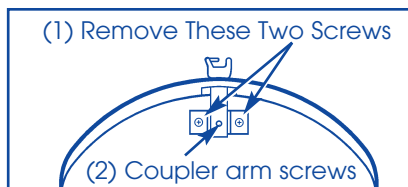


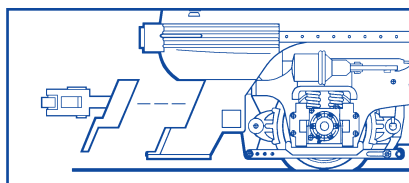
## A UNIT FRONT PILOT CONVERSION

Your F-3 A unit contains a "scale" pilot front coupler and coupler pocket which adds the "realistic" look to the pilot area of your model. This coupler is not designed for operation. If operation of the pilot coupler is desired, you must change the front coupler using the following procedures.

1. Turn the locomotive upside down and remove the two screws holding the coupler mounting block to the underframe.



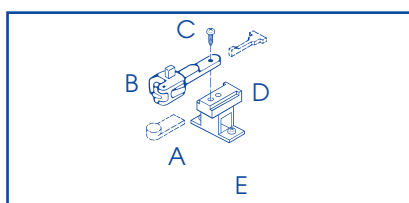
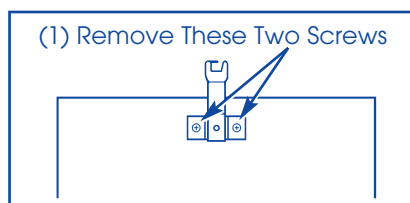
2. Slide coupler and front "break-away" plate forward from front of locomotive leaving the larger opening in the pilot.



3. Remove coupler from mounting block by removing the coupler arm screw.
4. Reattach operating knuckle coupler arm or hook/loop coupler arm by screwing it to coupler mounting block. Make sure coupler is right side up.
5. Reattach coupler mounting block to frame using two screws from (1) making sure coupler centering spring is attached to coupler arm.

## KNUCKLE COUPLER INSTALLATION

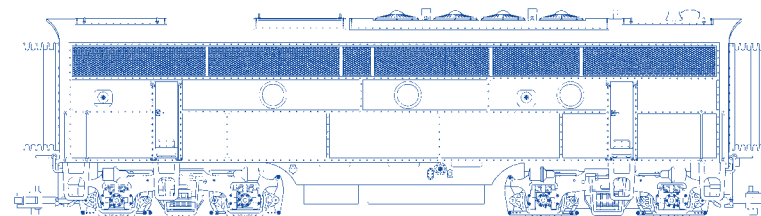
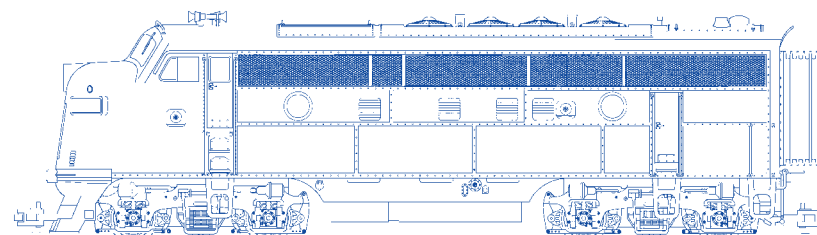
1. Turn the locomotive upside down and remove the two screws holding the coupler mounting block to the underframe.



2. Remove the coupler arm (D) from the coupler mounting block (A) by removing the center screw (E).
3. Attach the optional coupler arm provided (D) to the coupler mounting block by reversing Step #2 above. Due to the spacing difference between hook/loop and knuckle coupler you must use optional couple arm provided. This will keep the rubber diaphragm at the same distance as the hook/loop coupler.
4. Reattach coupler mount block to frame using two screws from (1) making sure the coupler centering spring is attached to coupler arm.
5. Attach USA knuckle coupler (B) with #4 Screw (C) provided.



## EMD F3 DIESEL LOCOMOTIVE OWNERS MANUAL



USA TRAINS  
662 Cross Street  
MALDEN, MA 02148, USA  
[www.usatrains.com](http://www.usatrains.com)



Dear Customer,

Congratulations on your purchase of this highly detailed replica of the electro-motive (EMD) F3.

