

Assembly Instructions

EMD F-3 DUAL ROAD DIESEL

In O Gauge by All-Nation

Before starting construction of your F-3 unit, examine all castings and remove all flash. Be careful not to file tongues off top of side casting and groove on bottom of roof casting. All detail parts should be added before unit is assembled. A preliminary assembly is recommended to check the fit to the parts, end to sides, sides to roof, etc.

DETAILING

To the end (404) fit two grab irons (these are formed from .032 wire), then mount coupler using 2-56 screw. Then install wire forms for uncoupling (see detail drawing and instructions).

Cement fiber diaphragm (508) to striker plate (509). When dry cement assembly to the door frame with striker plate away from end. Permit the floor sill to come through inside of striker plate when diaphragm is compressed.

Fit door window glass into frame from the inside. (do not install till painting is finished.

Now take the sides (304-305). You have a choice of either one or two headlites. If you want only one, file out the membrane in nose door. NOTE: if you want to use a MARS lite both lites will have to be used, the top one for the MARS and the bottom for the headlite. If you want 45° number boards see drawing and instructions for their installation.

Fit hand rails (formed from wire in kit) in nose and sides. Then mount front coupler using 2-56 screw. Now mount the uncoupling wire forms on the nose as shown on the drawing. (For best results in Operating Automatic Couplers, solder drawbar handle wire form closed after it has been assembled and installed).

Fit all windows at this time. These are fitted from the back of the casting and not from the front as shown on the drawings. (Do not install till painting is finished).

Place horns in place, one facing forward and one back, and cement or swedge on the inside.

Acetate grill can now be cut to fit. This should not be mounted until after the unit is painted.

The roof is now drilled if you want to put the train heating stacks on the rear of the unit. Mark off the roof as shown on drawing and drill with a 17/64" drill. Place the stacks in place and glue or swedge in place. Mount exhaust stacks in place. Mount roof lift rings and bend over on the inside. Fit plastic grill in opening in roof. (Do not install till painting is finished).

ASSEMBLING

Assemble end and one side with 4-40 screws (C-1405). Do not draw up tight. Start the turnbuckles (222) into bosses in side. Set headlite lenses in place, flat side facing outside. Then start turnbuckles in other side. Draw sides together, using 1/4" open end wrench being careful not to deform the castings. The tongues and grooves must line up. If sides are bent out of shape, loosen and bend back into shape.

Now fasten other side to end with 4-40 screws.

Fasten roof to sides and ends with 4-40 screws. Again be careful that tongues and grooves line up.

Body can now be painted to suit. When paint is dry, mount windows and roof grill using Walthers Goo or a good clear cement. Mount the acetate grill. If instructions are followed grills will not come loose.

