wheel and 2 1/4" o.d. bushing housing 1/2" thick aluminium. A grease impregnated bronze bushing is used in the shaft to provide smooth turning. Wheel is mounted using an all welded powder coated bracket ass'y consisting of a 1/2" pipe insert, 1.029" o.d. galv. pipe, and 3/16" x 1 1/2" hot rolled steel tab.

90° ANGLE BRACKET:

Shall be fabricated from 3/16" thick x 2" hot rolled steel plate. The 90° Angle Bracket shall be coated after fabrication with a custom formula of TGIC polyester powder coating in conformance with the specifications outlined herein.

LEG:

Shall be an all welded construction fabricated from a 11 ga. laser cut tab and 1 1/4" o.d. (12 ga.) galvanized pipe. The Leg shall be coated after fabrication with a custom formula of TGIC polyester powder coating in conformance with the specifications outlined herein.

PLATFORM:

Shall be constructed from nominal 2" x 4" frame and 3/4" thick densentic anti-skid hdpe. Platform is constructed using #10 stainless steel screws. All 2" x 4" parts are fiberglass reinforced for rigidity.

FLOWER PANELS, LEFT AND RIGHT PANELS, BACK PANEL, COCKPIT PANEL, ROOF RIB, SMOKE PANEL, BENCH SEAT, TRAIN BENCH, LEFT AND RIGHT CAR PANELS:

Shall be precision cut from a single solid sheet of .750" thick UV-stabilized extruded high-density polyethylene with colors molded in. The material will have a density of 60 lbs/ft³ and a tensile strength of 4400 PSI (30 Mpa) as determined per procedure C of ASTM D1928. All edges shall have radiuses and all corners rounded for safe play.

ROOF PANEL AND CAR ROOF:

Shall be precision cut from a single solid sheet of .50" thick UV-stabilized extruded high-density polyethylene with colors molded in. The material will have a density of 60lbs/ft³ and a tensile strength of 4400 PSI (30 Mpa) as determined per procedure C of ASTM D1928. All edges shall have radiuses and all corners rounded for safe play.

WHISTLE ASSEMBLY:

Shall be an all welded construction fabricated from 3.50" O.D. (10ga.) galvanized steel pipe, 1.315" (14ga.) galvanized steel pipe extensions, and 1/4" x 2" hot rolled steel tab. The whistles shall be fabricated from 1.315" (14 ga.) galvanized steel tubing with two crimped-in threaded inserts. The internal whistle components consist of four 3/4" thick solid high density, UV-stabilized and color impregnated polyethylene pieces, a plasticized PVC bellow, and an injection molded purchased whistle. An aluminum upright cap is permanently installed using a aluminum self-sealing rivets. The Whistle Assembly shall be coated after fabrication with a custom formula of TGIC polyester powder coating in conformance with the specifications outlined herein.

HARDWARE:

All nuts, bolts, screws, inserts, and lock washers used in the assembly of all play equipment shall be stainless steel, yellow dichromate plated steel, blue-coat plated steel, mechanically galvanized or powder coated/yellow dichromate plated steel. All primary fasteners shall be 304 alloy stainless steel. Fasteners with yellow dichromate treatment have an electro-deposited, 99.9% pure zinc substrate applied from a specially formulated solution sealed with a yellow dichromate top coat designed to work in conjunction with the zinc plating. Yellow dichromate has a 320% longer life to white corrosion and 275% longer to red corrosion than does hot-dip galvanizing. Stainless steel fasteners shall be button pin-in head, hex socket cap screws with a two-part epoxy locking patch added to the threads. The two-part locking patch shall consist of one part resin and one part catalyst which are activated during installation. After curing, the material shall require a minimum of five times the installation torque to remove the fastener. Manufacturer shall provide special installation tools for pinned fasteners.

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INSTALLATION INSTRUCTIONS:

