

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

SHOP EQUIPMENT, CONTACT REPAIR SHOP, LIGHT,
ORGANIZATIONAL MAINTENANCE
INSTALLATION IN ONE M151A2 1/4 TON,
4 X 4, UTILITY TRUCK
(NSN 4940-00-209-6219)

Headquarters, Department of the Army

28 January 1985

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*This bulletin supersedes TB 9-4940-325-30, dated 9 July 1968.

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1. General

a. Instructions contained in this bulletin are to be used as a guide for installation of organizational maintenance light contact repair shop equipment (NSN 4940-00-209-6219) in one M151A2 1/4 ton, 4 x 4, utility truck, referenced in figure 1.

b. Slight variations to the installation instructions may be made at the discretion of the officer in charge.

c. Complete lists of items contained in this shop are found in SC 4940-95-CL-A55.

d. Items not mentioned in this bulletin, that may be components of this shop, may be stowed in tool boxes and drawers or secured in such a manner as to avoid damage in transit.

e. All dimensions, fastener sizes, and hardware sizes are in inches.

f. When entering the 1/4 ton truck, curbside is at right and roadside is at left.

2. Warnings and Cautions

WARNING

All electrically powered tools and equipment must be grounded prior to use.

When using flammable cleaning solvents, extinguish all smoking materials. Do not use such solvents in the vicinity of open flame or sparks.

Drill bits can fracture or break. Wear safety glasses at all times when drilling holes.

CAUTION

Care must be taken when drilling into the dashboard to avoid drilling into electrical wires, cables, or gages.

Do not drill holes through cross members or into the frame of 1/4 ton truck.

If necessary, move the item to be mounted slightly so that drilled holes will avoid these structures.

To preserve its waterproof characteristics, precautions should be taken not to puncture the outer skin when drilling holes into the walls or floor of 1/4 ton truck. Coat underside of body with coating compound (UNDERCOATING TT-C-520, NSN 8030-00-221-1834) where mounting hardware projects through floor.

3. Location of Equipment

a. Location of equipment installed or stowed is referenced in figure 2.

(1) Refer to table 1 for hardware required for installation.

(2) Refer to table 2 for components to be mounted.

(3) Refer to table 3 for components to be fabricated.

b. Refer to table 4 for standard conversion chart.

3. Location of Equipment—Continued

Table 1. Mounting Hardware

MS/part no.	Size and description	Qty	Application
MS21316-46	5/16-18 UNC-2A Thumbscrew x 1.00 L	2	Support angle
MS21316-47	5/16-18 UNC-2A Thumbscrew x 1-1/2 L	1	Wood support
MS21333-13	1.00-in. dia Loop Clamp	4	Generator
MS27130-A21	#10-24 UNC Blind Rivet Nut	10	First aid kit, fire extinguisher, strap loops
MS27130-A44	5/16-18 UNC Blind Rivet Nut	13	Support angles, hinged lid assembly
MS27183-9	1/4-in. Flat Washer	8	General mechanic tool kit, welding machine parts chest
MS27183-11	5/16-in. Flat Washer	11	Support angles, tool box center
MS27183-13	3/8-in. Flat Washer	4	Bench and pipe vise
MS27183-42	7/32-in. Flat Washer	4	Generator
MS27965-14	Hinged Hasp	1	Tool box assembly
MS27968-16	Butt Hinge	4	Hinged top lid, hinged drop lid
MS35190-254	#8-32 UNC-2A Countersunk Head Machine Screw x 5/8 L	4	Hinged hasp
MS35190-274	#10-24 UNC-2A Countersunk Head Machine Screw x 7/8 L	4	Strap loops
MS35190-308	5/16-18 UNC-2A Countersunk Head Machine Screw x 1-1/2 L	6	Tool box top
MS35206-264	#10-24 UNC-2A Pan Head Machine Screw x 5/8 L	6	First aid kit, fire extinguisher
MS35206-269	#10-24 UNC-2A Pan Head Machine Screw x 1-1/2 L	4	Generator

3. Location of Equipment—Continued

Table 1. Mounting Hardware--Continued

MS/part no.	Size and description	Qty	Application
MS35338-42	#8 Lockwasher	4	Hinged hasp
MS35338-43	#10 Lockwasher	10	Generator, fire extinguisher, first aid kit
MS35338-44	1/4-in. Lockwasher	8	General mechanic tool kit, welding machine parts chest
MS35338-45	5/16-in. Lockwasher	27	Support angles, hinged lid assembly, tool box assembly
MS35338-46	3/8-in. Lockwasher	4	Bench and pipe vise
MS35492-51	#8 Flat Head Wood Screw x 5/8 L	27	Butt hinges, hinged hasp
MS35492-75	#10 Flat Head Wood Screw x 5/8 L	4	Strap loops
MS35492-80	#10 Flat Head Wood Screw x 1-1/2 L	3	Tool box center
MS35495-109	#12 Round Head Wood Screw	2	Wood support, support x 3/4 L angle
MS35649-202	#10-24 UNC-2B Hex Nut	4	Generator
MS35649-282	#8-32 UNC-2B Hex Nut	4	Hinged hasp
MS51939-3	Strap Loop	4	Cutting and welding torch outfit
MS51967-2	1/4-20 UNC-2B Hex Nut	8	General mechanic tool kit, welding machine parts chest
MS51967-5	5/16-18 UNC-2B Hex Nut	17	Support angles, tool box assembly
MS51967-8	3/8-16 UNC-2B Hex Nut	4	Bench and pipe vise

3. Location of Equipment—Continued

Table 1. Mounting Hardware--Continued

MS/part no.	Size and description	Qty	Application
MS90725-12	1/4-20 UNC-2A Hex Head Capscrew x 1-1/2 L	8	General mechanic tool kit, welding machine parts chest
MS90725-35	5/16-18 UNC-2A Hex Head	8	Tool box assembly
MS90725-36	5/16-18 UNC-2A Hex Head Capscrew x 1-1/4 L	2	Support angle
MS90725-39	5/16-18 UNC-2A Hex Head Capscrew x 1-3/4 L	8	Support angles
MS90725-40	5/16-18 UNC-2A Hex Head Capscrew x 2.00 L	3	Support angles
MS90725-67	3/8-16 UNC-2A Hex Head Capscrew x 2-1/4 L	4	Bench and pipe vise
7550588-1	72.00-in. Retaining Strap	2	Cutting and welding torch outfit
7550588-2	60.00-in. Retaining Strap	1	Acetylene and oxygen cylinders