The engineering and design staff at USA Trains has spent many hours reviewing original blue-prints and developing a locomotive that looks authentic and will provide you with many hours of operating enjoyment all at a reasonable price. Over 400 parts make up this model - the level of

detail found in brass locomotives costing thousands of dollars for a fraction of the cost. This locomotive will enhance the appearance of any modelers railroad.

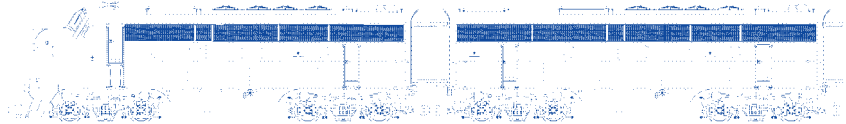
Please read the following instructions which will help you understand and operate the numerous features of this locomotive.

Happy Railroading  
USA TRAINS

## HISTORY OF THE EMD F3

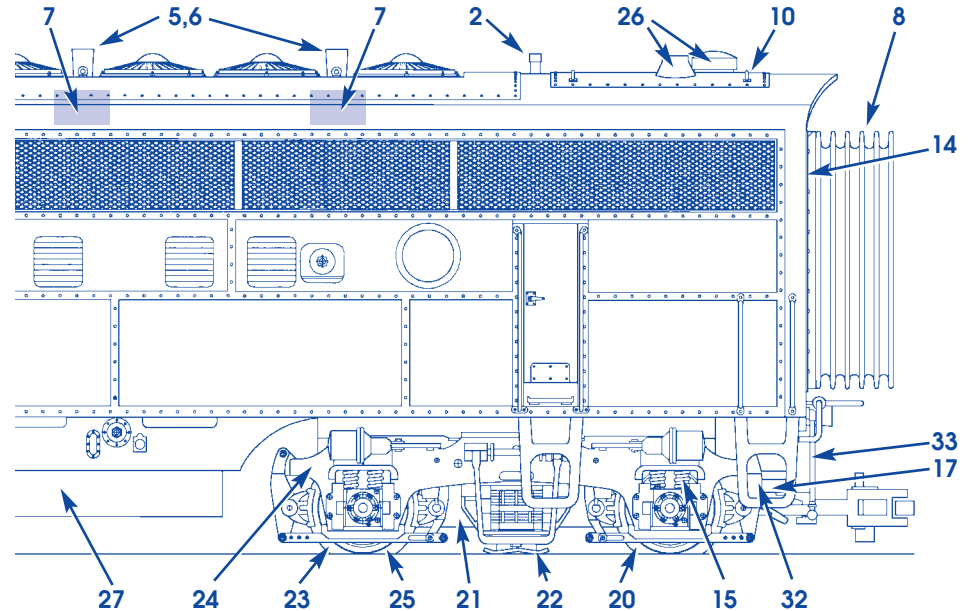
After World War II, EMD's offering in the road freight market was the "F" series locomotives. A total of 1807 F3 units were produced between 1945 and 1949 which makes it one of EMD's most popular units. These 1500 H.P. units served many of America's railroads for numerous years.

The accurate reproduction of this locomotive by USA Trains will allow the modeler to have his favorite railroad F3 running among the other fine locomotives previously made by USA Trains.



## FEATURES

- Powerful dual-motored 8 wheel Power Trac drive train
- Dual operating smoke stacks "puff real smoke"
- Directional red/green marker lights
- Front single or dual headlights for prototypical modeling
- Backup Light
- Constant voltage Lighting
- Metal handrails
- Interior cab lighting
- Opening cab doors
- Detailed cab interior with engineer and control panel with gauges
- Authentic detailing including brass side & roof screens, real rubber diaphragms between units, authentic pilot detail and rotating roof fans
- Expert decoration reproducing authentic paint schemes of your favorite railroad