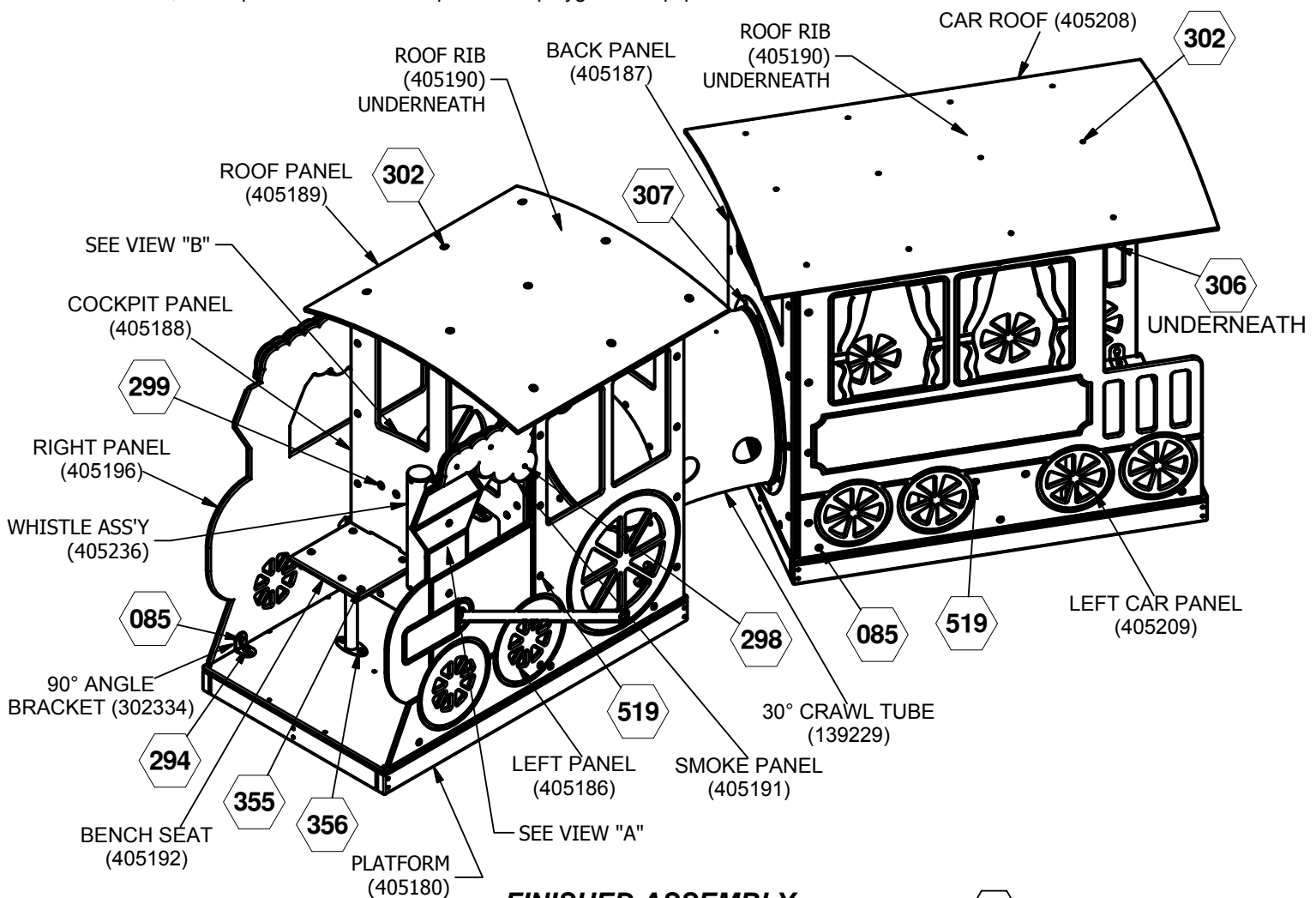
1. Attach Smoke Panel to Left and Right Panel using #12 x 1 1/4" Pan Head Sq Wood Screw. See Detail 298.
2. Attach 90° Angle Brackets to bottom holes of Left and Right Panels using 3/8" x 3/4" Carriage Bolt and 3/8" Barrel Nut. See Detail 085.
3. Attach Left and Right Panels to Platform using the 90° Angle Bracket and 3/8" x 2" Lag Screw. See Detail 294.
4. Attach 90° Angle Brackets to bottom holes of Back Panel and Cockpit Panel using 3/8" x 3/4" Carriage Bolt and 3/8" Barrel Nut. See Detail 085.
5. Attach Back Panel and Cockpit Panel to Platform using the 90° Angle Bracket and 3/8" x 2" Lag Screw. See Detail 294.
6. Attach Left and Right Panel to Back Panel using 90° Angle Bracket, 3/8" x 3/4" Carriage Bolt, and 3/8" Barrel Nut. See Detail 519.
7. Attach Left and Right Panel to Cockpit Panel using 90° Angle Bracket, 3/8" x 3/4" Carriage Bolt, and 3/8" Barrel Nut. See Detail 519.
8. Slide Roof Rib into rectangular slot on the inside of the Left and Right Panels. Attach Roof Rib to Left and Right Panel using 90° Angle Bracket, 3/8" x 1 1/2" P.B.H.C.S. w/Patch, 3/8" Flat Washer (1 1/4" O.D.), and 3/8" Acorn Nut. See Detail 306.
9. Attach Roof Panel to Roof Rib using 90° Angle Bracket, 3/8" x 3/4" Carriage Bolt, and 3/8" T-Nut. See Detail 302.
10. Attach Roof Panel to Cockpit Panel and Back Panel using 90° Angle Bracket, 3/8" x 3/4" Carriage Bolt, and 3/8" T-Nut. See Detail 302.
11. Attach Whistle Assembly to Left Panel using 3/8" x 1" P.B.H.C.S. w/Patch, 3/8" Lock Washer, and 3/8" Barrel Nut. See Detail 301. Refer to View "A".
12. Attach Leg to Bench Seat using 3/8" x 3/4" P.B.H.C.S. w/Patch, 3/8" Flat Washer, and 3/8" Barrel Nut. See Detail 355.
13. Slide Bench Seat into slot of Cockpit Panel and attach to Right Panel using 90° Angle Bracket, 3/8" x 3/4" Carriage Bolt, and 3/8" Barrel Nut. See Detail 519.
14. Attach Leg of Bench Seat to the Platform using 3/8" x 2" Lag Screw.
15. Attach Steering Wheel Ass'y to Cockpit Panel using 3/8" x 1" P.B.H.C.S. w/Patch, 3/8" Flat Washer, and 3/8" T-Nut. See Detail 299. Refer to View "B".
16. Attach Flower Panels to Cockpit Panel using 3/8" x 2 3/4" P.B.H.C.S. w/Patch, 3/8" Flat Washer, 1/2" I.D. Bronze Bushing, and 3/8" Barrel Nuts. See Detail 300. Refer to View "B".
17. Attach 30° Crawl Tube to Back Panel using 5/16" x 1" P.B.H.C.S. w/Patch, 5/16" Lock Washer, 5/16" Flat Washer (5/8" O.D.), and 5/16" T-Nut. See Detail 307.
18. Attach 90° Angle Bracket to bottom holes of the Back Panel using 3/8" x 3/4" Carriage Bolt and 3/8" Barrel Nut. See Detail 085.
19. Attach Back Panel to Platform using 90° Angle Bracket and 3/8" x 2" Lag Screw. See Detail 294.
20. Attach 90° Angle Bracket to bottom holes of the Left and Right Car Panel using 3/8" x 3/4" Carriage Bolt and 3/8" Barrel Nut. See Detail 085.
21. Slide Assembled Car to 30° Crawl Tube and attach to Back Panel using 5/16" x 1" P.B.H.C.S. w/Patch, 5/16" Lock Washer, and 5/16" Flat Washer (5/8" O.D.), and 5/16" T-Nut. See Detail 307.
22. Attach Back Panel to Left and Right Car Panel using 90° Angle Bracket, 3/8" x 3/4" Carriage Bolt, and 3/8" Barrel Nut. See Detail 519.
23. Slide Roof Ribs into rectangular slots on the inside of the Left and Right Car Panels. Attach Roof Ribs to Left and Right using 90° Angle Bracket, 3/8" x 1 1/2" P.B.H.C.S. w/Patch, 3/8" Flat Washer (1 1/4" O.D.), and 3/8" Acron Nut. See Detail 306.
24. Attach Car Roof to Roof Rib using 90° Angle Bracket, 3/8" x 3/4" Carriage Bolt, and 3/8" T-Nut. See Detail 302.

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25. Attach Car Roof to Back Panel using 90° Angle Bracket, 3/8" x 3/4" Carriage Bolt, and 3/8" T-Nut. See Detail 302.
26. Attach Leg to Train Bench using 3/8" x 3/4" P.B.H.C.S. w/Patch, 3/8" Flat Washer, and 3/8" Barrel Nut. See Detail 355.
27. Attach Leg of the Train Bench to the Platform using 3/8" x 2" Lag Screw. See Detail 356.
28. Attach Train Bench to Left Car Panel using 90° Angle Bracket, 3/8" x 3/4" Carriage Bolt, and 3/8" Barrel Nut. See Detail 519.
29. Plumb and level the entire assembly and tighten all fasteners.
30. Check that all hardware connections are securely tightened. Smooth away any sharp edges that may have been created during handling and assembly. Install resilient surfacing within the use zone of play structure in accordance with ASTM specifications F1292, and appropriate for the fall height of each structure. Refer to all applicable safety guidelines.

