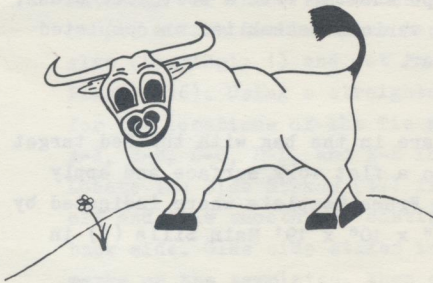


20' ORE CAR

Kit 3305 - INSTRUCTIONS



TAURUS PRODUCTS

P.O. BOX 6534 ORANGE, CA. 92667

"Neat stuff for the Model Railroader"

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NASG Inc.**

Thank you for selecting this TAURUS PRODUCTS kit. We sincerely hope that you will find it enjoyable to build and that you will try some of our other items.

Please read these instructions completely, and study the detail drawings and templates before starting construction.

Check the contents of your kit against the parts list, and, if any part is missing or defective, complete the claim coupon and mail it to us right away. Prompt replacement of the missing or defective part is guaranteed.

We would suggest that you do not mix the parts in the several different bags as there are several cut to size parts that are similar and could become confused. Also, remember that when cutting color-coded stripwood it is important to cut from the end which is not colored so that the remaining piece retains its identity.

THE PROTOTYPE

While this car has no exact prototype, it is a composite of, and is typical of small wooden ore cars used by both narrow and standard gauge railroads around the country.

WHAT YOU WILL NEED

You probably have all the tools you will need to build this kit. A sharp hobby knife such as an X-ACTO with some #11 blades, a razor saw, tweezers, needle nose and side cutter pliers, scale rule, pin vise and assorted small drills, some good white glue such as TITE-BOND, some ACC glue such as HOT STUFF, and some double-stick tape such as SCOTCH brand #136.

PAINTING AND AGING

These cars were subjected to very hard use and we would suggest that some consideration be given to aging the wood parts, especially the inside of the sides and slope sheets, with a soft wire brush. We would also suggest painting the various assemblies as completed and before final assembly of the car.

Step One--FRAME CONSTRUCTION

All components for the main frame are in the bag with the Red target on it. Attach the Template sheet to a flat work surface and apply strips of double-stick tape to the Frame Template where indicated by the shaded areas. Place the four 6" x 10" x 19' Main Sills (1) in

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place on the template. Glue in place the two 6" x 10" x 7'6" End Sills (2). Glue in place the four 6" x 10" x 6'7" Center Sills (3) and the 6" x 10" x 3'2" Interior Cross Beams (4). Now the 8" x 8" x 3'2" Hopper Spacer (5) should be glued in place flush with the top of the assembly. (Actually the bottom of the car as we are build- the frame upside down.) Similarly, glue in place the 9" x 9" x 2" Coupler Blocks (6). From the 4" x 8" Stripwood (red) cut the two Buffer Blocks (7) 2'4" long, and the Bolster Truss Blocks (8) to fit between the Main Sills (1). Glue in place, once again flush with the top of the assembly. Now glue in place the two 4" x 12" x 7'6" Body Bolsters (9) where indicated by the wide dotted line areas. Now glue in place the 4" x 8" x 7'6" Queen Post Beam (10) where indicated by the narrow dotted line area. Depending upon the type of couplers you plan to use you may or may not need to install the 4" x 6" x 3'10" Draft Gear Sills (11). If you do, cut them from the 4" x 6" Stripwood (green) and install them now to complete the Frame Assembly. When dry, remove the assembly from the template by sliding the blade of a knife between them, and then set this assembly aside.

Step two - HOPPER END & INTERMEDIATE FRAMES

Material for this step are in the bag with the Blue target on it, Attach strips of double stick tape to the templates where indicated and set in place the 4" x 12" x 7' Hopper End Beams (12). From the 4" x 4" Stripwood (blue) cut six pieces 7' long for the Caps and Sills (13), ten Posts 2'8" long (14), and ten Posts 1'3" long (15). Glue in place on the templates and allow to dry. When completely dry, remove from the templates and sand a bevel to the caps of the intermediate frames as shown. Set these assemblies aside.