Table 2. Components to be Mounted

NSN	Qty	Description	Figure no.
3431-00-679-5594	1	CHEST, PARTS, WELDING MACHINE	2
8120-00-663-3019	1	CYLINDER, COMPRESSED GAS: acetylene	2
8120-00-866-0206	1	CYLINDER, COMPRESSED GAS: oxygen	2
4210-00-555-8837	1	EXTINGUISHER, FIRE, MONOBROMOTRI- FLUOROMETHANE	2
6545-00-922-1200	1	FIRST AID KIT, GENERAL PURPOSE	2
6115-00-889-1446	1	GENERATOR, ALTERNATING CURRENT, DIRECT CURRENT	2

3. Location of Equipment--Continued

Table 2. Components to be Mounted--Continued

NSN	Qty	Description	Figure no.
5180-00-699-5273	1	TOOL KIT, GENERAL MECHANIC	2
3433-00-357-6311	1	TORCH OUTFIT, CUTTING AND WELDING	2
5120-00-188-1182	1	WISE, BENCH AND PIPE	2

Table 3. Components to be Fabricated

Drawing or Part no.	Qty	Description	Figure no.
11021151-5	4	ANGLE, SUPPORT	4-10
11021151-6	2	ANGLE, SUPPORT	2-3-10
11021151-7	6	ANGLE, SUPPORT	4-10
11021238	1	TOOL BOX ASSEMBLY, consisting of one each of the following	
11021238-1	1	TOP, TOOL BOX	4-5
11021238-2	1	FRONT, TOOL BOX	4-6
11021238-3	1	CENTER, TOOL BOX	4-7
11021238-4	1	LID ASSEMBLY, HINGED, consisting of one each of the following:	4
11021238-4-A	1	TOP LID, HINGED	8
11021238-4-B	1	DROP LID, HINGED	8
11021239	1	SUPPORT, WOOD	2-9

4. Installation

NOTE

Hand blind riveter (512000-679-6523) is used for installing blind rivet nuts in floors, walls, or dashboard of 1/4 ton truck. Install blind rivet nuts in accordance with the technical manual supplied with the hand blind riveter.

Position floor-mounted first aid kit and fire extinguisher as shown in figure 2. Use the equipment mounting holes as template for location of blind rivet nuts in accordance with figure 3.

a. Follow steps (1) and (2) below for installing blind rivet nuts.

(1) Mark and drill ten 0.25-in. diameter holes in floor of 1/4 ton truck in accordance with figure 3. Install ten #10 blind rivet nuts (MS27130-A21).

(2) Mark and drill thirteen 0.42in. diameter holes in floor and dashboard of 1/4 ton truck in accordance with figure 3. Install thirteen 5/16in. blind rivet nuts (MS27130-A44).

b. Follow steps (1) thru (8) below for fabricated items installation.

NOTE

Refer to figures 4 thru 10 for dimensions of components to be fabricated and to table 3 for quantity needed.

All wood parts are to be made from 3/4-in. exterior plywood, group B, PS-1, Type C, in accordance with specification NN-P-530. Support angles are to meet dimensions specified in figure 10.

(1) Position six support angles (11021151-7) on tool box center (110212383) in accordance with figure 4. Secure support angles to tool box center, using three 5/16x 2-in. hex head capscrews (MS90725-40), three 5/16-in. flat washers (MS27183-11), three 5/16in. lockwashers (MS35338-45), and three 5/16-in. hex nuts (MS51967-5).

(2) Position tool box center (11021238-3) and tool box front (110212382) in accordance with figure 4. Secure tool box front to tool box center, using three #10 x 1-1/2-in. flat head wood screws (MS35492-80).

(3) Position four support angles (11021151-5) on tool box front (110212382) in accordance with figure 4. Secure support angles, using eight 5/16x 13/4-in. hex head capscrews (MS9072539), eight 5/16-in. flat washers (MS2718311), eight 5/16-in. lockwashers (MS3533845), and eight 5/16-in. hex nuts (MS519675).

(4) Position tool box center (11021238-3) and tool box front (11021238-2) over eight installed blind rivet nuts on floor of 1/4 ton truck in accordance with figure 3. Secure tool box center and tool box front, using eight 5/16x 1-1/8-in. hex head capscrews (MS90725-35) and eight 5/16-in. lockwashers (MS35338-45).

(5) Position tool box top (110212381) on tool box center (11021238-3) in accordance with figure 4. Secure tool box top, using six 5/16x 1-1/2-in. countersunk head machine screws (MS35190308), six 5/16-in. lockwashers (MS3533845), and six 5/16-in. hex nuts (MS519675).

(6) Position four butt hinges (MS27968-16) on hinged drop lid (110212384-B) and hinged top lid (11021238-4-A) in accordance with figure 8. Using butt hinges as templates, mark and drill eighteen 0.12-in. diameter pilot holes.

4. Installation—Continued

Secure four butt hinges, using eighteen #8 x 5/8-in. flat head wood screws (MS35492-51).

(7) Position hinged drop lid and hinged top lid in cutout in tool box top (11021238-1) in accordance with figure 4. Using two butt hinges attached to hinged top lid (11021238-4-A) as templates, mark and drill six 0.12-in. diameter pilot holes. Secure hinged drop lid and hinged top lid to tool box top, using six #8 x 5/8-in. flat head wood screws (MS35492-51).

(8) Position hinged hasp (MS2796514) on rear of 1/4 ton truck and hinged drop lid in accordance with figure 8. Using female portion of hinged hasp as a template, mark and drill three 0.12-in. diameter pilot holes in hinged drop lid. Secure female portion of hinged hasp on hinged drop lid, using three #8 x 5/8-in. flat head wood screws (MS3549251). Position male portion of hinged hasp on rear of 1/4 ton truck. Using male portion of hinged hasp as a template, mark and drill four 0.19-in. diameter holes. Secure male portion of hinged hasp, using four #8 x 5/8-in. countersunk head machine screws (MS35190254), four #8 lockwashers (MS35338-42), and four #8 hex nuts (MS35649-282) in accordance with figure 8.

c. Follow steps (1) thru (8) below for equipment installation.

(1) Position support angle (11021151-6) over two installed blind rivet nuts in front floor of 1/4 ton truck closest to passenger area and secure, using two 5/16x 1-1/4-in. hex head capscrews (MS90725-36) and two 5/16-in. lockwashers (MS35338-45) in accordance with figure 2. Assemble wood support (11021239) and support angle (11021151-6), in accordance with figure 2, using two #12 x 3/4-in. round head wood screws (MS35495-109). Position wood support and support angle over three blind rivet nuts. two in

floor of 1/4 ton truck, one in dashboard, and secure, using two 5/16 x 1-in. thumbscrews (MS21316-46) in floor and a 5/16x 1-1/2-in. thumbscrew (MS21316-47) in dashboard. Position acetylene cylinder (8120-00-663-3019) and oxygen cylinder (8120-00-866-0206) against wood support (11021239). Secure acetylene cylinder and oxygen cylinder with 60-in. retaining strap (7550588-2).