MAINTENANCE PROCEDURE:

Periodically check hardware for tightness, and tighten as necessary. Always check all parts for breakage or wear, and immediately put equipment out of service until any faulty parts found are repaired or replaced. Also Check all metal parts for rust, paint loss and touch-up if necessary with paint. Check for welded areas and verify integrity. Check periodically resilient surfacing for appropriate depth and remove extraneous materials that could cause injury, infection, or disease. Maintain detailed installation, inspection, maintenance, and repair records for each public-use playground equipment.



FINISHED ASSEMBLY

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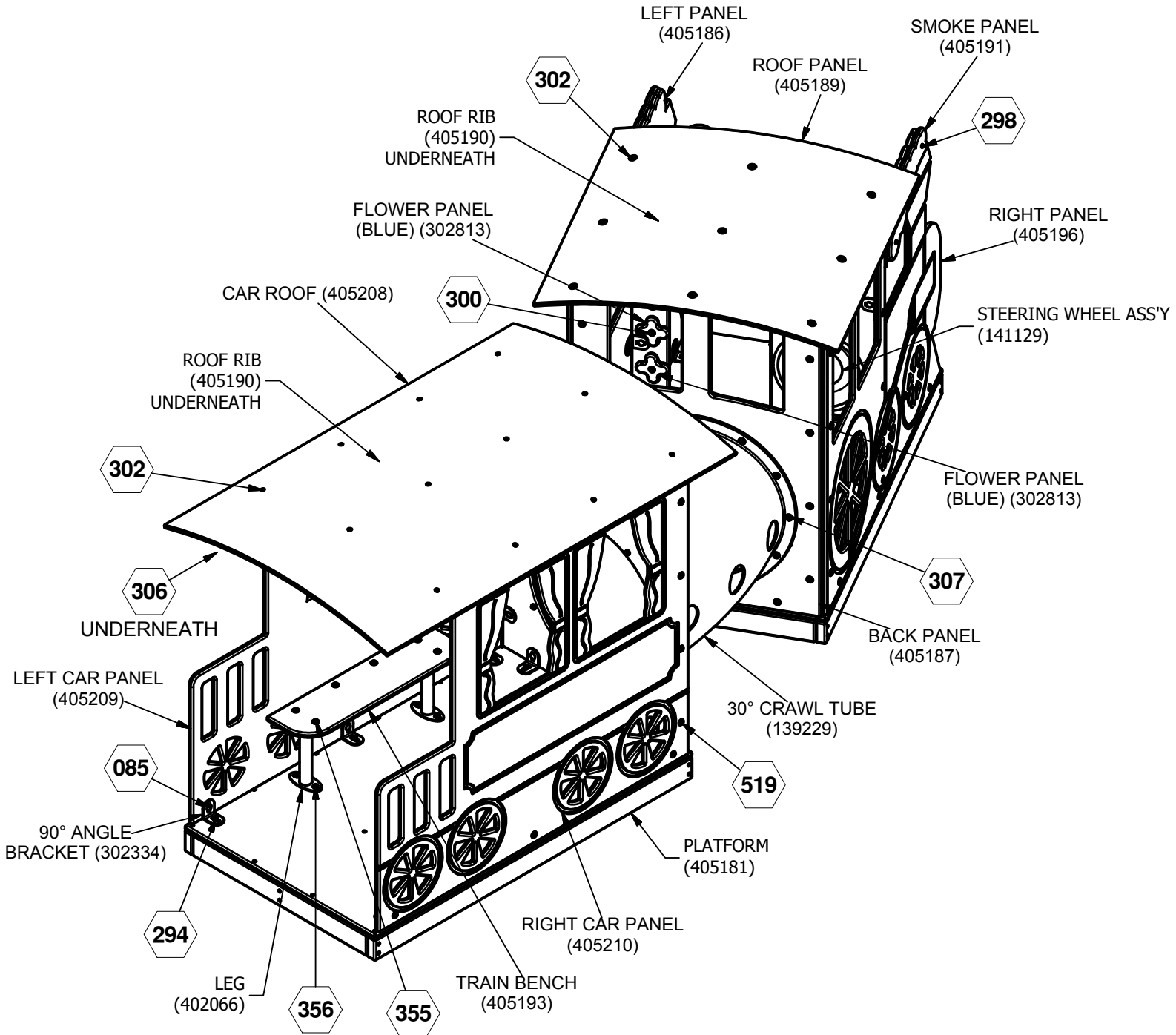
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⬡ = INSTALLATION DETAIL