Step three - SIDES, SLOPE SHEETS, AND DOORS

Material for these sequences are in the bag with the Orange target on it. Attach double stick tape to the Sides templates and edge glue (Sparingly !) and set in place the eight 3" x 12" x 19' Side Planks (16). Using a straightedge ruler draw intersecting lines for the locations of the Tie Rod and Crank Rod holes where lines A-A, B-B, C-C, D-D, and E-E intersect with F-F, G-G, and H-H. Locate the Side Stakes (17) from the miscellaneous parts bag. Cut off and file smooth any casting sprue and the small tab on the back side. Glue side stakes in place where indicated by the hash marks on the templates. When completely dry, remove sides from the

templates. Drill a #70(.028) hole in each side where C-C and G-G intersect for the Crank Rod (37). Drill #74(.022) holes at the other locations. Set these assemblies aside.

Attach tape to the End Slope Sheets templates and edge glue and set in place the fourteen planks 3" x 12" x 7'10" to form the Hopper End Slope Sheets (18). When dry, remove from the templates and sand bevels in each end as shown in the sectional side views. Set these assemblies aside.

Attach tape to the hopper Side Slope Sheets templates. Edge glue and set in place the six planks 3"x 12" x 12'6" (19). Using a straightedge ruler, cut to shape along lines A-A and B-B. When dry, remove from templates and sand a bevel to the top and bottom edges as shown in the sectional end view. Set these assemblies aside. Locate the 8" x 8" x 7'6" Hopper Spreader Beam (20) and notch the ends as shown in the isometric detail drawings. Set this piece and the 3" x 12" x 7'6" End Walk Plank (21) aside.

From the 3" x 10" Stripwood (orange) cut eight pieces 2'2" long (22) and position on the Hopper Door templates. From the 2" x 4" stripwood (black) cut four framing pieces 3'6" long (23) and glue in place where shown by the dotted lines. When dry, remove from the templates and set aside.

Step Four - BODY ASSEMBLY

Cement the Sides to the Frame, then cement the Hopper End Frames in place. Test fit the Intermediate Frames and the End Slope Sheets as some adjustment of the bevel sanding may be necessary. When fit is okay, cement in place. The Side Slope Sheets will require bevel sanding on the ends and perhaps some adjustment to the top and bottom bevels. This will be a sand/test/sand/test procedure until the correct fit is achieved. Then cement in place. Now glue the Hopper Spreader Beam (20) and the End Walk Plank (21) in place.

Step Five - UNDERBODY DETAIL

Study the isometric drawings of the Hopper Door assembly. Cut the Door Hinge Plates (24) from the etching and laminate them to the hopper doors. Cut two Hinge Bars (25) from the .022 wire 4'6" in length. Lay them in position as shown and bend hinge tabs over to secure. Drill #78(.016) holes thru doors where hole is etched in plates. Cut chain Hooks (26) from etching and cement in holes as

shown. With car body upside down, glue doors in position. Cut Hinge Bar Brackets (27) from etching, slip over the ends of the hinge bars, and glue to the Sills (1). Drill End Sills (2) where shown with #74(.022) holes to receive nylon Truss Rods (28). Mount plastic Queen Posts (29) to Queen Post Beam (10) where indicated. Cut the nylon truss rod material into four equal pieces. Draw each piece thru one end sill, under (actually over but we're upside down again) the bolster truss blocks (8), over the queen post beam beside (not in) the queen post, under the other truss blocks and thru the other End Sill. Cement one end (use ACC) and when dry pull the other end so that the nylon is straight but not tight. Cement the other end and hold until dry. When all four truss rods are installed, pull up into queen posts, trim ends flush with end sills, and cover with large Nut/Bolt/Washer castings (30). Drill Buffer Blocks as shown and install medium N/B/W castings. Refer to Airbrake Equipment Installation drawing and install Brake Cylinder (31). If you wish to complete Air Brake system, form Train Line (32) from .028 wire and install. Cut Brake Levers (33 & 33a) from etching and install. The rest of the rodding and piping should be made up from the .015 wire. Depending upon the trucks you intend to use you may have to shim the Bolsters. (See detail drawings.) If so, do so at this time and then drill the bolsters to accept the truck mounting screws.

