# 24915 ROCK ISLAND 52'6" THRALL GONDOLA

In 1978 Thrall Manufacturing Co. made 300 gondolas for the Chicago, Rock Island and Pacific Railroad. These cars are numbered 400,000 to 400,299. Their capacity is 190,000 lbs. with an area of 2,494 cu. ft. These cars weigh 603,000 lbs. and are equipped with continous lading strap anchors on the top plate of the sides and have 36" wheels.

Tools needed for kit assembly are: a small saw, small files or emory boards, a 2-56 tap and tap handle, an exacto knife, a small drill (pin vise), #50, #74, and #77 drill bits, needle nose pliers, cutters for sheet metal and fine sandpaper.

1. Unpack and inspect your kit against the parts list. Read all instructions through thoroughly and familiarize yourself with the sequence of assembly. If the plastic parts are bent or warped, they may be heated until soft under a 100 watt lightbulb or a hand held hair drier. Line the piece up with a straight edge, then flatten it until cool under a heavy book.

Sand and seal all stripwoods before assembly. Use either a sander-sealer or an acrylic finish (Krylon) for this purpose.

Be sure to use a barrier coat on all plastic parts prior to assembly. This will prevent any non-compatible paints from attacking the plastic parts.

Do not hurry assembly. Trial fit all parts and sand to fit if necessary, before applying glue.

2. Remove all flash (excess metal or plastic) from the castings with a file or emory board. Check for any air bubbles we might have missed and repair them with epoxy or a filler compound such as Squadron Green Putty.

Underframe

3. Cut the basswood floor to be the same length as the plastic sides. Make certain that both floor ends are square.

4. Kits with trucks included only. Tap the truck screw holes and the coupler holes with the 2-56 tap. Mount the bolster with the #2 x ½" flathead wood screw. Be sure that the center of the truck screw hole lines up with the center of the first side post on the plastic gondola side.

5. To get the floor framing to line up with the side posts, hold the plastic sides even with the floor, and using the square, mark on the floor where the floor supports go opposite the side posts.

6. To build the centersill, use the 1/16" x 3/16" (green) stripwood for the spacer between the side of the centersill. This wood should fit between both bolsters, and is centered on the floor. Glue the 3/16" wide side to the center of the floor.

7. The sides of the centersill are made of the 1/16" x .200" (red) stripwood. Cut these to fit between the bolsters and cement them to the floor against the spacer.

8. Drill holes in the centersill for the brakepipe. Refer to the underbody drawing for the approximate location of the holes.

9. Cut twelve 5/64" x 1/8" (purple) crossties and ten 1/8" x .200" (blue) crossbearers.

Use the #50 drill bit to make holes in six of the crossties and in four of the crossbearers for the brakepipe.

10. The thick wire is used for the brakepipe. Thread the wire through the centersill holes. Bend it as is shown in the underbody drawing and cut it to fit between the bolsters.

11. Slide the crossties and crossbearers in the correct sequence on to the brakepipe. Cement the remaining crossties and crossbearers to the floor.

12. Cut the five 1/8" x .012" (orange) crossbearer tie plates 21/32" long. Cement these to the crossbearers.

13. Use the #75 drill bit to drill holes in the brake reservoir and ABD valve for inserting the emergency reservoir pipe and the auxilliary reservoir pipe. Cement the ABD valve to the crossbearer and install all the remaining brake piping, except for the reservoir pipes which will be installed in step 21.

Use the thin wire for the brake cylinder pipe, which is attached to the bottom of the crossbearer tieplates.

14. Drill holes for the grabirons in the sides and ends with the #77 drill bit. Use side and end drawings as a placement guide. Install these with epoxy. When the epoxy is thoroughly dry, cut off the excess wire which shows through the inside of the car and file it smooth.

15. Assembling the sides and ends should be done upside down on a flat surface.

With five minute epoxy, glue one of the car sides to one of the car ends so that the end overlaps the side. This will look like an 'L'. Note that the ends overhang the sides slightly. Use the square to keep the side and end at right angles to each other. Repeat this step with the other side and end. Remember that both 'L's have to fit together later. See fig. A.

16. When the epoxy is dry, assemble both 'L's to form the body of the gondola. With either epoxy or contact cement, add the four end and side ladders as shown in side and end drawings.

Use a file or emory board to round the top corners of the body to a 1/16" radius. See fig.B.