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⬡ = INSTALLATION DETAIL

FINISHED ASSEMBLY

BACK VIEW

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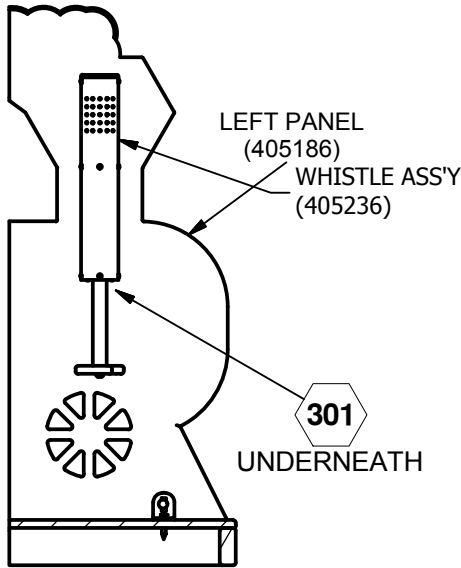
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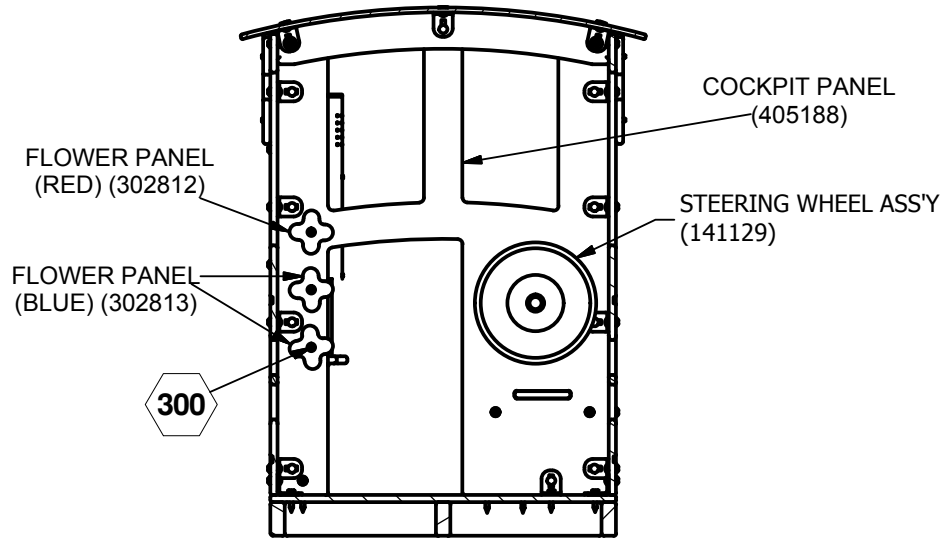
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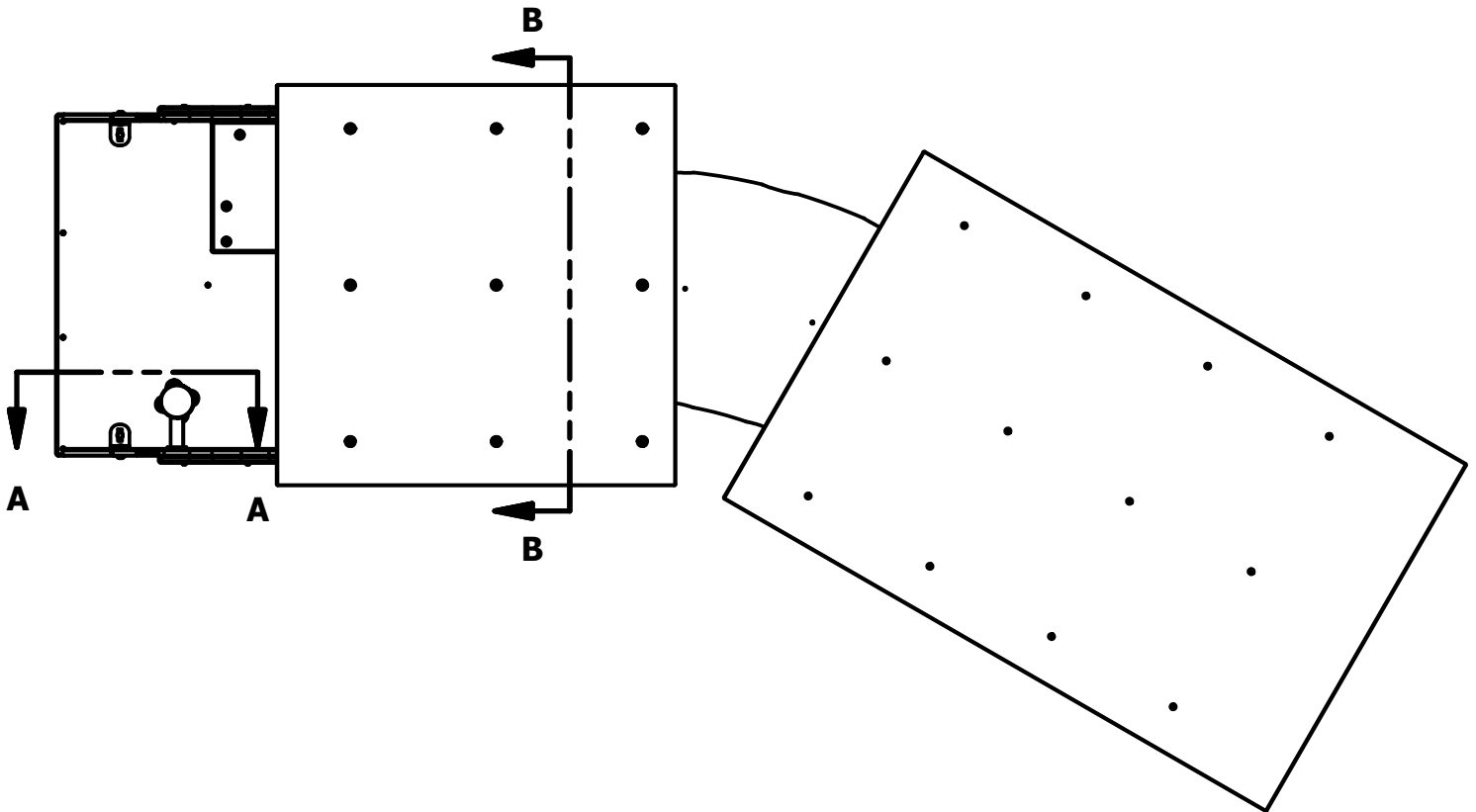
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SECTION A-A
SCALE 1 / 18