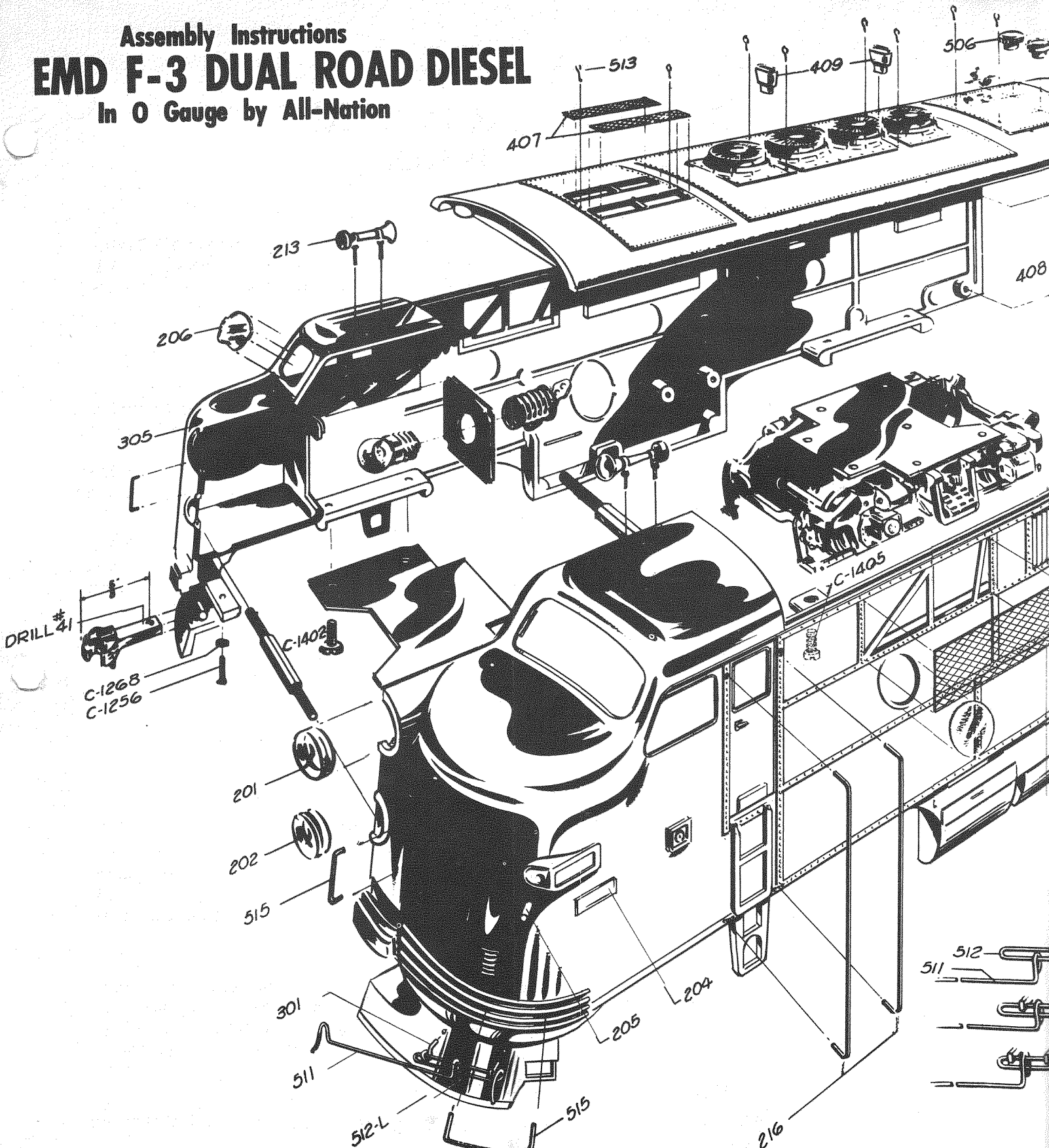
Lite assembly can now be placed in lite compartment and held in place with spring wire ring.

B unit is assembled the same as the A, but use two ends. The roof is attached in the same manner as the A.