Step Six - FINAL DETAILS

Cut four pieces of the .022 wire 7'6" long and install between sides as tie rods (34). Cover the ends with medium N/B/W castings. Drill for and install medium N/B/W castings in frame sides as shown. Install Stirrup Steps (35) and side and end Grabirons (36) where shown. Refer to the isometric drawing showing the installation of the Crank Rod (37) and Chain (38) and Shaft Plates (39 & 40). Cut Crank Rod from the short piece of .028 wire. Attach center of chain to center of crank rod. Hook other ends of chain to the chain hoaks in the hopper doors. Rotate crank rod until chains are taught and cement in place. Install shaft plates (39 & 40) and then Ratchet & Pawl (41) from etching. (Hole in R & P may have to be enlarged.) Drill thru the small holes in the shaft plates and install small N/B/W castings. Drill .028 hole in end sill at brake staff end where shown. Cut Brake Staff (42) 8' long from short piece of .022 wire. Cut upper and lower Brake Staff Supports (43 & 44) from the

#70

etching and install the lower support first. Place Brake Staff thru end sill into lower support. True up and then cement in position the upper support. Drill thru the small holes in the supports and install small N/B/W castings. Add Ratchet & Pawl (41) and Brake Wheel (45) from etching. Bend two Coupler Lift Bars as shown from .022 wire. Cut the Eye Bolts (47) from the etching. Drill the end sills as shown and install eye bolts/ lift bars to complete the construction.

PARTS LIST

Red Target Bag:

- 4 6" x 10" x 19' Main Sills
- 2 6" x 10" x 7'6" End Sills
- 4 6" x 10" x 6'7" Center Sills
- 2 6" x 10" x 3'2" Interior Cross Beams
- 1 8" x 8" x 3'2" Hopper Spacer
- 2 9" x 9" x 2' Coupler Blocks
- 1 4" x 8" x 7'6" Queen Post Beam
- 1 4" x 8" Stripwood (red)
- 1 4" x 6" Stripwood (green)

Blue Target Bag :

- 2 4" x 12" x 7' Hopper End Beams
- 4 4" x 4" Stripwood (blue)

Orange Target Bag :

- 8 3" x 12" x 19' Side Planks
- 14 3" x 12" x 7'10" End Slope Sheet Planks
- 6 3" x 12" x 12'6" Side Slope Sheet Planks
- 1 8" x 8" x 7'6" Hopper Spreader Beam
- 1 3" x 12" x 7'6" End Walk Plank
- 1 3" x 10" Stripwood (orange)
- 1 2" x 4" Stripwood (black)

Miscellaneous Parts :

Nylon Truss Rod Material

- 16 Side Stakes
- 8 Large N/B/W
- 20 Medium N/B/W
- 12 Small N/B/W
- 1 Brake Cylinder
- 4 Queen Posts
- 4 Stirrup Steps
- 11 Grabirons

Chain

- 1 Long .028 Wire
- 1 Short .028 Wire
- 2 Long .022 Wire
- 1 Short .022 Wire
- 1 Long .015 Wire ✓

Brass Etching

KIT #3305 - CLAIM COUPON

Name _____ The following part(s) is/are
Address _____ missing / defective
City _____
State _____ Zip _____

