

# EMD FT

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## PART I: GENERAL INSTRUCTIONS & TOOLS

### The Following Tools are Required to Build This Kit

Small Phillips Screwdriver                      Modelers                      Knife  
(optional)

Cyanoacrilate Cement (ACC)                      Plastic Cutters

Pin Vise with Small Drill Bit (optional)

Liquid Plastic Cement with Small Sharp Paint Brush

Note: Refer to the exploded view drawing during assembly. The front, rear, right, and left of each unit is identified. Remove parts from sprues carefully, verifying that all gate material has been removed. Glue must be applied sparingly from the inside of the shell, allowing capillary action to draw the cement into the joint or hole.

## PART II : ASSEMBLY OF THE SUPERSTRUCTURE

Step 1) Use Figure 1 to identify the prototype unit that you wish to model.

Step 2) Refer to Figure 1 to select the proper roof hatch. Select either the non-dynamic hatch (125), the Phase I or II dynamic hatch (126) or the Phase III dynamic hatch (127). Note the orientation of the piece on the exploded view drawing. The exhaust stacks should be toward the rear of an A unit and toward the front of a B unit. Snap the selected piece into the shell . Applying cement onto the latches is optional.

Step 3) For units with dynamic brakes only . . . Select the dynamic brake grids with straight sides (128) for Phase I or III, or curved sides (129) for Phase II and install in holes as shown on the exploded view drawing. Apply cement.

Step 4) For Phase III dynamic units only . . . Install the dynamic blower housings (130) in the appropriate holes. Apply cement. Note: The dynamic blower housings are not included with factory painted models that lacked Phase III dynamic brakes on the prototype.

Step 5) For B units only . . . Select either the blank boiler hatch (131) or the vented boiler hatch (132). Photographs of this portion of the B unit are extremely rare. A few overhead photos of A-B sets do exist; however, the rear of the B unit is distant and inconclusive as to what details are present. We have provided generic boiler parts that were scaled from EMD drawings. We CAN NOT provide information as to which parts were used for any particular railroad. For more detailed information, contact the appropriate historical society or modelers group. If you chose to use a vented boiler hatch to model a unit with a steam generator, then note the orientation of the vented boiler hatch on the exploded view drawing. The mounting pins on the top of the hatch should be toward the rear. Snap the selected hatch into the roof. Applying cement to the latches is optional.

Step 6) For vented boiler hatches only . . . Apply cyanoacrilate cement (ACC) to the mounting pins on the vented boiler hatch (132) and install the boiler air intakes (133). Find a blind hole inside the shell, just forward of the boiler hatch area. Open this hole and install the boiler exhaust stack (134) as shown on the drawing.

Step 7) A units only . . . Install cab glass (135) and either the single headlight lens (136) or the double headlight lens (137) into the

shell. Examine the small number boards (138). The outside of each piece is flat. The inside is angled. Install with the wide portion towards the front of the unit as shown on the drawing. View the classification light lenses (139), noting that the lens on the end of each stem is angled to match the molded number board on the shell. Insert the stem of each lens into the appropriate hole. Apply cement, but NOT TO THE END OF THE STEM, as this may cause "fogging" that will restrict the amount of light that is provided by the red/green LED on the headlamp board (159,160). Remove the fifth porthole from each porthole window set (141,142) by breaking off this portion at the provided score line. If your unit does not have the large number boards (the rectangular openings under the porthole windows), then remove the appropriate portion of the window set by breaking at the score line. Note the "X" and "Y" designations on the window sets. The set marked "X" must be installed on the right side of the unit and the set marked "Y" must be installed on the left. Install the horns (143) as shown. Apply cement.

Step 8) For B units only . . . Remove the large number boards (the three rectangular openings under the porthole windows) from each porthole window set (141,142) by breaking off this portion at the provided score line. Note the "X" and "Y" designations on the window sets. If your unit does not have the fifth porthole, then remove that portion from each of the window sets by breaking at the score line. For units with the fifth porthole, only remove the fifth porthole from the piece marked "X". The set marked "X" must be installed on the left side of the unit, and the piece marked "Y" must be installed on the right.

## PART III FINAL ASSEMBLY

Step 1) Install the air cylinder (156) and brake hanger (157) as shown, on each sideframe. The use of cyanoacrilate cement (ACC) is optional.

Step 2) Arrange the shell assembly and the frame (144,145,146) as shown. Slide the shell onto the frame. The hooks on the window sets snap into the receptacles on the sides of the frame.

Step 3) Turn the unit upside down and place on a padded flat surface. Place the coupler of your choice (18) or (Accumate) into the coupler box (19) and install the lid (20). Turn the coupler assembly upside down and slide into position on the coupler pad (147) or (148). Install using the longer of the two provided screws (158). DO NOT over tighten, as this will prevent the coupler from pivoting freely.