(2) Position generator (6115-00889-1446) on tool box top (11021238-1) in accordance with figure 2. Secure generator, using four 1-in. loop clamps (MS21333-13), four #10 x 1-1/2-in. pan head machine screws (MS35206-269), four 7/32-in. flat washers (MS27183-42), four #10 lockwashers (MS35338-43), and four #10 hex nuts (MS35649-202).

(3) Position and center bench and pipe vise (5120-00-188-1182) on tool box top (11021238-1) in location shown in figures 2 and 5. Using vise base as a template, mark and drill four 0.41-in. diameter holes through tool box top. Secure bench and pipe vise, using four 3-8x 2-1/4-in. hex head capscrews (MS90725-67), four 3/8-in. flat washers (MS27183-13), four 3/8-in. lockwashers (MS35338-46), and four 3/8-in. hex nuts (MS51967-8).

(4) Remove contents of first aid kit (6545-00-922-1200). Mark and drill three 0.22-in. diameter holes in the back of first aid kit. Position in location shown in figure 2 over installed blind rivet nuts in accordance with figure 3. Secure first aid kit, using three #10 x 5/8-in. pan head machine screws (MS35206-264) and three #10 lockwashers (MS35338-43). Reinstall contents of first aid kit.

(5) Position bracket for fire extinguisher (4210-00-555-8837) on floor in accordance with figure 2. Mark and drill three 0.22-in. diameter holes in bracket. Position over installed blind rivet nuts in accordance with figure 3. Secure fire extinguisher, using three #10 x 5/8-in. pan head machine screws (MS35206-264) and three #10 lockwashers (MS35338-43).

4 Installation—Continued

Install fire extinguisher in bracket.

(6) In accordance with figure 2, position two strap loops (MS51939-3) over four blind rivet nuts on 1/4 ton truck floor and secure, using four #10 x 7/8-in. countersunk head machine screws (MS35190-274). Position two strap loops (MS51939-3) on back of tool box assembly (11021238) and secure, using four #10 x 5/8-in. flat head wood screws (MS35492-75). Position cutting and welding torch outfit (3433-00-3576311) on 1/4 ton truck in accordance with figure 2. Secure, using two 72in. retaining straps (7550588-1).

(7) Position general mechanic tool kit (5180-00-699-5273) on tool box top in accordance with figure 2. Using tool box top (11021238-1) as a template,

mark and drill four 0.28-in. diameter holes through bottom of general mechanic tool kit in accordance with figure 5. Secure general mechanic tool kit to tool box top, using four 1/4 x 1-1/2-in. hex head capscrews (MS90725-12), four 1/4-in. lockwashers (MS35338-44), four 1/4-in. flat washers (MS27183-9), and four 1/4-in. hex nuts (MS51967-2).

(8) Position welding machine parts chest (3431-00-679-5594) on tool box top in accordance with figure 2. Using tool box top (11021238-1) as a template, mark and drill four 0.28-in. diameter holes through welding machine parts chest bottom in accordance with figure 5. Secure welding machine parts chest to tool box top, using four 1/4 x 1-1/2-in. hex head capscrews (MS9072512), four 1/4-in. lockwashers (MS3533844), four 1/4-in. flat washers (MS271839) , and four 1/4-in. hex nuts (MS519672).

