

MAC-300

Type "O" Boiler Railcar Load
(1970s to Present Day)

MACRAIL
Distinctive details that enhance your modeling



Thank you for purchasing our MAC-300 Type "O" Boiler railcar load. This load is the first in our future line of "Wide n' High" type railroad loads.

OVERVIEW

Shipping boiler loads by rail is not a new endeavor. Our load captures the look of a type "O" water-tube boiler with cylindrical steam drum on top and water drum at the base. The middle section of the load is the furnace that is surrounded by tubes filled with moving water which when heated turn to steam. Boilers like this are powered by gas type fuels versus solid fuels. Depending on the steam output need (PPH Pounds of steam per hour), these loads can vary in size with our model representing a mid-sized boiler weighing 163,000 pounds at 24'09" long, 12'06" wide, and 15' tall producing around 100,000 PPH. This load is designed to fit on the Class One six axle or Walthers 81' eight axle depressed flatcars. Boilers like this can be found in numerous industrial, commercial, and civic facilities that require steam for processes or climate control.

STORY BEHIND THE LOGO

I have always wanted to model a manufacturing plant that made large industrial loads. Given the work involved to construct these loads they don't normally ship daily and usually build a few at a time. This made for the perfect single car spur that ended up in a large warehouse looking building. Fast forward to 2023 when Chris Palmieri with Home Shops decided to offer a Michigan Interstate six axle flat from the Class One offering. Helping create a complete purpose for the railcar, we decided to design a boiler load which fits right into a Midwest manufacturing location. Each load is finished in Tamiya Intermediate Blue, with an aluminum façade on top of the steam drum and furnace. Completing the model is the King-Land Manufacturing logo centered for this fictional company located on the Michigan Interstate St. Clair Subdivision in Gerhard, Michigan. Offering as completed models adds a distinctiveness found with MACRail products.

ROUTING

After inspection loads are pulled from King-Land Manufacturing in Gerhard, Michigan. They are pulled by the "Grays Turn" connecting to a manifest train to Bay City. From Bay City the loads can head across North American via multiple routes.

Northbound: MCIS-MACKINAW CITY-W&UM


Eastbound: MCIS-PORT HURON-CN or MCIS-DETROIT-NS

Southbound: MCIS-FORT WAYNE-NS or MCIS-BAY CITY-HESR or MCIS-BAY CITY-LSRC

Westbound: MCIS-GRAND RAPIDS-CSXT

INSPECTION & MEASUREMENT

Once loaded and secured the shipper would request the origin railroad mechanical forces to complete an inspection of the railcar and load securement along with measuring the load for High and Wide clearances. These are passed railroad to railroad ensuring this larger load can physically clear from origin to destination. On the following page are examples of six axle and eight axle inspection forms that you can use to create your own railroad HIWI clearance cards.




MICHIGAN INTERSTATE RAILROAD CO.
 DIMENSIONAL LOAD INSPECTION FORM
LOAD INFORMATION

Date: _____ Location: Gerhard, MI.
 Car #: MCIS 5904 Tare Weight: 123,900 lbs.
 Origin: Gerhard, MI. Destination: OFFLINE
 Shipper: KingLand Manufacturing
 Load Type: Boiler Deck Height: 2'06" ATR
 Load Length: 24'09" Load Weight: 163,000 lbs.
 Axle Count: 6 Gross Weight: 286,900 lbs.
 Idlers Required: YES / NO Buffer Required: YES / NO
If idlers or buffers required, contact Equipment Distribution Department

LOAD DIMENSIONS (FROM RAILCAR DECK)

HEIGHT: <u>2'06"</u>	WIDTH: <u>9'00"</u>
HEIGHT: <u>3'06"</u>	WIDTH: <u>9'00"</u>
HEIGHT: <u>4'06"</u>	WIDTH: <u>12'06"</u>
HEIGHT: <u>14'06"</u>	WIDTH: <u>12'06"</u>
HEIGHT: <u>15'06"</u>	WIDTH: <u>4'06"</u>
HEIGHT: <u>16'06"</u>	WIDTH: <u>4'06"</u>
HEIGHT: <u>17'06"</u>	WIDTH: <u>3'06"</u>
HEIGHT: _____	WIDTH: _____

Inspector: [Signature]
"ATR" = Above Top of Rail
 MACRail form M-88



MICHIGAN INTERSTATE RAILROAD CO.
 DIMENSIONAL LOAD INSPECTION FORM
LOAD INFORMATION

Date: _____ Location: Gerhard, MI.
 Car #: _____ Tare Weight: 187100 lbs.
 Origin: Gerhard, MI. Destination: OFFLINE
 Shipper: KingLand Manufacturing
 Load Type: Boiler Deck Height: 2'09" ATR
 Load Length: 24'09" Load Weight: 163,000 lbs.
 Axle Count: 8 Gross Weight: 350,100 lbs.
 Idlers Required: YES / NO Buffer Required: YES / NO
If idlers or buffers required, contact Equipment Distribution Department