THOMAS PRODUCTS

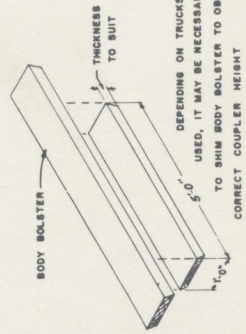
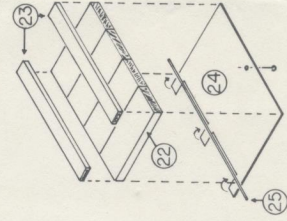
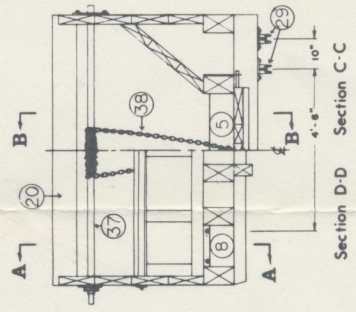
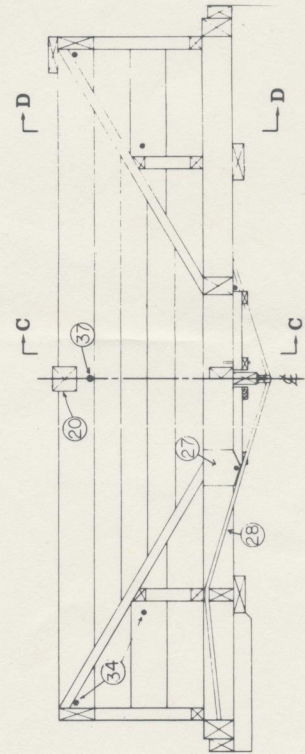
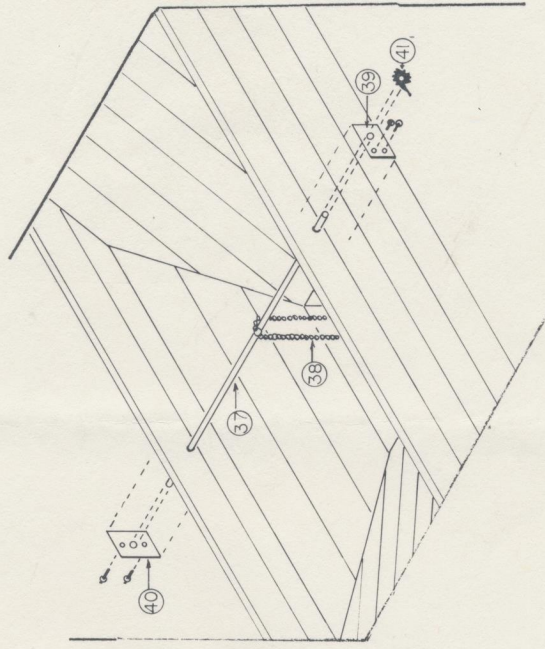
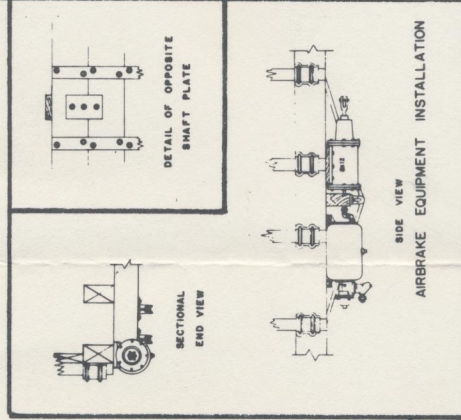
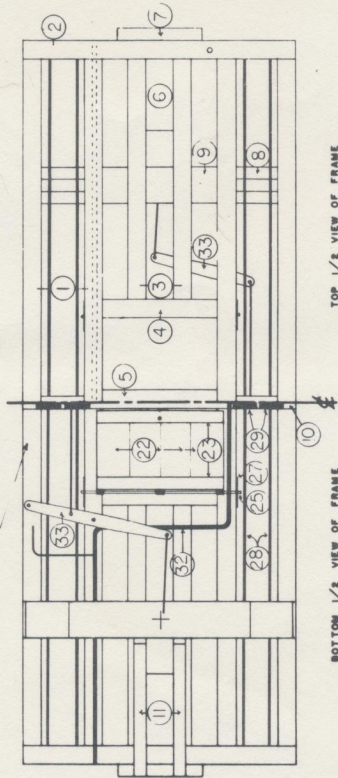
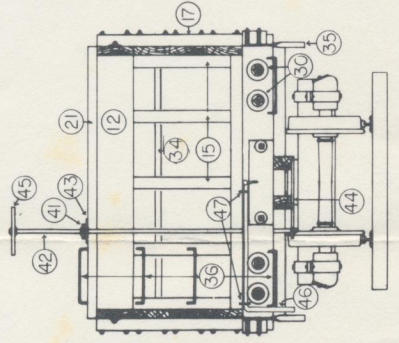
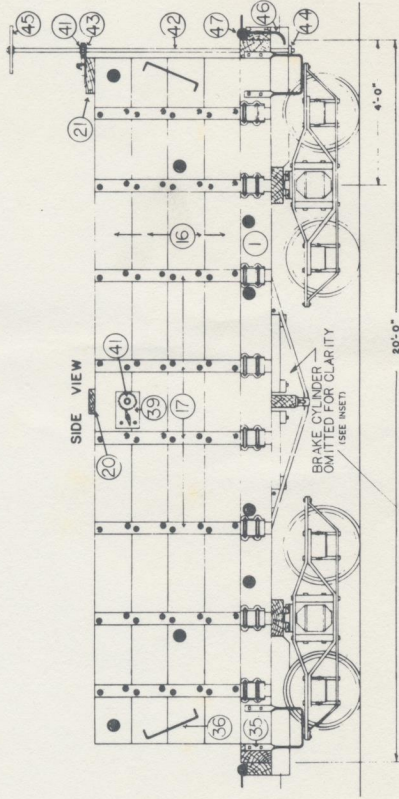
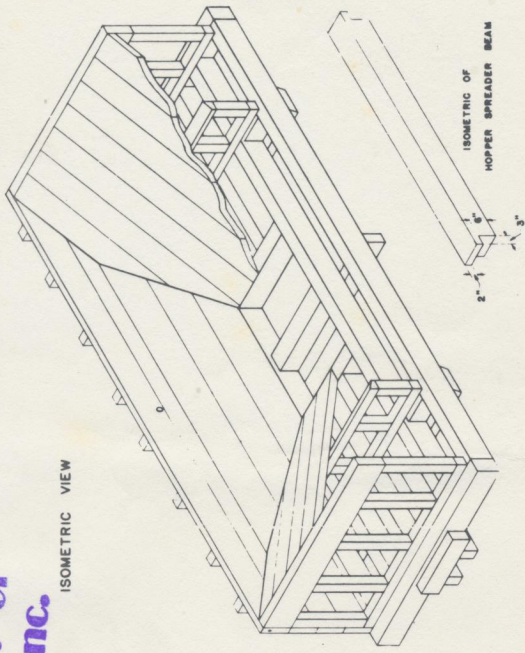
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Kit 3305 - DETAIL DRAWINGS