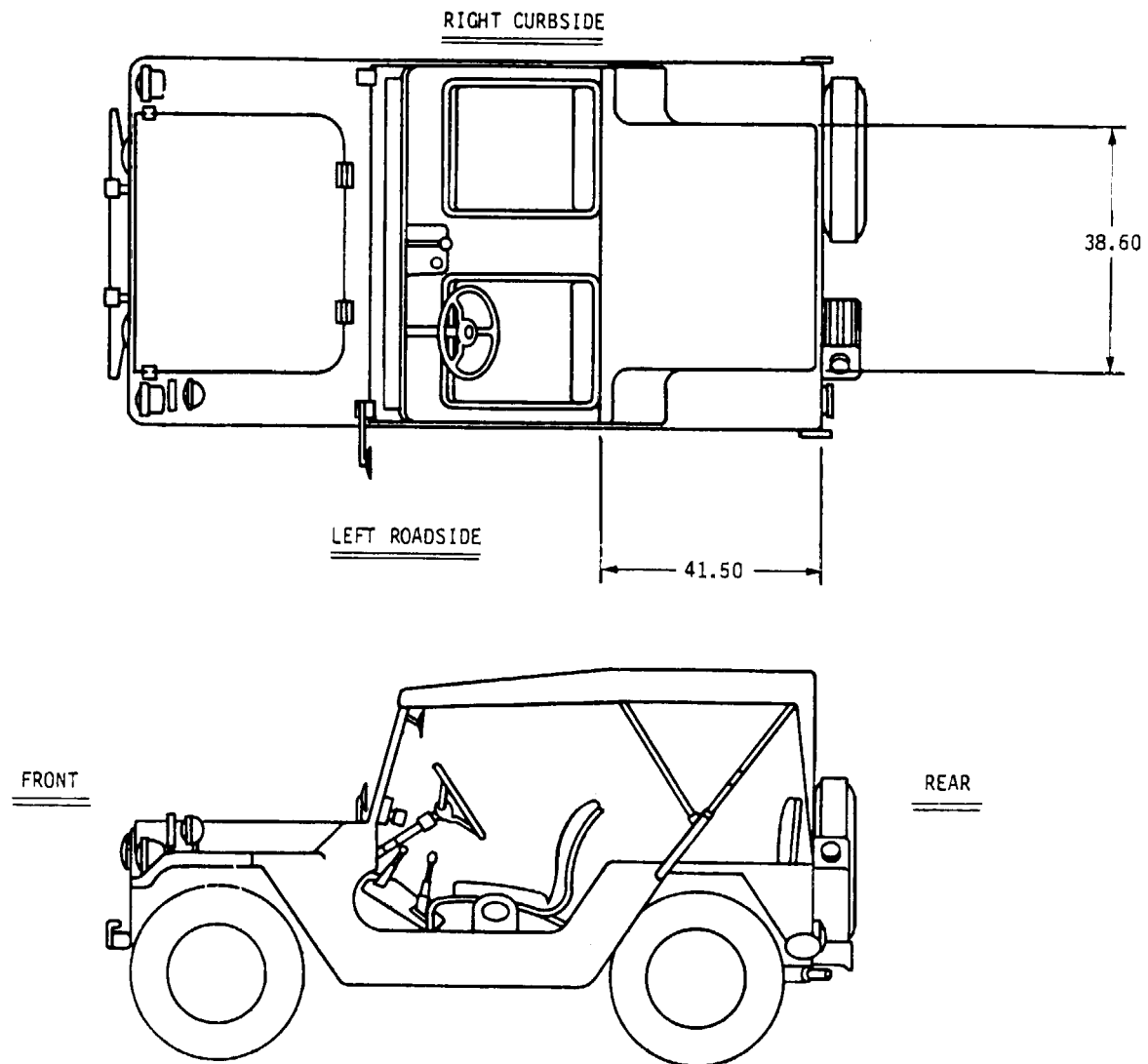


Figure 1. Utility Truck, 1/4 Ton, 4 x 4, M151A2.

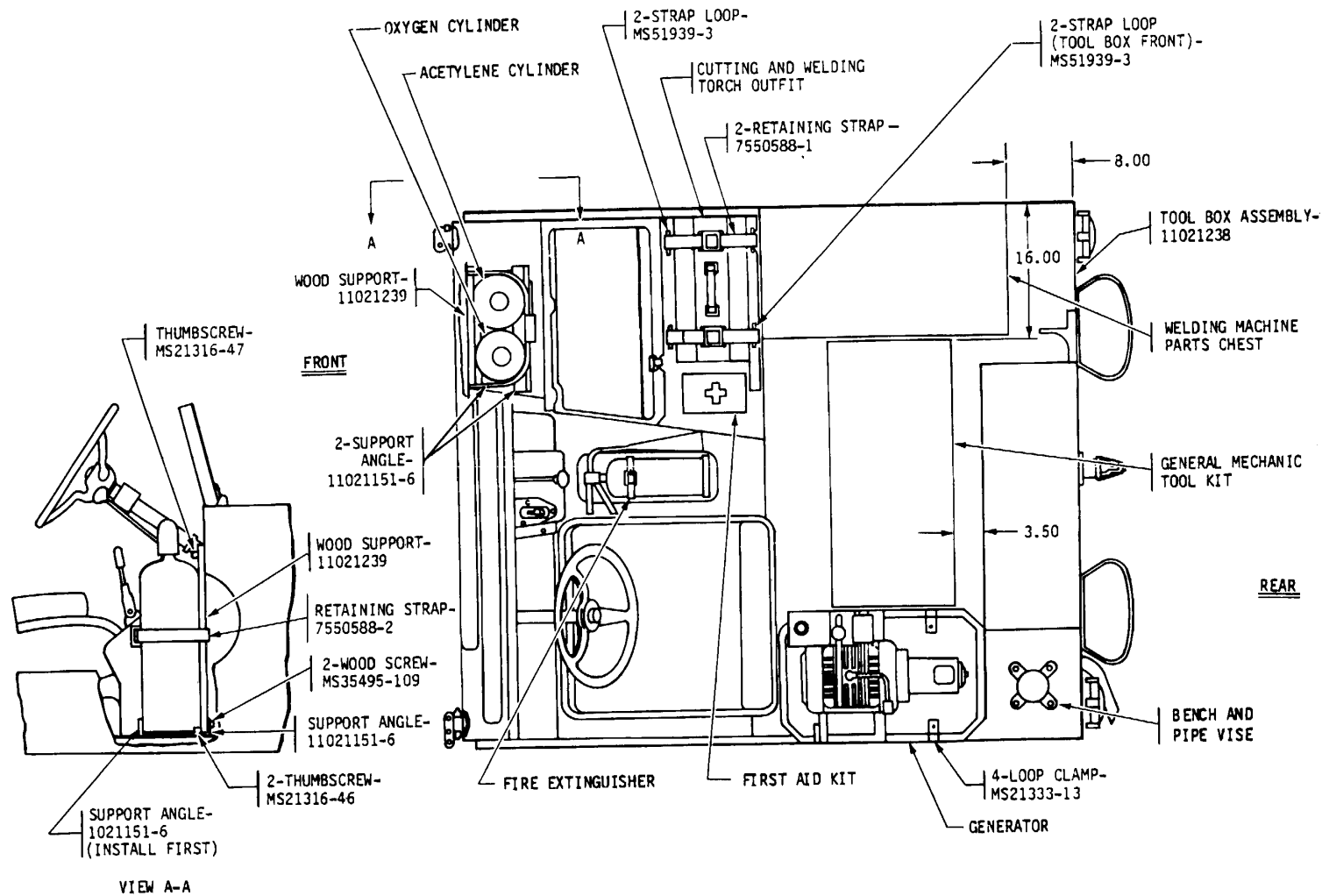


Figure 2. Components to be Installed, M151A2, Top View

NOTE:

1. For 0.42-inch diameter holes, use blind rivet nuts MS27130-A44.
2. For 0.25-inch diameter holes, use rblind rivet nuts MS27130-A21.