17. Attach the miner brake housing to the 'B' end of the car. Glue the brake wheel to the housing. Drill holes with the #77 drill bit for the continous lading strap on the top rail of the car. Use the side drawing as a guide. Be careful not to stretch the corrugated wire as it will deform the loops. Bend the first loop of the wire down 90° and straighten out the tail, cut the end leaving 1/16" remaining on the tail. See fig. F. Epoxy the tail into the hole that was just drilled and let the epoxy cure. Using epoxy sparingly, paint the top rail of the car, now lay the corrugated wire in the epoxy on the rail. Weigh down the wire so that the bottoms of the corrugations lie on the top rail (bits of wire coat hanger cut to 2½" straight lengths can be laid from one side of the car to the other with a weight resting between will hold the wire in place). Cut the corrugated wire to length before the epoxy sets. Be sure the corrugated wire runs down the middle of the top railing. Too much epoxy will fill the corrugations.

18. Use the .020" x .030" flat wire to form the brake wheel stand supports. Make four right angled 1/8" x 3/16". Glue together and mount on the car end. See fig.D. Fasten the brake platform to these supports

19. — Cement the floor to the car body

Cut two .012" x 1/8" (undyed) stripwood. Glue these along the seam between the end of the car and the floor, fitting them between the sides. Cut two pieces of the 1/16" angle. Glue these in the seam between the sides and the floor. These should fit between the .012" x 1/8" strips used previously. Cut four 1/16" angle strips 5/8" long. Glue these in the seam between the ends and the side, 1/16" below the top of the top rail. See fig. B.

20. Bend the .020" x .060" flat wire to form the end sill steps. Mount these with contact cement. Refer to fig. E.

21. Cement a small scrap of wood to the centersill to shim the end of the brake cylinder. After the glue dries, shave the shim down until the reservoir is level. Then cement the reservoir to the shim and to the bottom edge of the car side. Use the remaining thin wire for the auxiliary and emergency reservoir pipes.

22. Using a #74 Drill bit, make a hole in the end of the slack adjuster for thick wire to run to the lever closest to the ABD valve. Attach the levers (remove from the brake wheel) to the slack adjuster, brake cylinder, and thin wires running to the bolster. Staples can be used as hangers for the levers and thin wires. The four cast roping staples cab be mounted on the car body now (refer to underbody and side drawing).

23. The body, sides, and underframe are painted light blue (two parts Floquil's Great Northern Blue and one part Floquil's White). The trucks are painted black. WAIT UNTIL THE PAINT IS DRY BEFORE DECALING. Hold the car to your nose, if you can still smell the paint, it is not dry yet. Sometimes it will take two weeks, but can be as long as a month. All surfaces should have a gloss coat for the best decaling results. You can dull coat it after the decals are on and completely set.

When soaking decals, it helps to add a drop of liquid detergent (Lux) to the water. The Solvset soln. should be diluted 1:1 with water.

24. GLUES. When cementing styrene plastic to wood or to other styrene, use five minute epoxy. When cementing metal to styrene, use contact cement. For wood to wood use a white glue (Elmers').

| | | |
|---|---|---|
| 1 | T031A | Floor |
| 2 | A062 | Bolsters (truck kits only) |
| 2 | N550 | Bolsters |
| 1 | N055 | 1/16" x 3/16" Green stripwood |
| 2 | N064 | 1/16" x .200" Red stripwood |
| 1 | N040 | 5/64" x 1/8" Purple stripwood |
| 1 | N067 | 1/8" x .200" Blue stripwood |
| 1 | N034 | .012" x 1/8" Orange stripwood |
| 1 | T012 | 1 5/8" brake line (wire) |
| 1 | T009 | 1" brake line (wire) |
| 1 | L019 | Brake reservoir |
| 1 | L020 | ABD valve |
| 2 | T056 | Gondola sides |
| 2 | T057 | Dreadnaught ends |
| 8 | N381S | Grabirons |
| 4 | T015 | Four rung ladders |
| 1 | L116 | Miner brake housing |
| 1 | N600 | Escutcheon pin |
| 1 | W006 | Tensioning spring |
| 1 | L115 | Miner brakewheel |
| 1 | W353 | .020" x .035" flat wire |
| 1 | T035 | Brake platform |
| 1 | W354 | .020" x .060" flat wire |
| 4 | T071 | Roping staple |
| 1 | T072 | Slack adjuster |

