

## Converting the Kato Mikado 2-8-2 to a Southern Type M-3

by M. Linke

### On the boiler shell;

- Removing cast piping from sand dome, leaving cast valves at base of dome.
- Remove cast valve turret and related cast piping.
- Remove steam whistle from steam dome.
- Remove safety valves from behind steam dome.
- Remove cast steam generator and related piping.
- Remove cast water delivery piping and check valves from both sides of boiler.

### On the front pilot deck;

- Remove cast coupler cut bar.

### On smoke box;

- Remove cast hand grab under headlight on smoke box door.

### Running board, fireman's side;

- Remove air cylinder tank below sand dome.
- Remove section of running board for Worthington heater and Westinghouse air pump.

### On the tender shell;

- Remove cast coupler cut bar.
- Removing ladder.
- Remove cast hand grab on rear of tender.

### Installation of Detail Parts;

The following parts are from GHQ N scale detail manufacturer unless noted otherwise.

### Boiler;

- Fill hole in boiler in front of cab where cast valve turret was. Install turret valve casting. Using .015 brass wire form injector steam pipes, one each side of valve turret following pictures in directions. Install check valve casting on fireman's side.
- Install steam generator on top of boiler behind steam dome.
- On engineer's side install water delivery pipe with check valve casting, use picture in directions for location.
- Form two hand grabs with .010 brass wire, drill holes for grabs on each side of sand dome and install.
- Install steam whistle casting on fireman's side of steam dome.
- Install safety valve casting behind steam dome.
- Install raised section of running board.

### Smoke box;

- Install smoke box door hinge casting (two).
- Form hand grab for smoke box front, drill holes and install.
- Install Gold Medal Models etched brass number board under head light facing forward.

Cab;

Form two hand grabs from .010 brass wire for forward cab doors, drill holes and install.  
Form two hand grabs from .010 brass wire for rear section of cab, drill holes and install.  
Install window shade/sill, side trim castings.  
Form cab floor sliding plate from .005 styrene and glue to cab floor.

Fireman's side;

Install Worthington feed water heater.  
Install Westinghouse air pump.  
Install air filter on fire box.  
Form from hardened wire water delivery pipe from behind air pump, follow along fire box, under cab, trailing down towards tender. Form pipe clamp from .010 flat brass wire.  
Install air line tube casting under running board above water delivery pipe.  
Install two step ladder casting under running board in front of cab.  
Install bulb casting in front of Worthington feed water heater.  
Install supply line from back of valve cylinder to heater bulb.  
Install running gear Cross Beam over plastic beam, fit as needed.

Engineer's side;

Install air cylinder casting under small tank under running board. Form air line from .010 brass wire and route to existing plastic air tank.  
Install two step ladder casting under running board in front of cab.  
Install injector casting under cab. Form supply and delivery piping from .010 brass wire.

Pilot deck;

Form platform step from Gold Medal Models diamond steel plating and .015 brass wire.  
Form coupler cut bar from .010 brass wire. Install with Gold Metal Models etched brass handrail standoffs.

Tender;

Form four hand grabs for front and rear corners, drill holes and install.  
Form one hand grab for rear wall of tender, drill holes and install.  
Form ladder from etched brass ladder stock, removing rungs as needed for hand rails. Drill holes and install.  
Install rear tender headlight casting.  
Form coupler cut bar from .010 brass wire. Install with Gold Metal Models etched brass handrail standoffs.  
Form coal bunker sloped plate from .010 styrene and glue to existing sloped plate.  
Install two coal bunker side extension castings.  
Install brakeman's doghouse casting. Form two roof hand grabs from .010 brass wire, drill holes and install.  
Remove backing of forward tender steps to simulate open style step castings.  
Install tool box casting to under side of engineer's side of tender.  
Remove truck mounted coupler. Install Micro Trains Z scale coupler to bottom of tender.

## Painting;

After cleaning, sandblast all surfaces to be painted. Dry brush carefully to remove all dust.

Prime all surfaces with Polly Scale gray undercoat acrylic model paint with airbrush.

Paint all surfaces with Polly Scale steam engine black with airbrush.

Mask cab roof, paint with Polly Scale maroon with airbrush.

Mask steam box front, paint smoke box with a mixture of steam engine black, light gray, and silver to simulate graphite gray, with airbrush.

Hand brush fire box sides, Worthington feed water heater, and Westinghouse air pump with graphite mixture.

Hand brush window side trim and sills with Lehigh Valley Cornell red.

After decaling airbrush with Polly Scale acrylic semi-gloss clear coat.

## Decals;

Paint number board with Polly Scale reefer white , install numbers from number decal set.

Place engine number under cab windows from number decal set.

Letter tender with name and tender data for the SouthWestern Railroad.