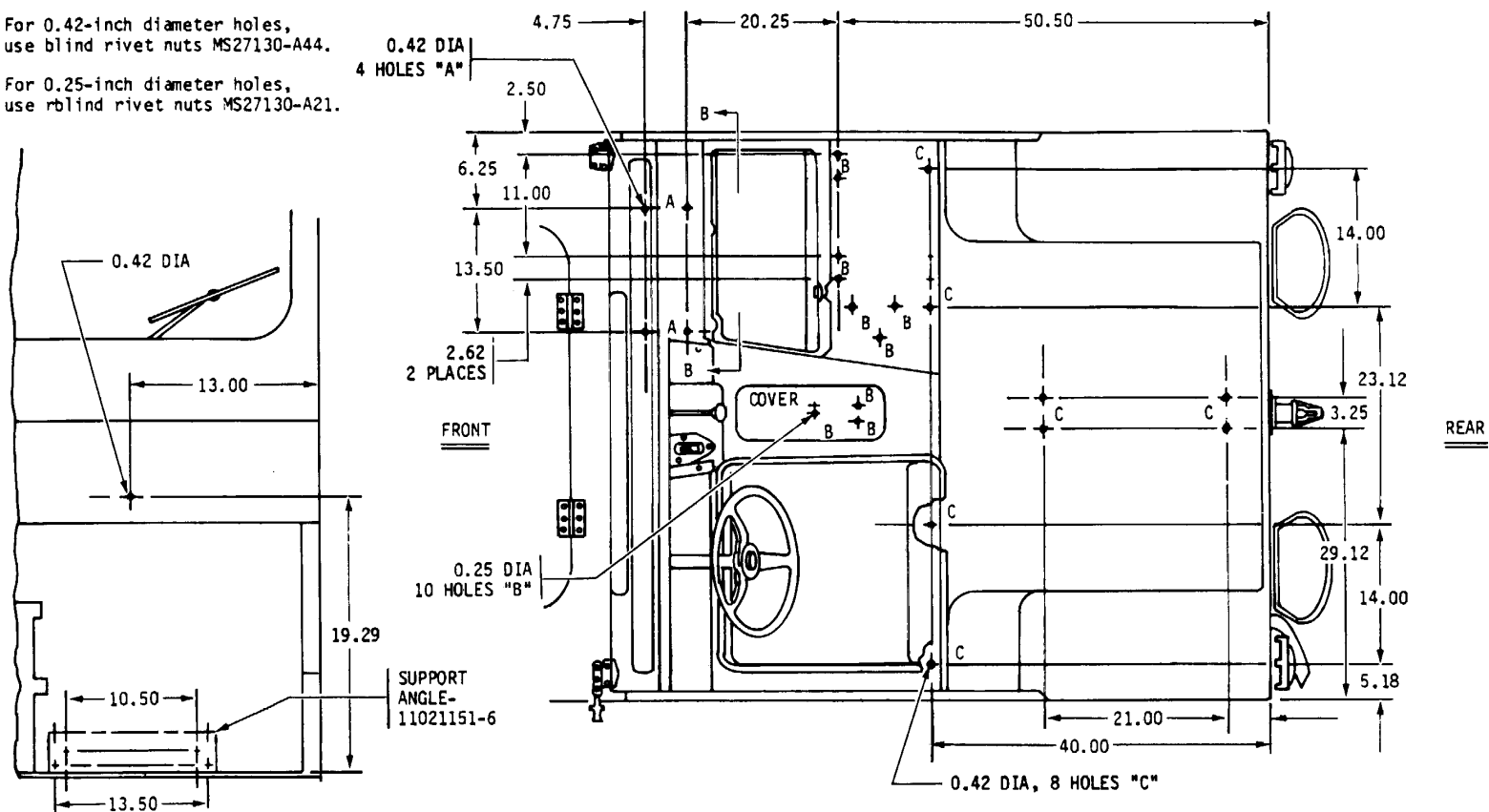


Figure 3. Hole Dimensions and Location for Mounted Components, M151A2, Floor Plan.

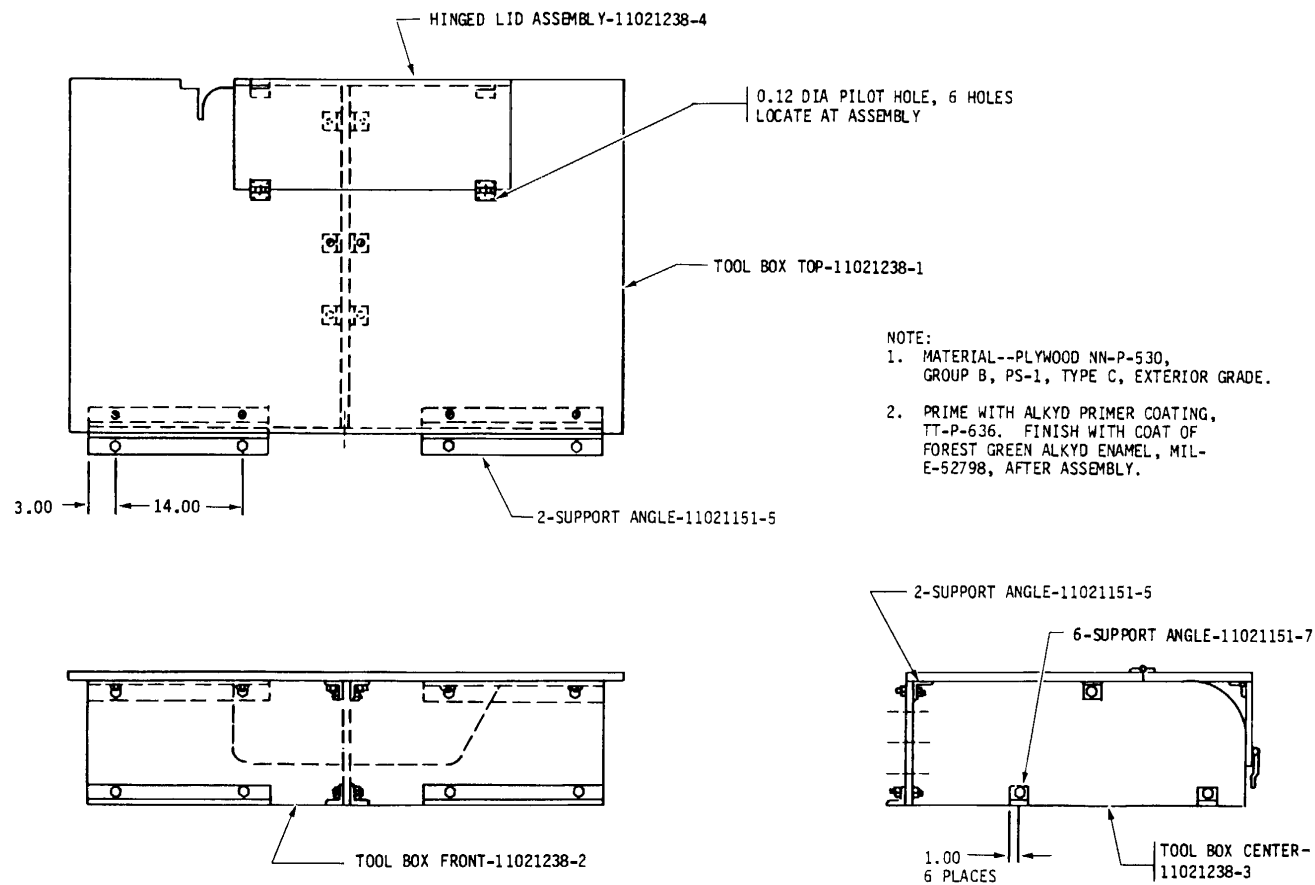


Figure 4. Components of Tool Box Assembly, 11021238.