LOAD DIMENSIONS (FROM RAILCAR DECK)

HEIGHT: <u>2'09"</u>	WIDTH: <u>9'00"</u>
HEIGHT: <u>3'09"</u>	WIDTH: <u>9'00"</u>
HEIGHT: <u>4'09"</u>	WIDTH: <u>12'06"</u>
HEIGHT: <u>14'09"</u>	WIDTH: <u>12'06"</u>
HEIGHT: <u>15'09"</u>	WIDTH: <u>4'06"</u>
HEIGHT: <u>16'09"</u>	WIDTH: <u>4'06"</u>
HEIGHT: <u>17'09"</u>	WIDTH: <u>3'06"</u>
HEIGHT: _____	WIDTH: _____

Inspector: [Signature]
"ATR" = Above Top of Rail
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HANDLING PRACTICES

With load inspection and measurements complete by mechanical, loads are then turned over to transportation to move with the assistance of High Wide clearance which comes in the form of a HIWI bulletin. Along with having these bulletins to advise which routes and trains these oversized loads move on, special handling practices are noted. These practices can be easily added to your model railroad operations with instructions on your work orders, car card/waybill, or by creating a simple HIWI card to give your operators.

Special Handling Instructions and meaning

Do Not Hump: *These loads have internal components and should not be cutoff in motion either when flat switching or over a hump to minimize potential damage*

Head End Handling: *Larger loads need to be observed by train crews enroute in case of potential load shift or close clearance. Place railcar on head end behind power.*

INSTALLATION INSTRUCTIONS

STEP 1 – PREPARATION

Before installing load to railcar, ensure the following tools are available for use.

- Glue (CA gel or Canopy type glue)
- Sanding stick or paper
- Tweezers
- Pencil and ruler

Ensure necessary PPE is worn during installation to include safety glasses and mask during sanding.

STEP 2 – THE KIT

Opening your kit, you will find the following items:

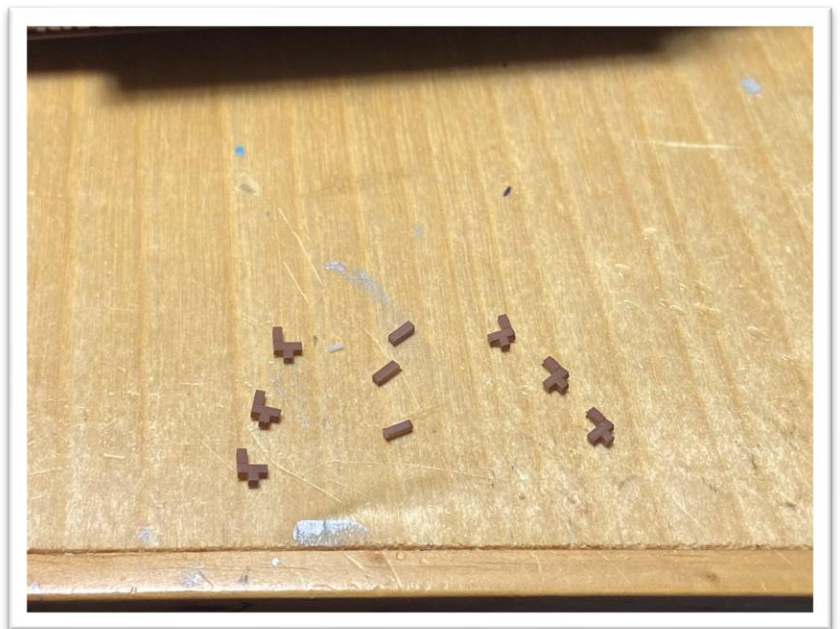
- 3D printed boiler load
- Cardstock boiler footprint template
- Bag of securement stops (3 Left, 3 Right, 3 Center)
- QR code to instructions on web
- Builders Plate with individual build number and date



STEP 3 – MOCK UP THE SECUREMENT STOPS

Before gluing any securement stops to the railcar, you should first cutout the template and center it on the railcar. These “O” Type boilers are centered on the car side to side and front to back. The template when cutout matches the bottom of the boiler.

Removing the securement stops from the packaging, check the underside (un-painted) side and sand flat if necessary.