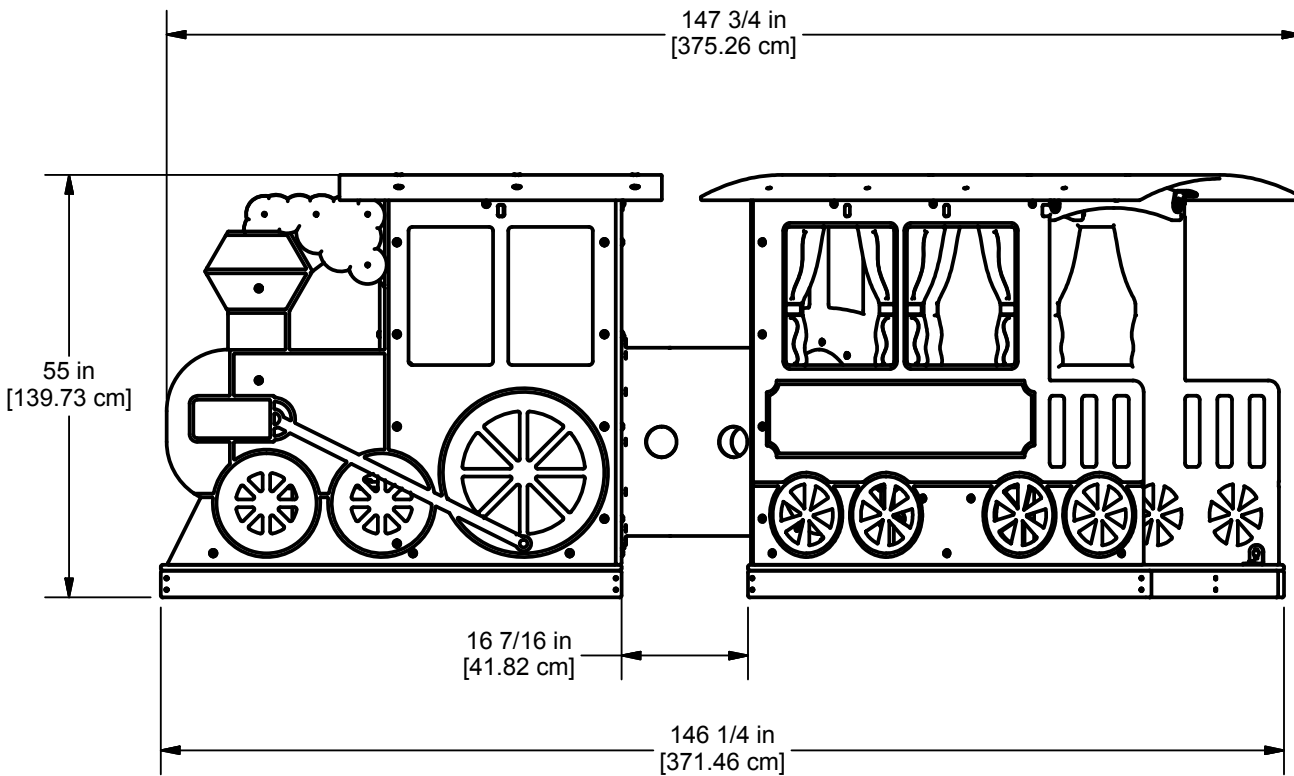
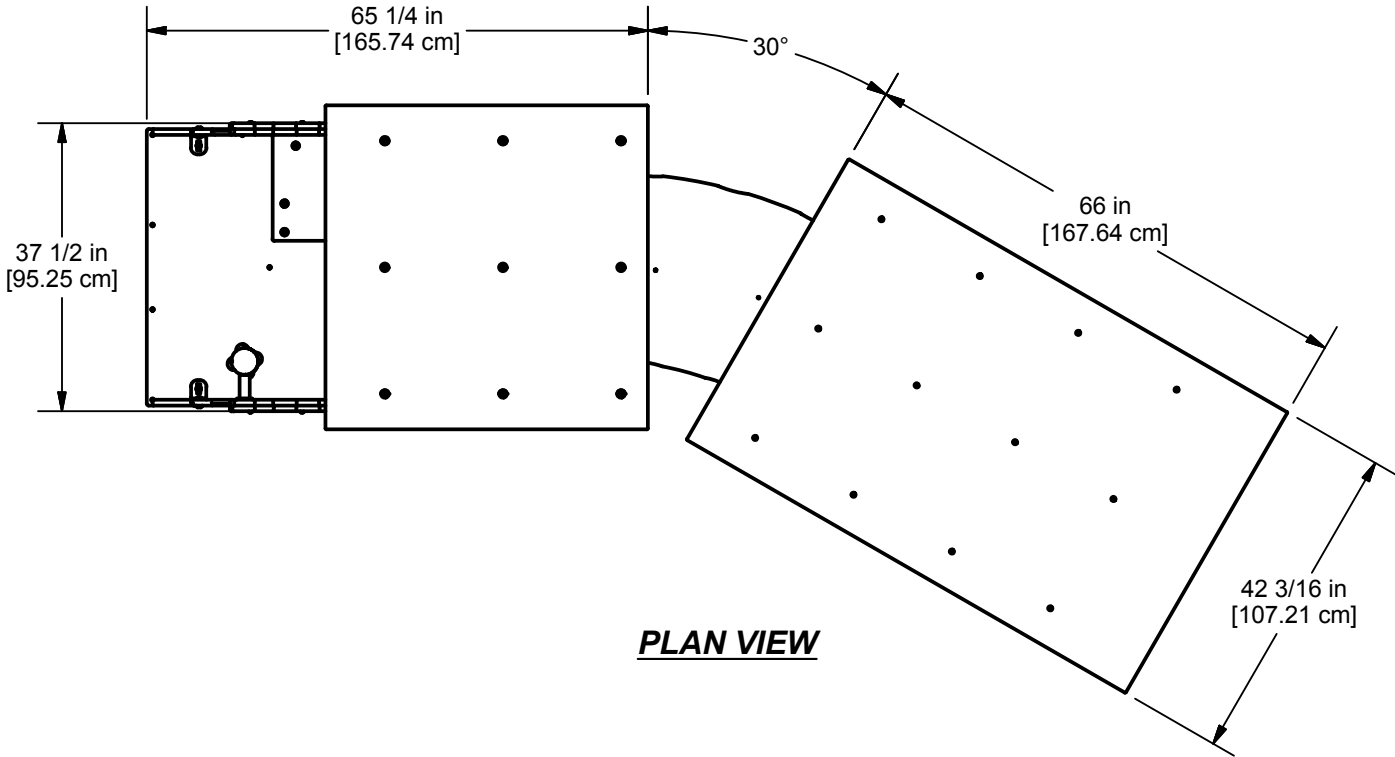