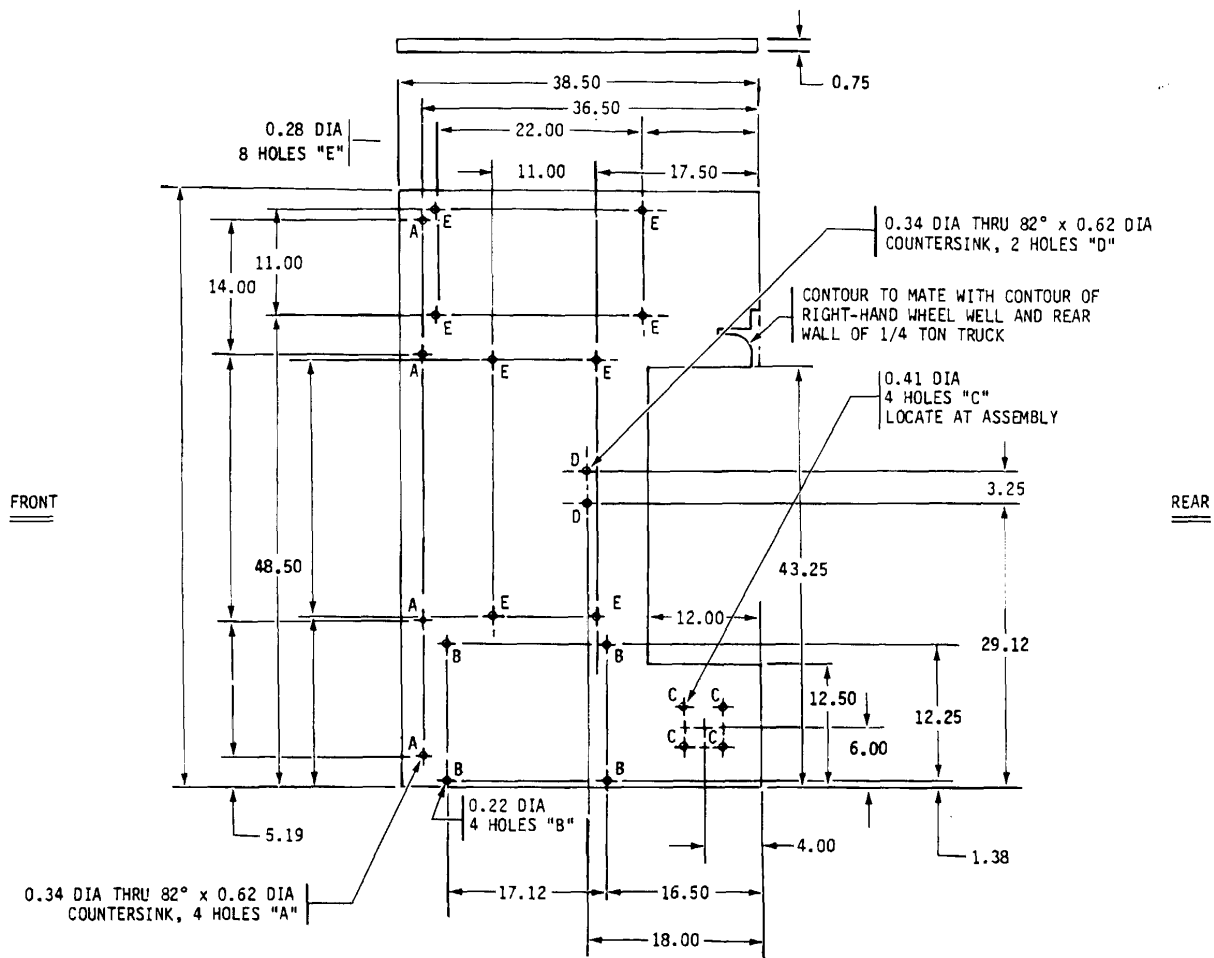


Figure 5. Dimensions for Tool Box top, 11021238-1.

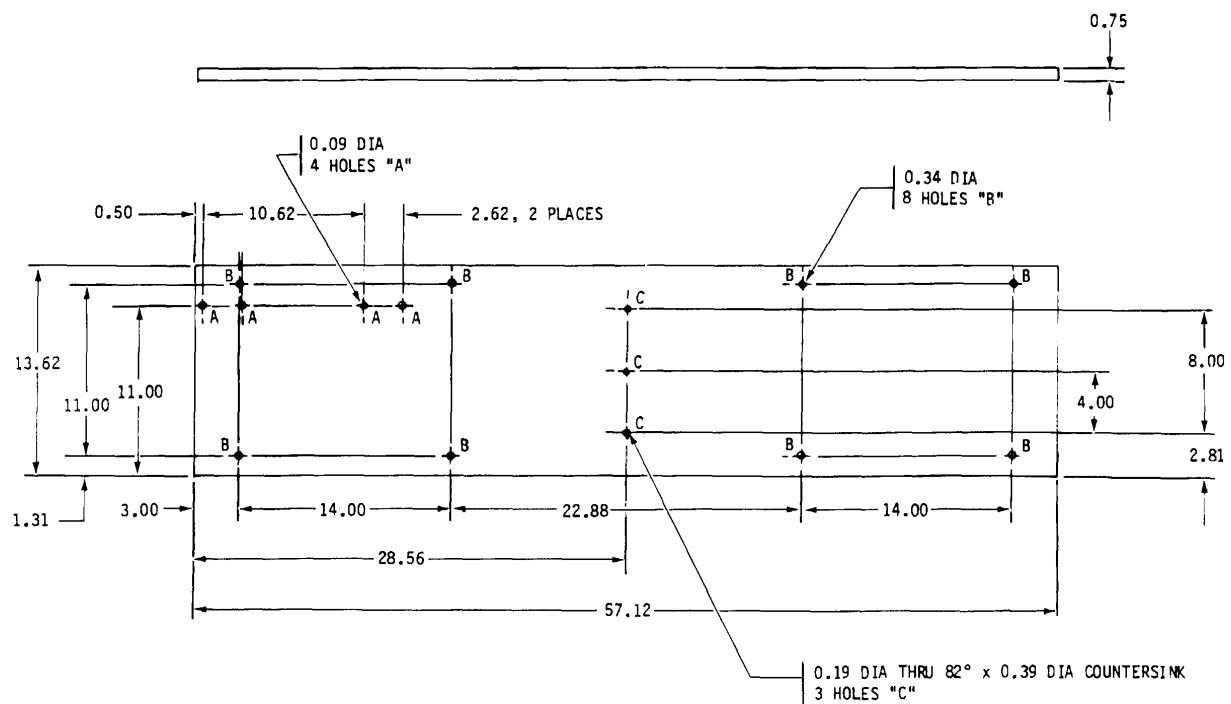


Figure 6. Dimensions for Tool Box Front, 11021238-2.