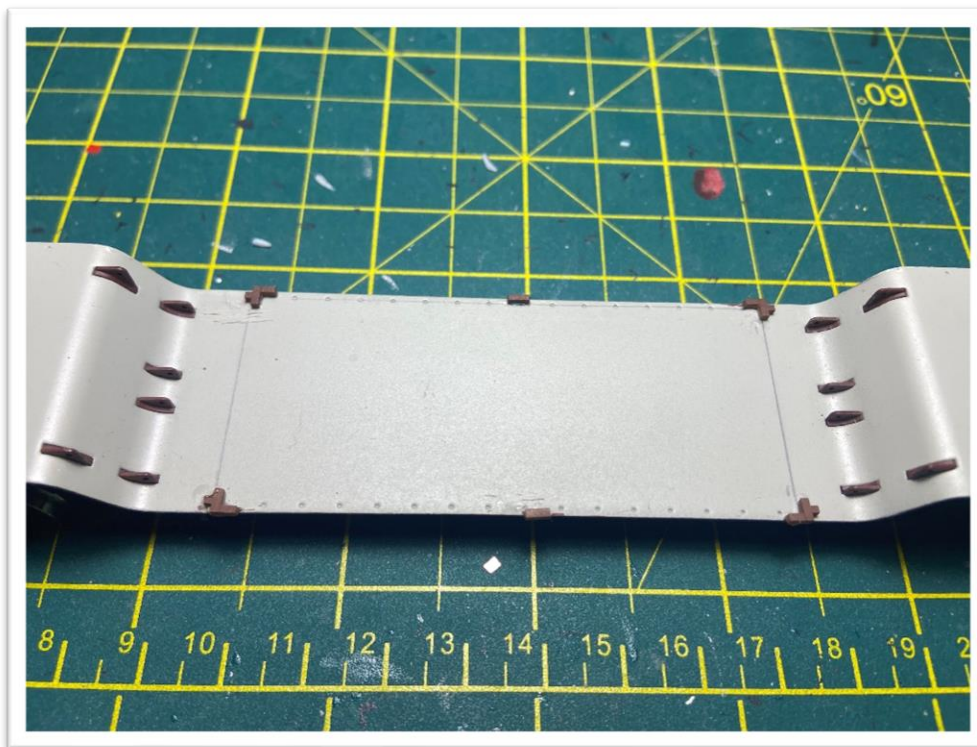


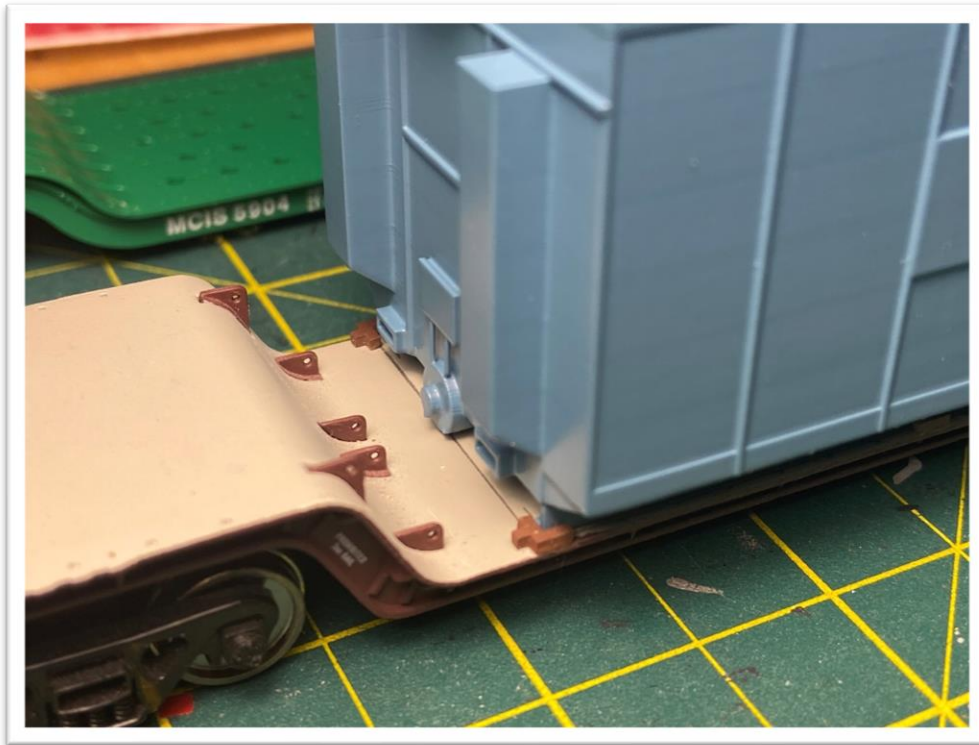
STEP 4 – GLUE SECUREMENT STOPS

After mocking up the securements with the template test with the load. There will not be a lot of extra space between the edge of the car deck and where the securement goes. On my own install documented the stops are off the edge of the car.

Start by securing one corner and then the opposite corner. Once secured continue with the other corners. Once all corners are in and with load in place add the middle securement stops and let dry. Once dry add your load back to the railcar and depart!

We collaborated with experts to best design our securement stops to be close to prototype while also being effective for the purpose of allowing the model to be removable (load / empty) cycle. To allow the load to be removable we only made securement that provides longitudinal movement (forward / back) and horizontal movement (side to side). The prototype securements are actually steel plate pieces that are welded together and then welded to railcar deck. Prototype would also have vertical securement that would be like “clips” on sides and ends to keep the load in place.





THANK YOU & SUPPORT INFORMATION

We hope you enjoy our Type “O” boiler railcar load. If you have any issues or have broken or missing parts please contact us at macrailllc@gmail.com to obtain replacements.