### ITEM No. PART No.

### DESCRIPTION

20	R22-135	METAL WHEELS WITH GEARS (2)
21	R22-115	REPLACEMENT MOTOR TRUCK (1)
22	R22-122	SLIDE SHOES & SPRINGS (4)
23	R22-136	TRACTION WHEELS WITH GEARS (2) (for rubber tires)
24	R22-117	TRUCK SIDEFRAE (2)
25	R22-137	RUBBER TIRES (4)
26	R22-326	STEAM GENERATOR INTAKE/EXHAUST
27	R22-327	FUEL TANK (specify color)
28	R22-328	SIDE GRILLS (2) (specify color and A or B unit)
29	R22-116	REPLACEMENT MOTOR ONLY (1)
30	R22-134	STIRRUP FOR SIDE FRAME (4) (specify color)
31	R22-331	TRUCK MOUNTING BLOCK (1)
32	R22-332	COUPLER MOUNTING BLOCK & PIVOT (no coupler)
33	R22-333	AIR HOSES (2)
34	R22-334	COUPLER LIFT BAR WITH 4 HOLDERS (1)
35	R22-335	LIGHT BULB AND WIRE (Cab)
36	R22-136A	LIGHT BULB AND WIRE (Number Board)
37	R22-000	MOTOR BLOCK BOTTOM PLATE
	R50001	USA TRAINS SMOKE FLUID
	R50002	USA TRAINS CONDUCTIVE LUBRICANT

Please call our parts department for prices and availability or visit our web site [www.usatrains.com](http://www.usatrains.com) • Phone: 781-322-6084 • Fax: 781-321-6459

## ASSEMBLY

Due to the high level of detail designed into the USA Trains F3A & F3B, some simple assembly is required.

### (1) Coupler Lift Bar Assembly ( 1 )

Insert 2 eye bolts onto each side of lift bar and insert all 4 eyebolts onto frame as in diagram below.

### (2) Air Hoses ( 2 )

Insert right and left air hoses into frame as shown in diagram below.

### (3) Smoke Stacks

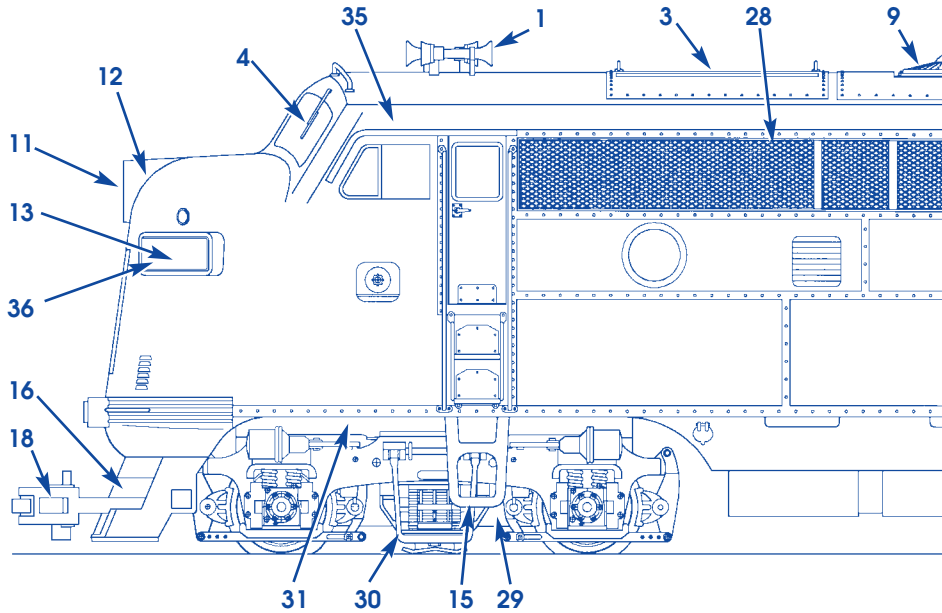
Insert (2) plastic **or** (2) metal stacks into smoke stack holes on top of locomotive

**NOTE:** If running with smoke units on, **metal stacks** must be used due to heat of smoke unit. (See smoke unit operation next page).

### (4) Truck Sideframe Stirrups ( 4 )

Insert one truck side frame stirrup into each truck sideframe as shown on the diagram below. Proper installation will cover the top two side frame screws.