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ISOMETRIC VIEW



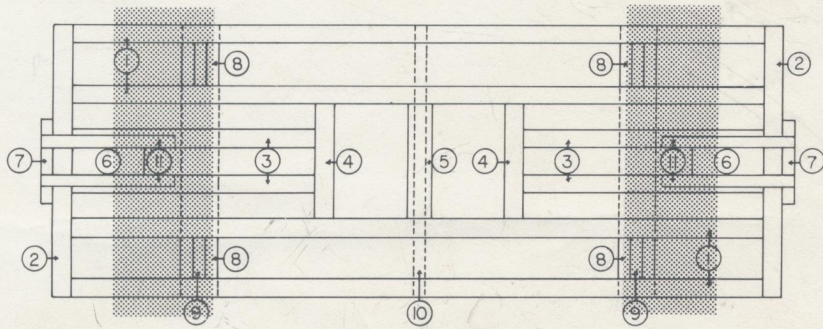
SECTIONAL VIEWS

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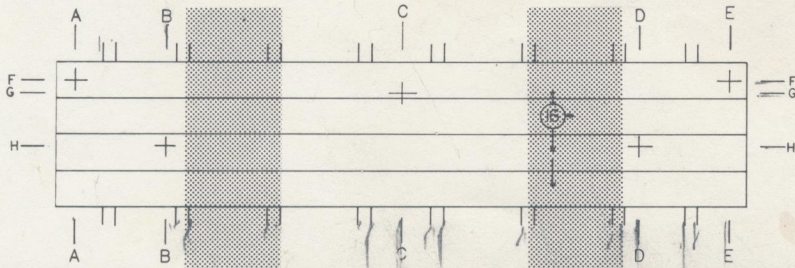
Cross Section B-B