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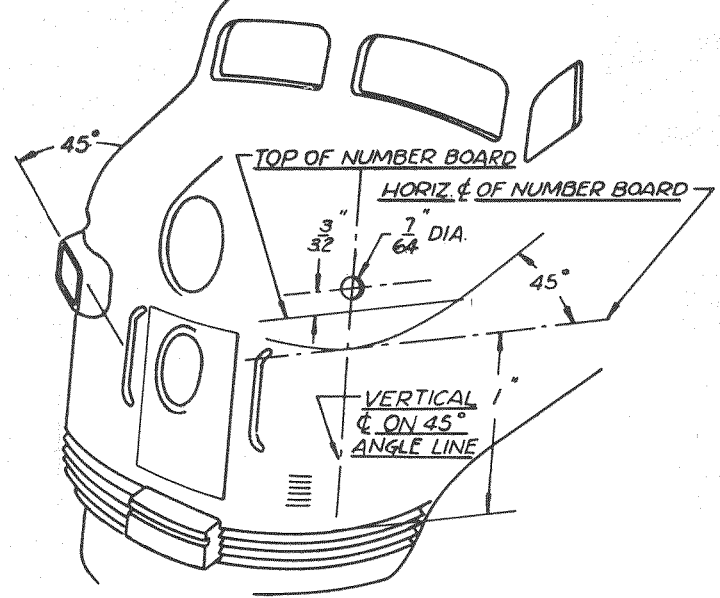
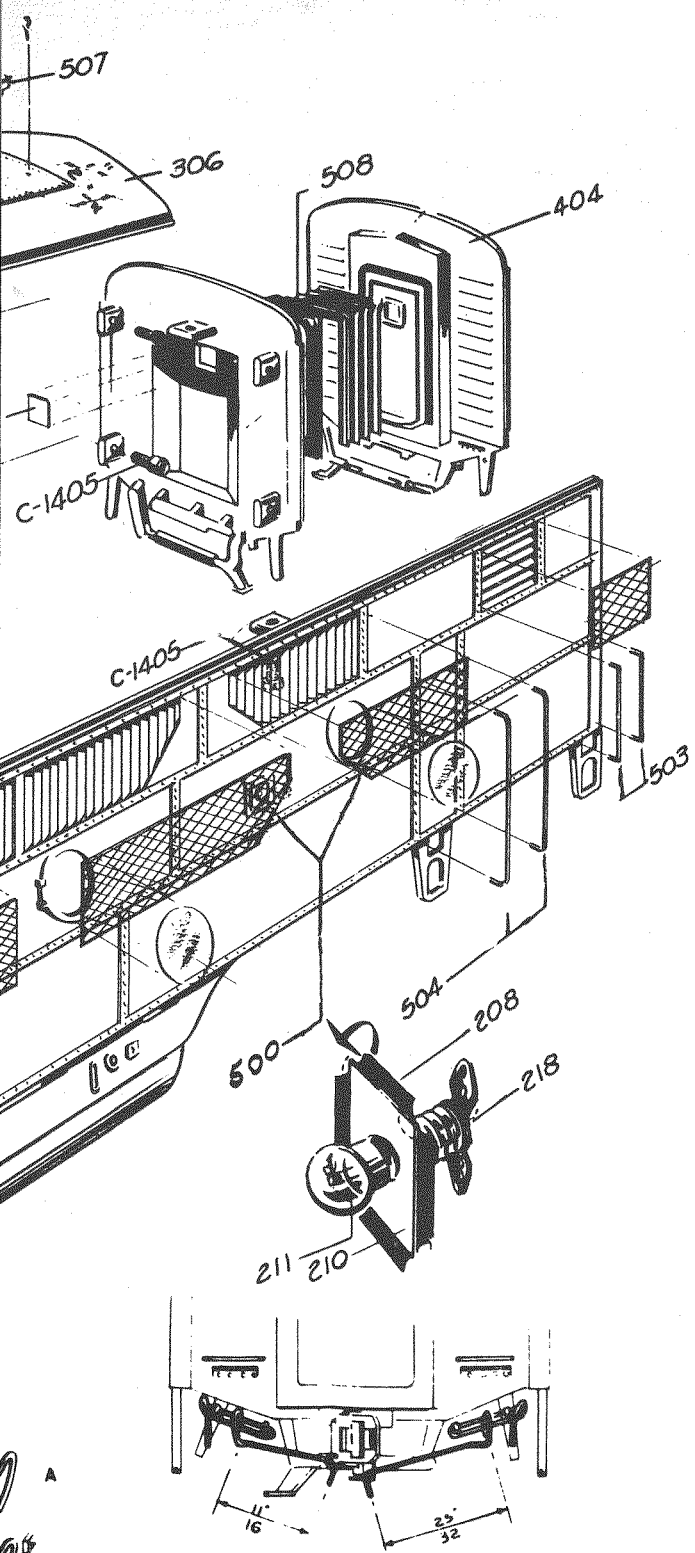
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P. O. Box 145 — Des Plaines, Illinois

LOCATION OF 45° NUMBER BOARDS ON THE EMD F-3 DUAL ROAD DIESEL



The location and installation of the 45° number boards is as follows:—First, file the flat or side type number board completely off with a wide, fairly fine file. This is done on both sides. Use a 45° angle to find the tangent point anywhere along the nose on the cylindrical section as in Sketch No. 1. By scraping the 45° angle protractor or template up and down the nose, it will leave a line along the 45° tangent point.