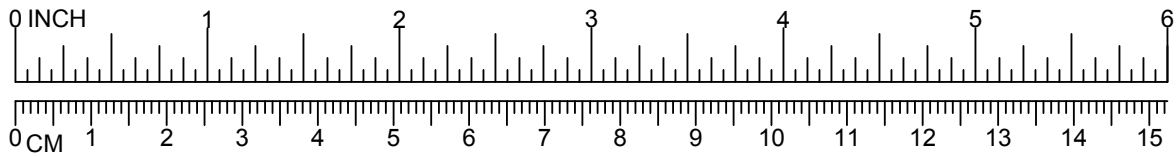
SECTION B-B
SCALE 1 / 20



SECTION VIEWS

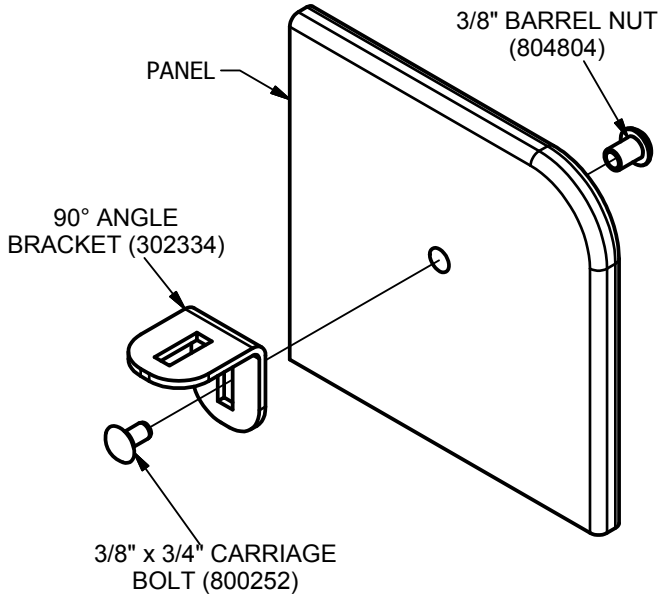
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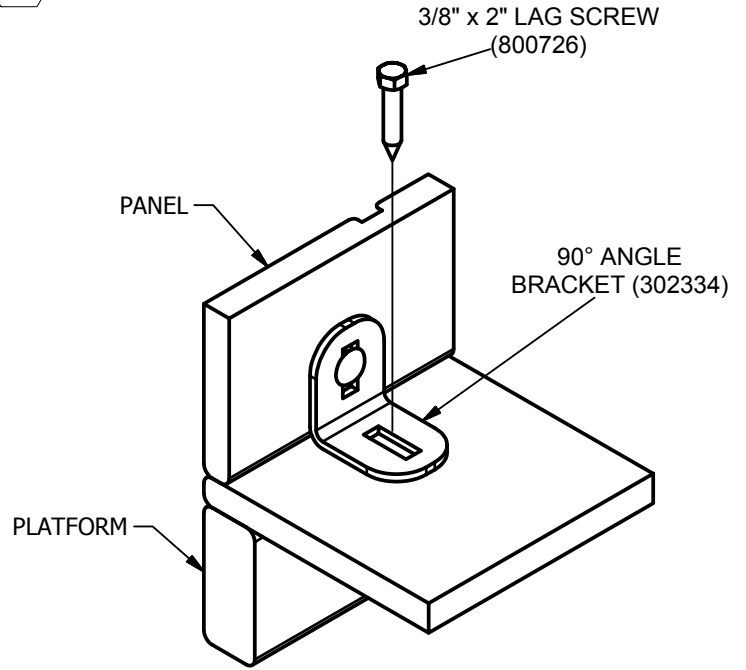


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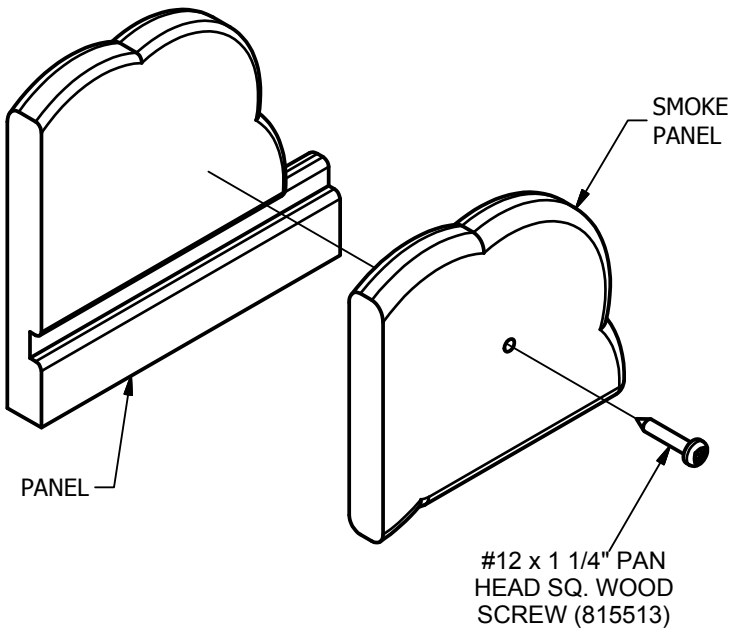
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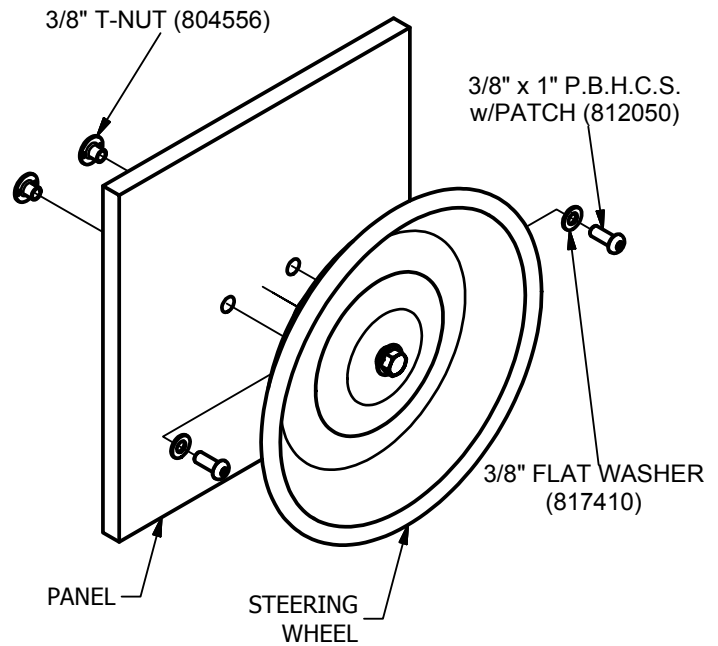
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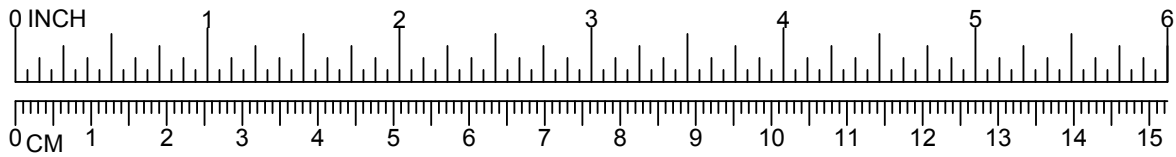


