

22. Follow previous steps with front wheel holding bracket, except drill the #56 hole thru, then thread it with the 0-80 tap.
23. Bend 90° inwards round ears of drilling fixture, solder corners, install the 00-90 x 1/2" round head screw, secure screw with three nuts (J). Position drilling fixture's screw shaft into the place of rear driver, fasten fixture to chassis with the original gear cover plate screw. Drill #56, approximately 2.5 mm (3/32") deep blind holes into the "L" shaped side extensions of chassis (K). Remove fixture, thread holes with the 0-80 tap.
24. Cut / file off wings of acrylic isolation plate.
25. Bend front side frame assembly's top bracket upwards (until etched bending line's corners fully closed), solder corner. Bend front round portion downwards, solder corner. Bend, assemble / solder side frames.
26. Bend 180° outwards the front hook / spacer, then glue it temporarily to the bottom of front side frame assembly. Make sure, the round outlines and the holes are properly aligned (L).
27. Bend, assemble / solder rear side frames.
28. Remove masking tape from armature, clean chassis, install magnet housing.
29. Glue rear light panel to top edge of magnet housing. Shoulder of panel should be held tight against the corner of magnet housing.

To blacken filed surfaces of chassis use rail weathering solution or black permanent marker. The side frame assemblies can be painted to the desired color, or blackened with rail weathering solution prior final assembly. The spokes of the original red wheels can be filled with epoxy or "J-B Weld", then after sanding, painted black or colored with black permanent marker.

#### Sequence of final assembly:

- Clamp down the acrylic isolation plate with the front side frame assembly, secure it with the 0-80 x 5mm flat head screw.
- Install flangless wheels into wheel brackets, use a vise to press wheel pairs carefully together.
- Place the front wheel assembly into the front coupler pocket, secure it with the 0-80 nut.
- Attach the rear wheel assembly with a 0-80 x 2 mm round head screw.
- Secure the rear side frames with 0-80 x 2 mm round head screws.
- Install the locomotive drivers, gears, gear cover plate and motor brushes
- Connect the constant light circuit to the rear light panel with two 1 1/4" long wire as shown on the diagram, then slide the circuit between the two center contacts.
- Lubricate and test.

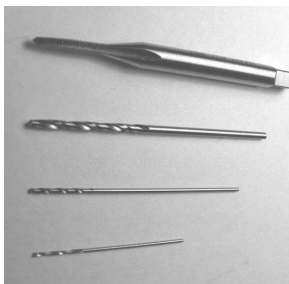
#### Tools included:

0-80 tap

#56 drill bit

#72 drill bit

#75 drill bit



#### Tools required:

25W - 30W soldering iron with small chisel tip

small flat pliers, tweezers, small screwdrivers, small reamer

vise with optional non metallic heat resistant jaws, pin vise

large and small flat files with smooth edges, small half round file

#### Helpful suggested tools:

Slim self locking soldering tweezer with glued in bakelite or mica padding to prevent "heat sink" effect

Small flat nose spring loaded pliers with smooth jaws. Available from jewelry supply stores.