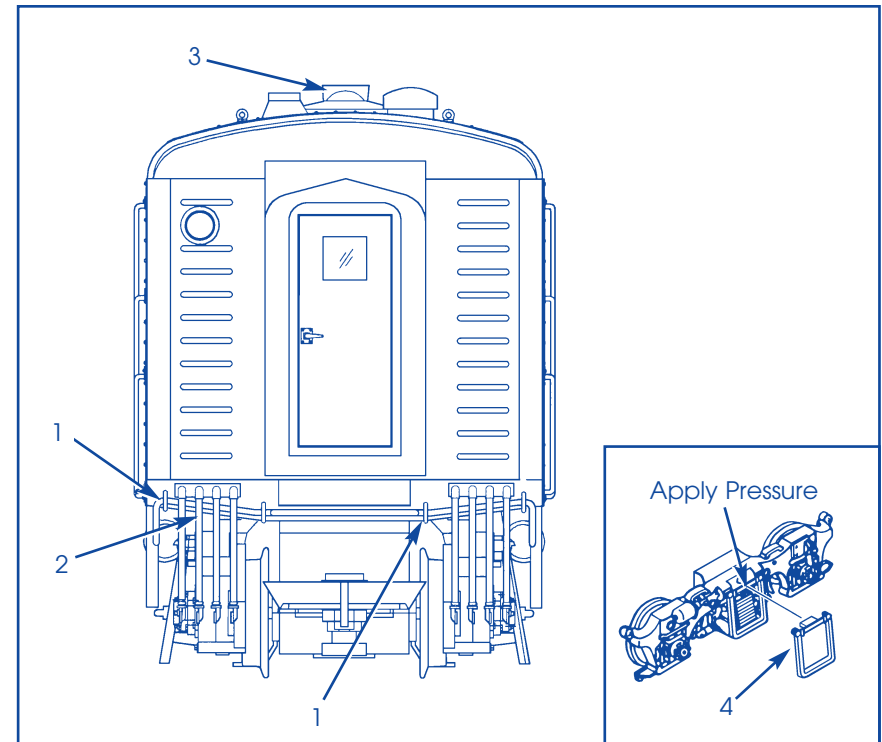
**NOTE:** Apply pressure to middle top slotted piece to ensure side frame will stay on during operation.



#### ITEM No. PART No.

#### DESCRIPTION

1	R22-301	DIESEL HORN (2)
2	R22-302	ANTENNA
3	R22-303	BRASS ROOF GRILLS (2) (specify color)
4	R22-304	WINDSHIELD WIPERS (2)
5	R22-205	SMOKE STACKS - PLASTIC (2)
6	R22-206	SMOKE STACKS - METAL (2)
7	R22-108	SMOKE UNIT (Non fan driven)
7	R22-454	SMOKE UNIT (Fan driven)
7	R22-554	SMOKE REGULATOR BOARD (Required for fan driven unit)
8	R22-308	DIAPHRAMS (2)
9	R22-309	ROOF FAN w/ ROTATING FAN BLADE (specify color)
10	R22-310	BRASS LIFT RINGS (10)
11	R22-311	LENS COVER (1)
12	R22-312	LIGHT BULB AND WIRE (Headlight)
13	R22-313	NUMBER PLATE (specify number)
14	R22-314	REAR BACKUP LIGHT LENS
15	R22-315	LADDERS (4) (specify color)
16	R22-316	COMPLETE PILOT INSERT w/COUPLER
17	R22-317	COUPLER SPRING & MOUNTING PLATE
18	R22-318	FRONT PILOT COUPLER (scale dummy version)
19	R22-114	TRUCK SIDEFAME SPRINGS (8)



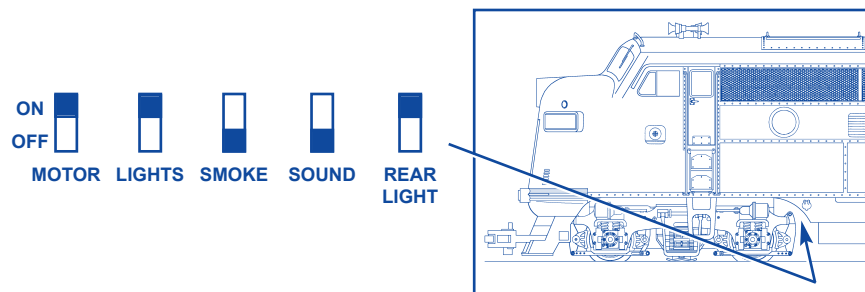
## OPERATION

### POWER REQUIREMENTS

The locomotive is designed to operate on direct current (DC) with outputs of 0-22 volts.