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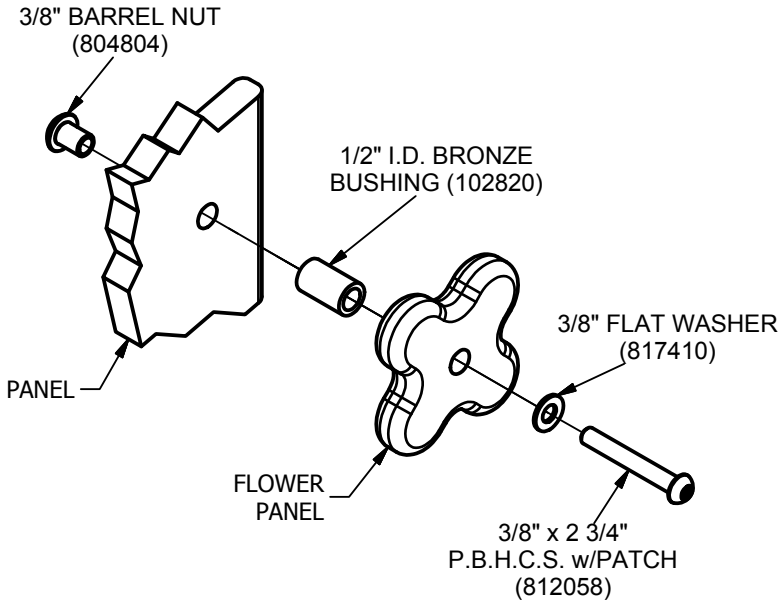
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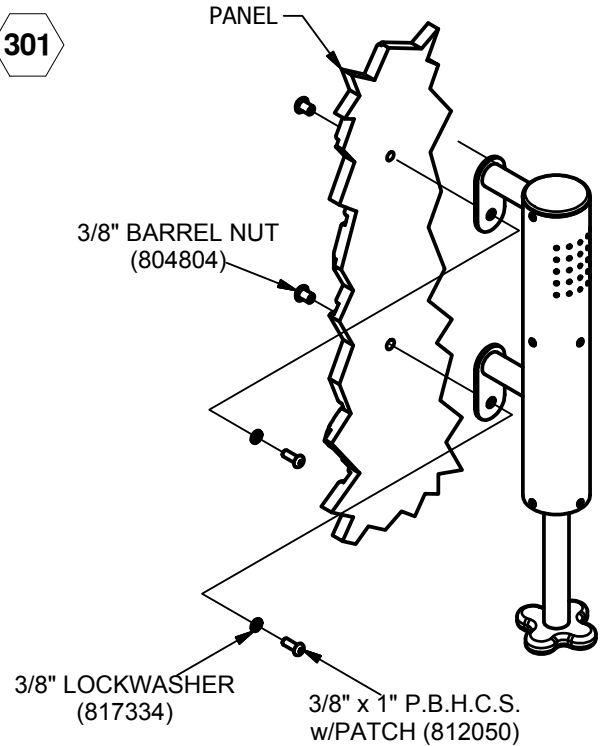


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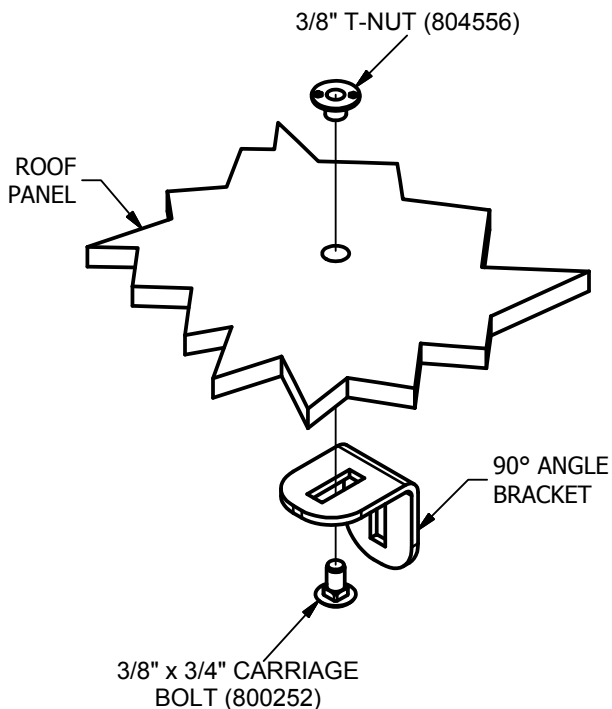
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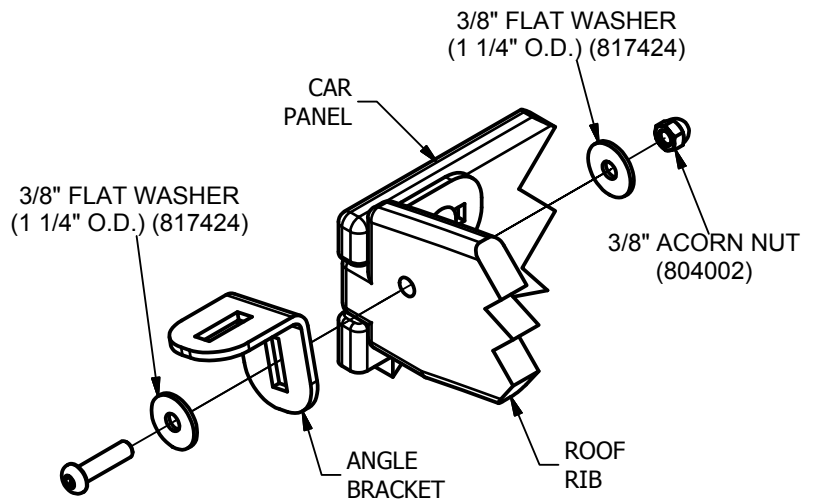
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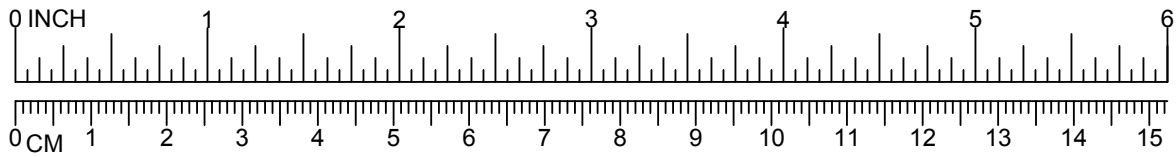