WE WOULD LIKE TO THANK DICK LIND FOR USE OF HIS PATTERNS AND DRAWINGS AND THANKS ALSO TO RICK JOHNSON

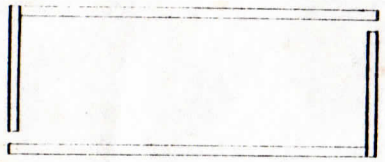


FIG. A

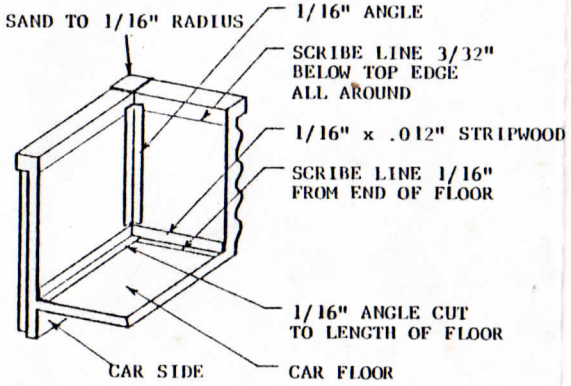



FIG. B

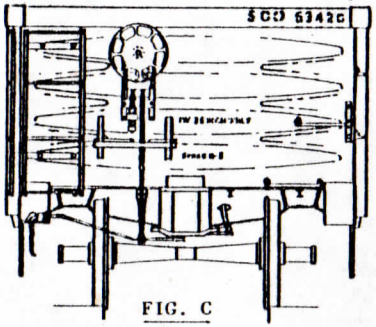


FIG. C

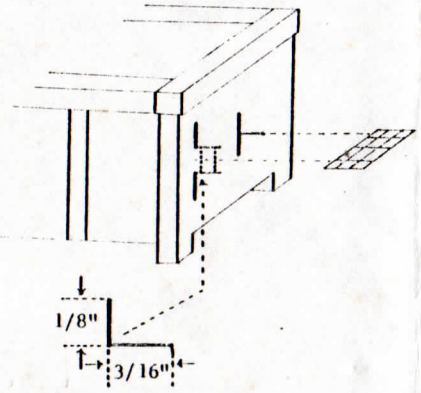



FIG. D

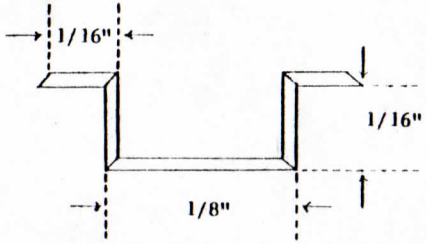
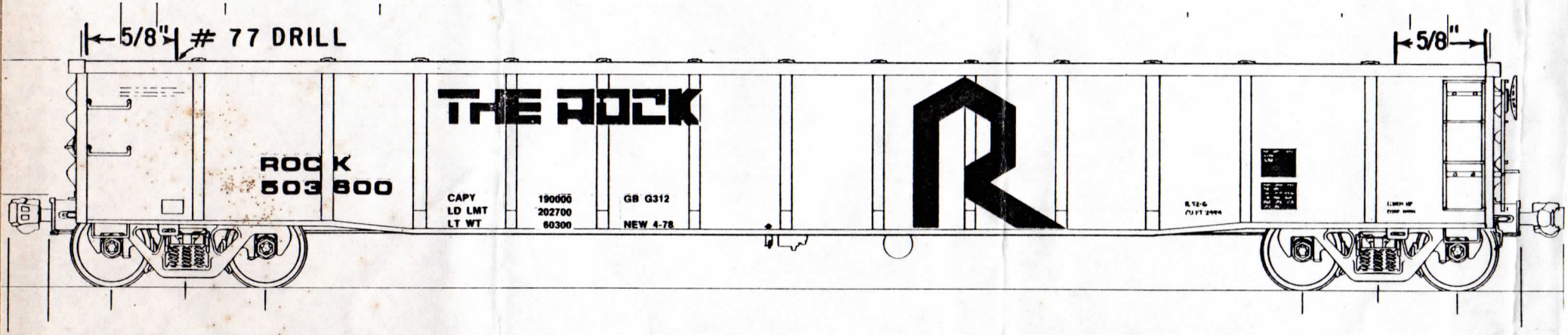
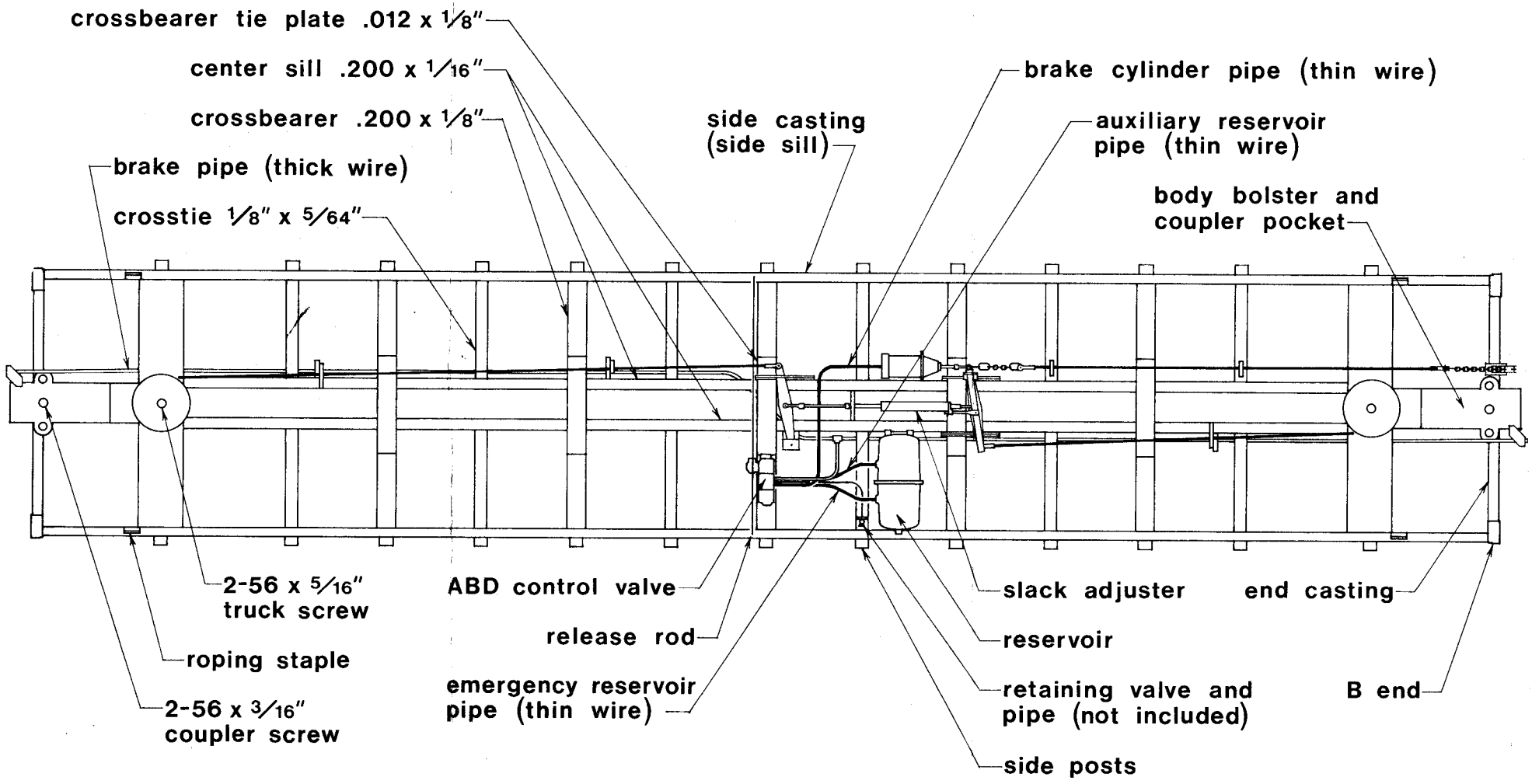



FIG. E


FIG F




crossbearer tie plate .012 x 1/8"
center sill .200 x 1/16"
crossbearer .200 x 1/8"
brake pipe (thick wire)
crosstie 1/8" x 5/64"
side casting (side sill)
brake cylinder pipe (thin wire)
auxiliary reservoir pipe (thin wire)
body bolster and coupler pocket
2-56 x 5/16" truck screw
roping staple
2-56 x 3/16" coupler screw
ABD control valve
release rod
emergency reservoir pipe (thin wire)
slack adjuster
reservoir
retaining valve and pipe (not included)
side posts
end casting
B end