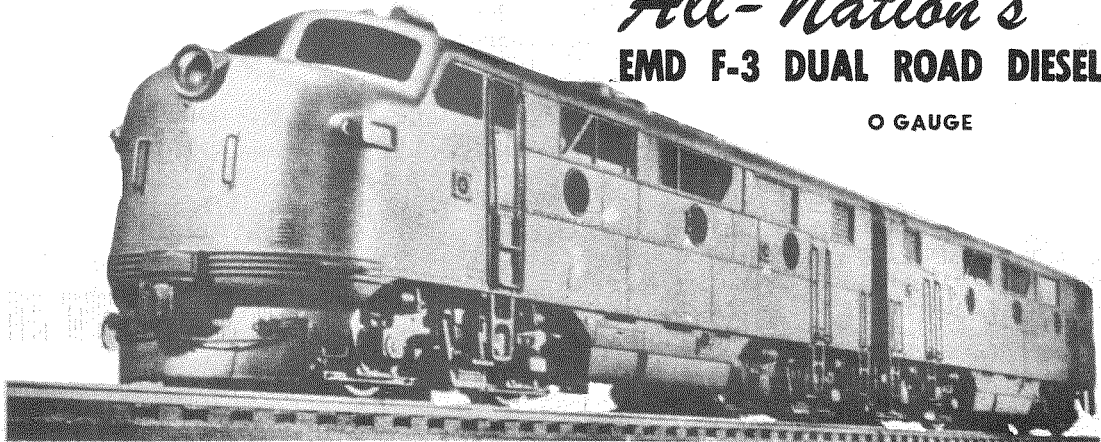
Along this centerline measure 1" up from the top anti-climber rails. This will be the horizontal centerline of the number board. Repeat process on the other side.

The simplest method of mounting these lights was found to be cementing them into place with household cement after removing the cast bosses on the inside of the number board casting. The rear indicator or jewel above the number board is located 3/32" above the top of the board. The hole itself should be about a scale 5" diameter, which would be about 7/64".

To illuminate the number board itself, merely open up the nose after fitting the board and scribe the location of the opening on the nose. Fit the acetate "glass" carefully, then paint the inside black and use white number decals on the outside. Scratch the paint from behind the numbers so the light will illuminate them.

All-Nation's EMD F-3 DUAL ROAD DIESEL

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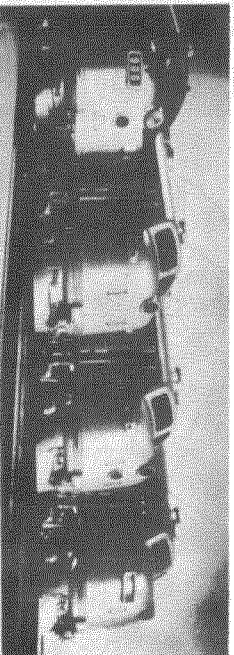


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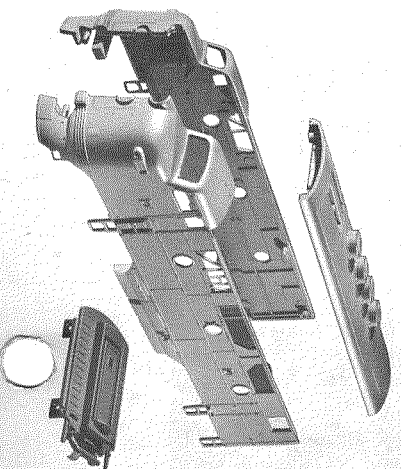
EMD F-3 DUAL ROAD DIESEL