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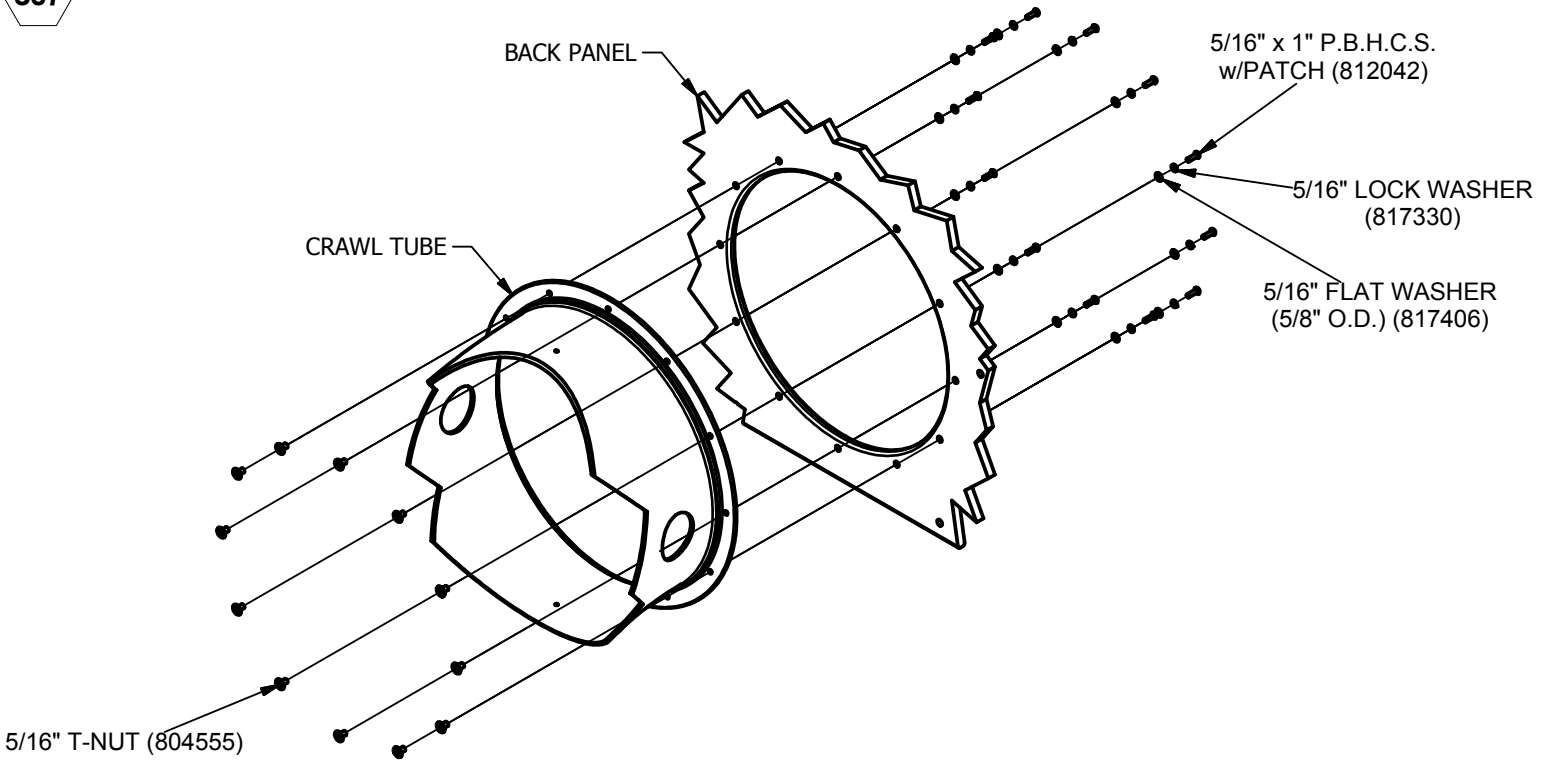
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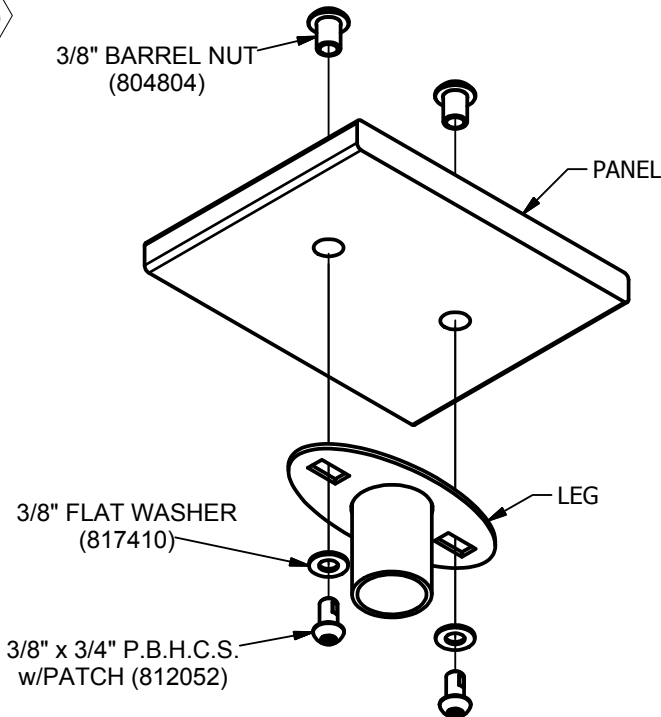


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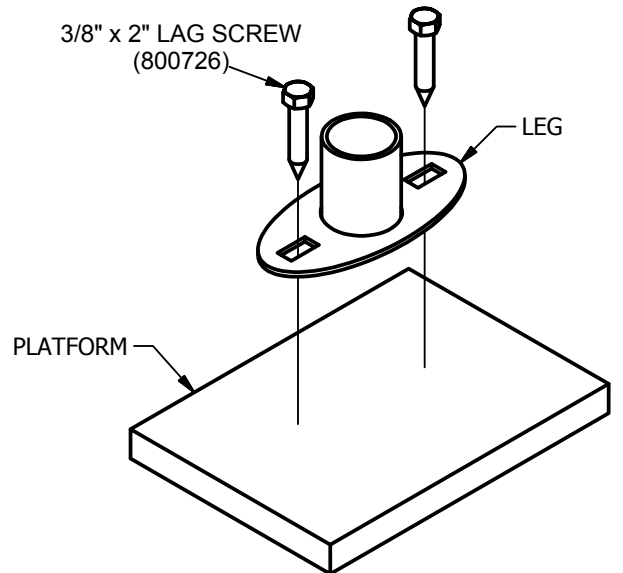
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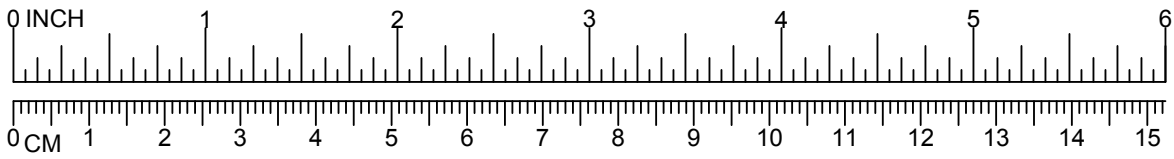


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