### CONTROL SWITCHES

The locomotive contains five switches to operate the on/off motors, on/off smoke generator, on/off lights, on/off sound, and on/off backup light. The control switches are located on the underside of the locomotive, between the front motor truck and the fuel tank. (see diagram below)



**CAUTION!** If the locomotive is going to be run for any period of time without smoke fluid, please position the smoke switch to the OFF position.

### SMOKE GENERATOR

The locomotive contains two fan driven smoke units which produces "diesel exhaust" through the two stacks on the top side of the cab body. The smoke generators require the periodic addition of smoke fluid in order to operate properly. To add smoke, remove the stacks from the top of the locomotive and add 25-30 drops of USA Trains smoke fluid (USA Trains part # R50001) into each smoke generator hole. Never overfill the smoke generator and promptly wipe up any excess smoke fluid that may have spilled onto any painted surfaces. Place both **metal** smoke stacks back on top of the locomotive, and begin operation. Smoke production will begin when the fluid becomes heated. It may take longer to generate the smoke if the unit is full. When the smoke chamber is empty the unit will shutdown automatically until more fluid is added. By following these directions the smoke generator will provide hours of enjoyment and enhance the realistic operation of your F3 locomotive.

**CAUTION-USE ONLY THE METAL SMOKE STACKS PROVIDED WHEN OPERATING SMOKE UNIT.**

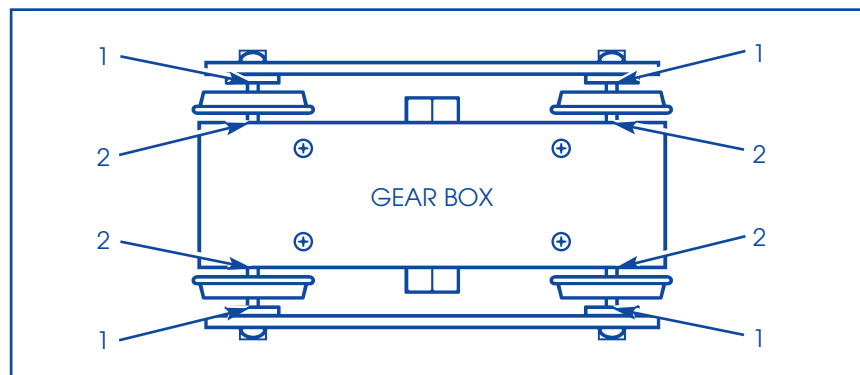
**CAUTION!** Even though your locomotive is equipped with an automatic shut-off when the smoke generator runs out of fluid, we suggest you shut off the smoke switch on the underside of the locomotive to prevent accidental burning out of the smoke generator.

**NOTE:** It is not uncommon for the front stack to smoke more than the rear stack due to the draft created by movement of the locomotive.

## MAINTAINING AND SERVICING YOUR F3

### LUBRICATION

Your locomotive was lubricated at the factory and under normal operating conditions will not need to be lubricated during the first 50 hours of operation. The locomotive has three lubrication points. (See diagram below)



**1. SIDEFRAE JOURNAL BOX:** The axle ends fit into brass bushings which bring power into the locomotive. These brass bushings should periodically be cleaned out and lubricated with a small amount of USA Trains electrically conductive lubricant (USA Trains Part #R50002). Use only our conductive lubricant to avoid loss of electrical contact which could cause your locomotive to lose power or run erratically. The frequency of lubrication depends on your operating conditions.

**2. AXLE LUBRICATION:** Two drops of oil should be placed on all four contact points where the axle enters the gear box. An ultra light oil such as Hob-E-Lube (#HL653) is recommended.

**3. GEAR BOX LUBRICATION:** Under normal operating conditions, the gear box should not have to be lubricated. However, you may want to lubricate the gears after each 100 hours of operation by removing the six screws on the bottom of the gear box to expose the gears and applying moly grease by Hob-E-Lube to the gears on the axle only. Do not apply grease to any electrical contacts inside the gear box as you may hinder the electrical contacts required for smooth operation.

### WHEEL/SLIDE SHOES

The F3 units are equipped with twelve electrical pickup points-six per motor truck. Each of these must be cleaned periodically to ensure proper electrical contact with the track which will ensure smooth operation of your locomotive. Clean all four wheels and the bottom surface of the slide shoes periodically to ensure good electrical contact with the track. A good indication that you need to clean these contacts is flickering lights, non-operation of the smoke unit, or a jerking motion of the locomotive.