Section C-C

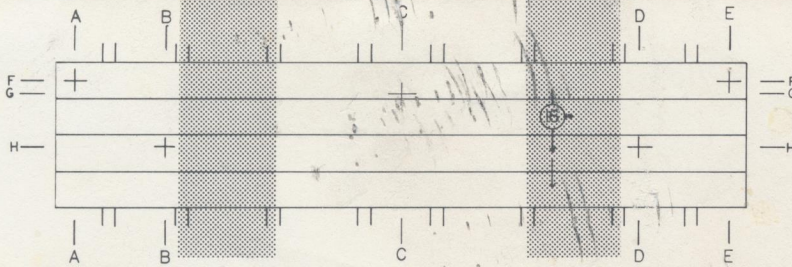
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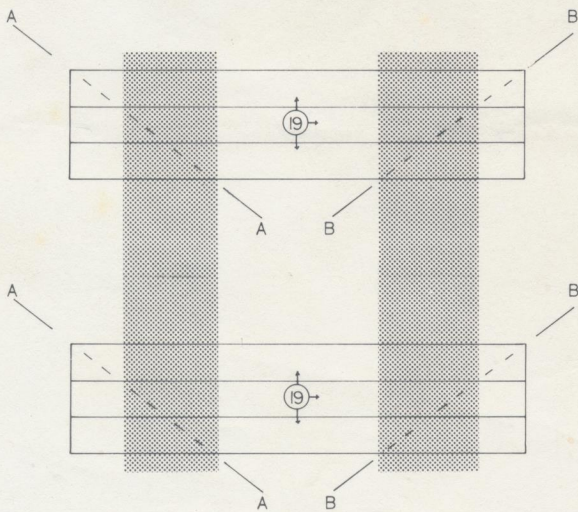
MAIN FRAME



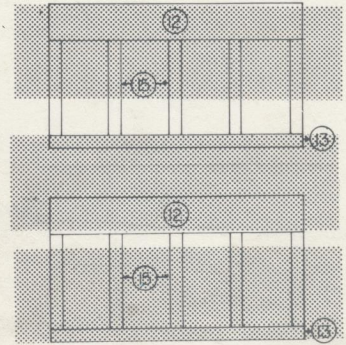
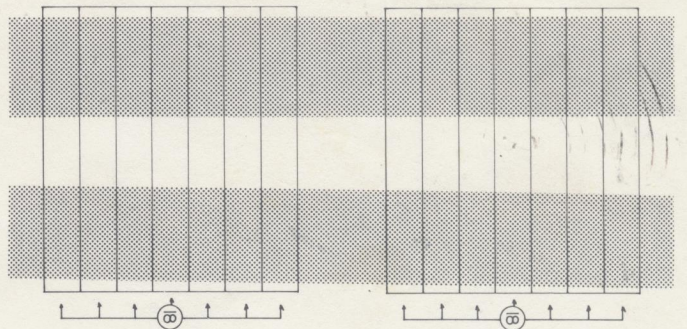
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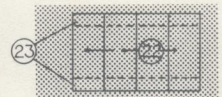
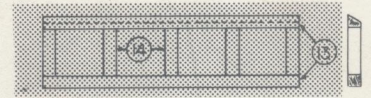
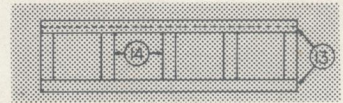
SIDE SLOPE SHEETS



END SLOPE SHEETS



END & INTERMEDIATE FRAMES



HOPPER DOORS