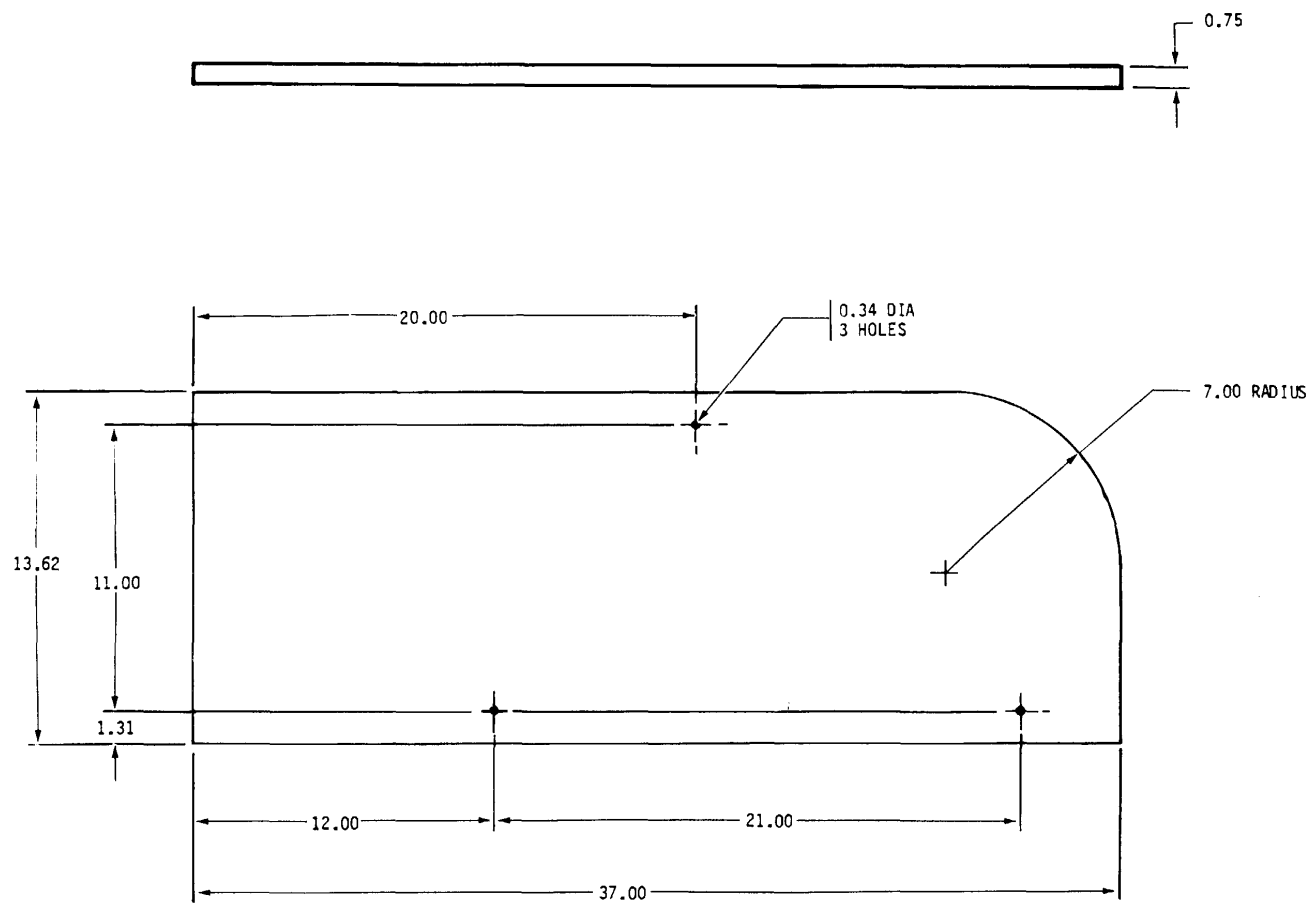


Figure 7. Dimensions for Tool Box Center, 11021238-3.