PARTS LIST

	A		B		Price	A		B		Price
	unit	unit	unit	unit		unit	unit	unit	unit	
101A Side frame	4	4	1.20 ea.							
404 End	1	2	2.50 ea.		513 Roof rings	10	4/.10			
1004 Bolster	2	2	.50 ea.		2482 SUB ASSEMBLY-Headlite	1				
304 Right side A	1		9.50 ea.		201 Large lense	1	.15 ea.			
305 Left side A	1		9.50 ea.		202 Door lense	1	.15 ea.			
306 Roof A	1		7.50 ea.		205 Marker lite	2	.10 pr.			
901 Roof B	1		7.50 ea.		209 Paper insulator	1	.05 ea.			
902 Left side B	1	1	7.50 ea.		210 Bulb mounting plate	1	.15 ea.			
903 Right side B	1	1	8.50 ea.		220 Retaining ring	1	.05 ea.			
400 Plastic grill	1	1	8.50 ea.		4016 Socket	1	.20 ea.			
508 Diaphram	1	1	.65 ea.		4018 12 volt bulb	1	.25 ea.			
509 Striker plate	1	2	.40 Pr.		2483 SUB ASSEMBLY-B unit small castings	1				
1008 Floor plate	1	2	.20 pr.		C-1256 2-56x3/8" Fil. Hd.	2	.25 dz.			
1908 Hook up wire	2	2	.25 ea.		C-1402 4-40x3/16" Bind. Hd.	8	.25 dz.			
1903 .032 wire	1		.06 ft.		C-1407 4-40x1/4" Fil. Hd.	14	.25 dz.			
1903A .025 wire	2	2	.03 ft.		C-1800 No.3 washer	2	.15 dz.			
			.03 ft.		409 Exhaust stack	2	.15 ea.			
					506 Steam intake	1	.15 ea.			
2480 SUB ASSEMBLY-A unit small castings	1		.25 dz.		507 Steam exhaust	1	.15 ea.			
C-1256 2-56x3/8" Fil. Hd.	2		.25 dz.		2484 SUB ASSEMBLY-B unit wire forms.	1				
C-1402 4-40x3/16" Bind. Hd.	8		.25 dz.		511 Bottom operating bar	4	.03 ea.			
C-1407 R-40x1/4" Fil. Hd.	9		.25 dz.		512R Right handle	2	.03 ea.			
C-1800 No.3 washer	2		.15 dz.		512L Left handle	2	.03 ea.			
213 Air horn	2		.25 ea.		513 Roof rings	14	4 .10			
222 Nose bolts	2		.50 pr.		2485 SUB ASSEMBLY-Truck parts	1				
409 Exhaust stacks	2		.15 ea.		C-1804 No.5x.032 washer	2	.15 dz.			
506 Steam intake	1		.15 ea.		C-2032 Bolster clip	4	.15 ea.			
507 Steam exhaust	1		.15 ea.		C-2036 C washer	2	.05 ea.			
204 45 degree number board	2		.50 pr.		103 End bar	4	.05 ea.			
2481 SUB ASSEMBLY-wire forms	1		.03 ea.		109 Tank ends	4	.10 ea.			
301 Lift bar ring	4		.03 ea.		1009 1/4" king pin	8	.15 pr.			
511 Bottom operating bar	4		.03 ea.		1013 Ball bearing	2	.15 ea.			
512R Right handle	2		.03 ea.		3818 Operating couplers	8	.15 ea.			
512L Left handle	2		.03 ea.		111 Sway Bracket	2	.98 pr.			



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'F' 3 - B UNIT (Sides)

1. First inventory all parts to make sure you have enough to finish entire kit.
2. Set up small high-speed drill for drilling holes for hand rails. Use fixture #620 for left side or #621 for right side. Lubricate well with kerosene to prevent drill breaking, use a #67 Drill. (Faldon Cobalt drill)
3. Now, use drill press #1 and a #43 drill. Make four holes, through bushings for mounting trucks. Note: It is much easier to remove side from fixture if bushings are slid back out of the way before unlocking fixture.
4. Always take care to position side properly in fixture to insure proper hole alignment.
5. Now, using gizmo #626 and 4-40 tap (tapered) tap truck mounting Holes.
6. Now tap four holes (in corners) of side, using tapping fixture # and a 4-40 bottoming tap. Note: Use 'Do All' tapping oil for all tapping operations.
7. Now drill hole w/counter sink for weight mounting. Use special drill 9/32 for this. It will perform both operations at once. Take care setting depth stop so you don't drill too deep.
- 8.- Now turn fixture upside down and drill holes for roofmounting w/#30 drill.