Step 4) Two drawbars have been provided. The scale drawbar (152) provides the accurate 2'-0" distance between the A and B units. It WILL NOT operate on curve of less than a 24" radius. The long drawbar (153) provides a distance of 3'-0" between the units. This is the scale distance that was used between the units for the F3, F7, and F9 series of locomotives. Position the drawbar of choice on the drawbar pad (151) and install with the screw (100). Tighten completely, and then back the screw one full turn only. Failure to do so may cause derailments.

Step 5) A few FT's were delivered with couplers instead of a drawbar. These units feature a set of steps at the rear side of the A unit and the front side of the B unit. Owing to the fact that the rear truck of an A unit is located at the extreme rear of the unit, there is no room for any commercially available operating HO scale coupler. Simply using the shell and drawbar as is can simulate a coupler connection. When the prototype units were delivered with the drawbar connection, the set of steps at the rear sides of the A units and the front sides of the B unit were omitted. Removing these steps can simulate this. Figure 1 indicates which units require the removal of steps to simulate a drawbar connection. It should be noted here that most railroads eliminated the drawbar connection over a period of time. We CAN NOT provide information as to when a particular railroad converted to couplers. For more detail

information, contact the appropriate historical society or modelers group.

Step 6) Optional . . . Install Details Associates #701 Handrail Kit for an FT A or #702 for an FT B using the provided drill bit starter guides. If steps were removed in Step 5 above, do not install handrails at these locations.

## **PART IV GENERAL INFORMATION**

### **Painting Undecorated Shells**

The use of a plastic compatible paint is a must!! CAUTION – Paints and finish coats from different manufacturers may attack each other! NEVER paint one brand over another until the previous coat is completely dry. Paint is dry only when no fumes can be detected. Paint should be tested on the inside of the shell for both plastic and brand compatibility.

Prior to painting, wash the parts in warm soapy water. Lightly scrub with a soft brush to remove fingerprints and mold release. Rinse parts with warm water thoroughly. Allow the parts to dry completely before painting.

### **Removing Paint and Lettering**

**THIS PRACTICE IS NOT RECOMMENDED.** It is impossible to predict how paint removers, chemicals, strippers, etc. will react with the plastic shell. Stewart Hobbies CAN NOT be held responsible for any damage that occurs during or after paint removal.

### **Lubrication**

All units are lubricated before shipment. After many hours of use, additional lubrication may be required. One note of caution: Excessive lubrication attracts dirt, which will impair the electrical pickup in your locomotive. The two areas that require minimal lubrication are the worm bearings and the gears. The motor bearings are self-lubricating.

Each worm cover (22) has an opening in the top for access to the worm gear. Labelle #106 Lubricating Grease with Teflon is recommended for application to the worm gear (37). The grease

will be distributed to the plastic gears (39,90) in the truck while the unit is in motion.

Worm bearings (35) can be found in the upper part of each gear case (23). One tiny drop (AND ONLY ONE DROP!) of Labelle #107 Lubricating Oil should be placed in each worm bearing.

### **Painting Truck Sideframes**

Modelers who wish to paint or weather truck sideframes (154,155), may wish to remove them in order to prevent overspray from impairing electrical pickup. This requires the partial disassembly of the truck to release the sideframes. Each worm cover (22) has two legs extending inward. Release the covers by using a small flat screwdriver to pry the legs outward. Disconnect the four connector wires from the Molex connectors on the main circuit board by sliding the Molex housing toward the middle of the board. Pull lightly with needle nosed pliers if necessary to release the wire. The worm gear assembly and universal shaft (166) can be removed by prying upward with a small flat screwdriver. After the worm assembly and universal shafts are removed, the frame can be lifted upward and away from the trucks. The sideframes are locked into place by a retainer clip (26). Four tabs extend upward from this clip. These tabs are only visible when the truck is viewed from directly overhead. The retainer clip can be removed by gently prying outward on the tabs. The sideframes can now easily be pulled away from the gear case.

### **DCC Information**

For DCC users, a DCC compatible plug socket has been provided. Remove the DCC Plug from the main circuit board. Reference your DCC manual for proper decoder installation. Also for your convenience, we have included a soldering pad that connects to pin 3 of the socket.

### **Questions or Problems**

We hope that you will be happy with this finely detailed kit. If any questions or problems occur, please inform us. Any problems with defective parts will be responded to promptly. Circle the part number on the parts list to identify the missing or damaged part. For painted models, please indicate the ROAD NAME and STOCK NUMBER.

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- FT UNDECORATED BODY SHELLS  
 5000-001 FTA SINGLE HEADLIGHT  
 5001-001 FTA SHL W/ LG NUMBERBOARDS  
 5002-001 FTA DOUBLE HEADLIGHT  
 5003-001 FTA DHL W/ LG NUMBERBOARDS  
 5004-001 FTB  
 5005-001 FTB W/ 5TH PORTHOLE