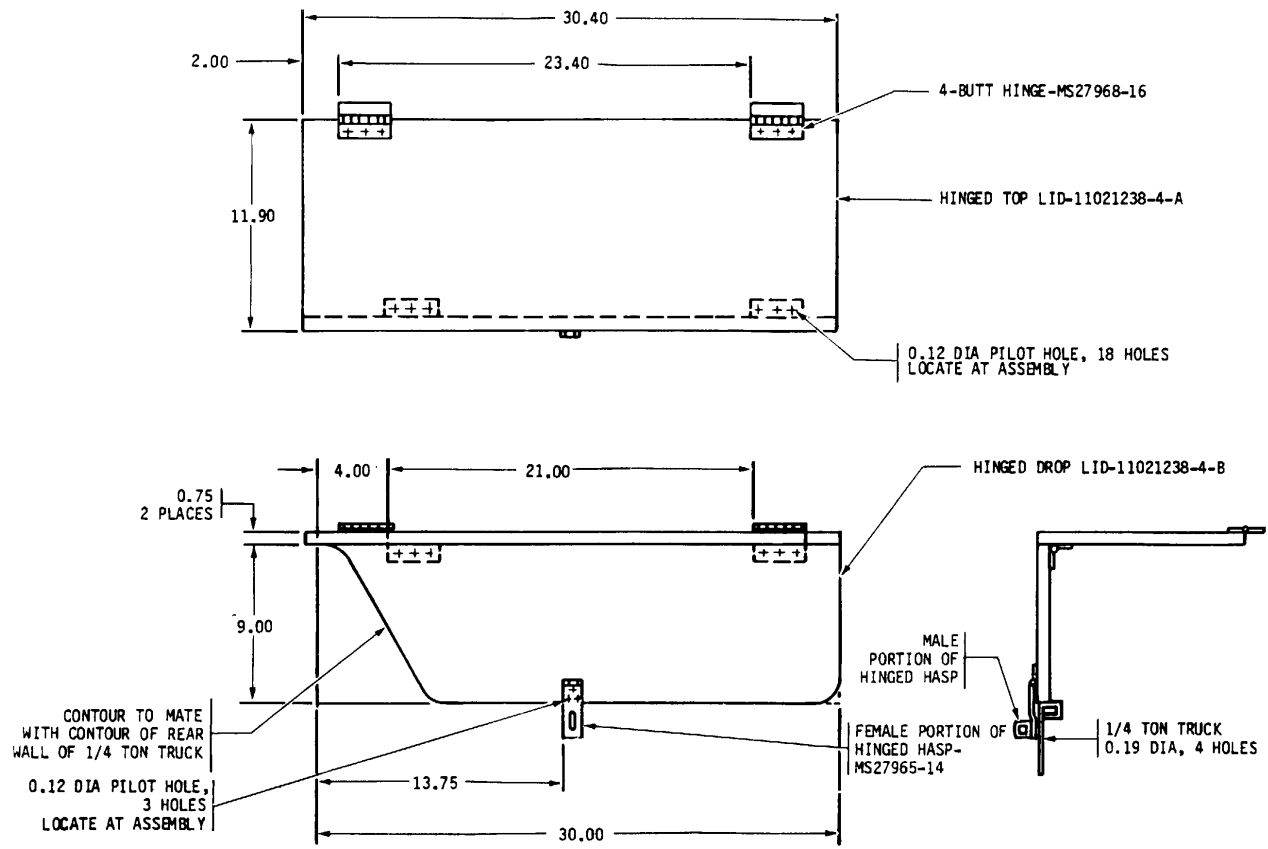


Figure 8. Dimensions for Hinged Top Lid, 11021238-4-A and Hinged Drop Lid, 11021238-4-B.

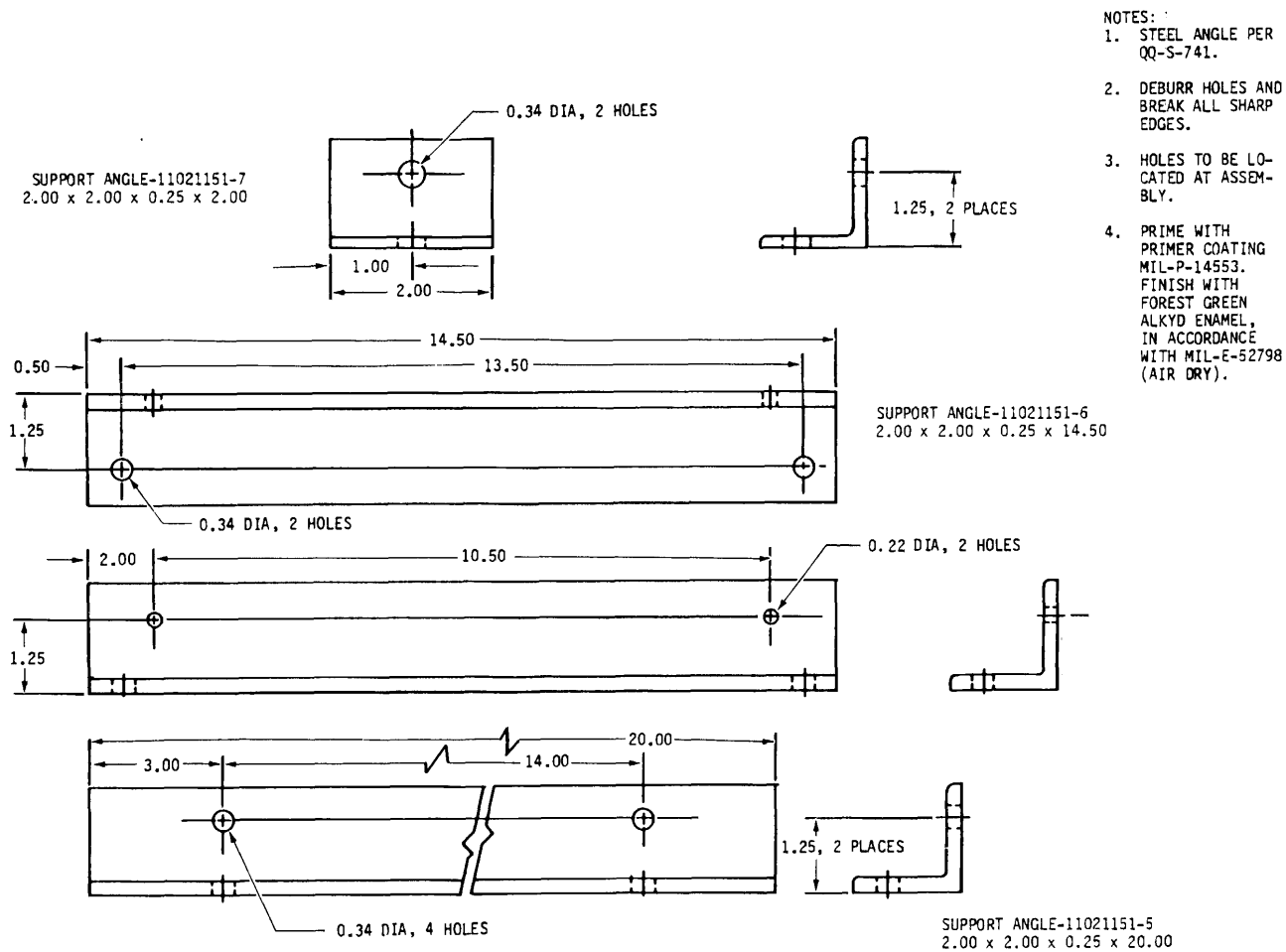


Figure 10. Dimensions for Support Angles, 11021151-5, 11021151-6, and 11021151-7.

Table 4. Standard Conversion Chart

Nominal size	Decimal size	Nominal size	Decimal size
1/16	0.06	35/64	0.55
5/64	0.08	9/16	0.56
3/32	0.09	37/64	0.58
7/64	0.11	19/32	0.59
1/8	0.12	39/64	0.61
9/64	0.14	5/8	0.62
5/32	0.16	41/64	0.64
11/64	0.17	21/32	0.66
3/16	0.19	43/64	0.67
13/64	0.20	11/16	0.69
7/32	0.22	45/64	0.70
15/64	0.23	23/32	0.72
1/4	0.25	47/64	0.73
17/64	0.27	3/4	0.75
9/32	0.28	49/64	0.77
19/64	0.30	25/32	0.78
5/16	0.31	51/64	0.80
21/64	0.33	13/16	0.81
11/32	0.34	53/64	0.83
23/64	0.36	27/32	0.84
3/8	0.38	55/64	0.86
25/64	0.39	7/8	0.88
13/32	0.41	57/64	0.89
27/64	0.42	29/32	0.91
7/16	0.44	59/64	0.92
29/64	0.45	15/16	0.94
15/32	0.47	61/64	0.95
31/64	0.48	31/32	0.97
1/2	0.50	63/64	0.98
33/64	0.52	1	1.00
17/32	0.53		

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