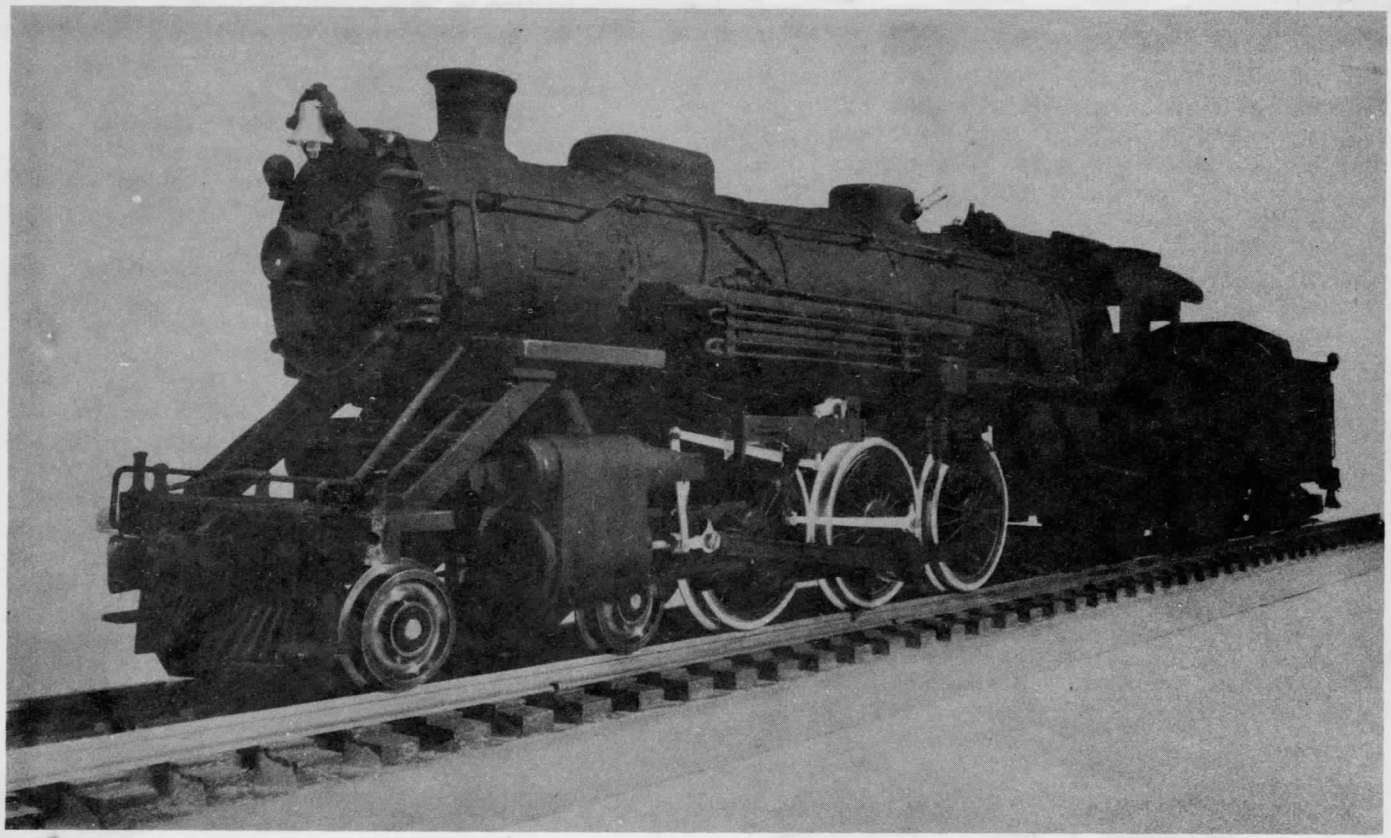
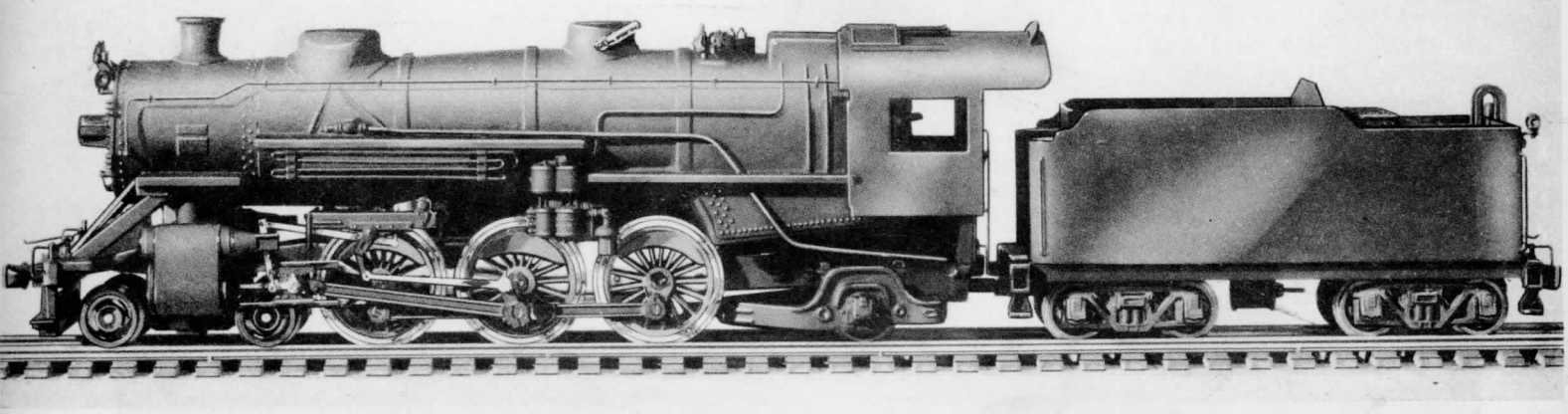
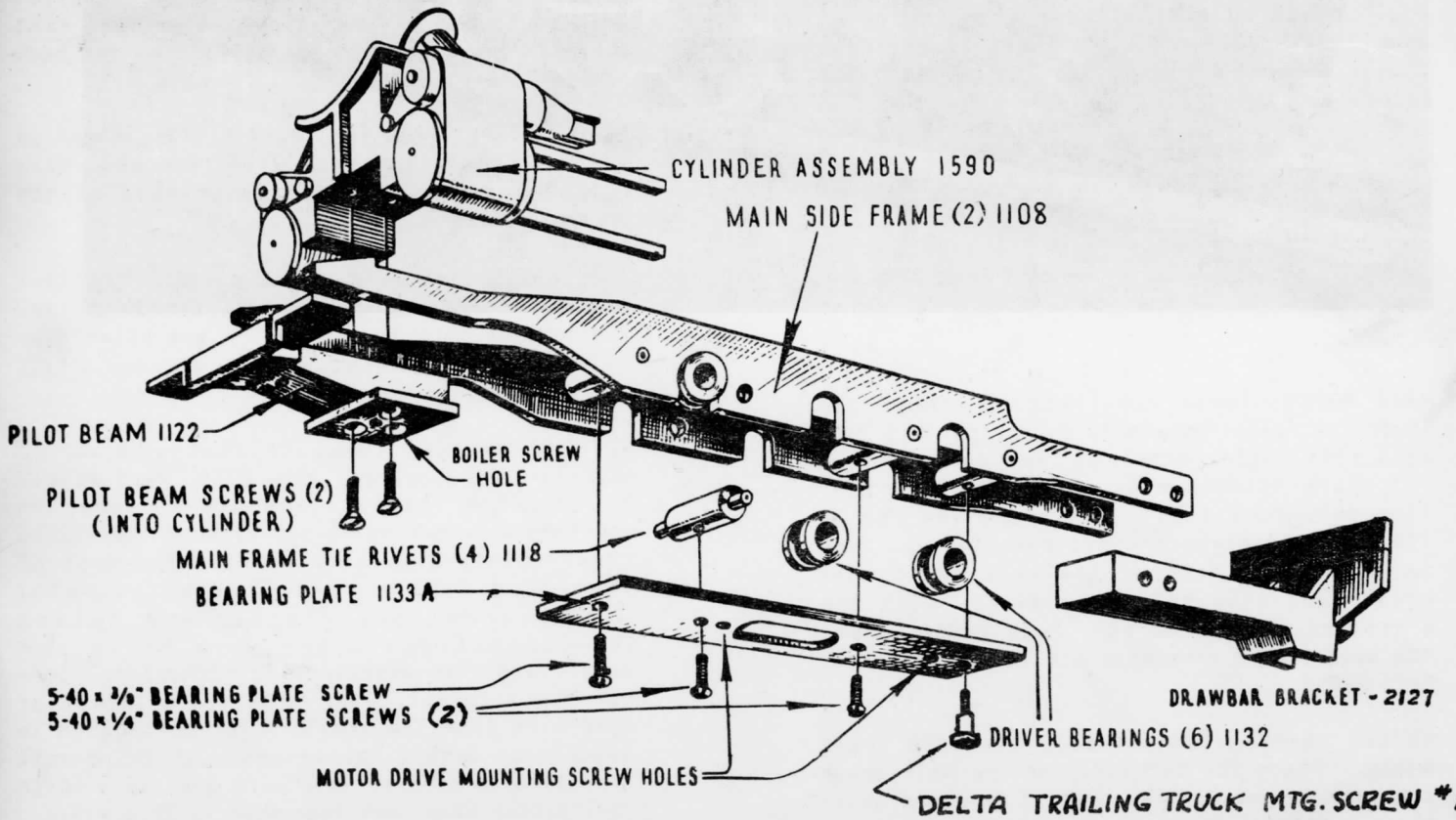
GENERAL MODELS CORPORATION

O-GAGE STANDARD MODEL PACIFIC LOCOMOTIVE MECHANISM ASSEMBLY INSTRUCTIONS-SECTION I






CYLINDER ASSEMBLY 1590
MAIN SIDE FRAME (2) 1108
PILOT BEAM 1122
BOILER SCREW HOLE
PILOT BEAM SCREWS (2) (INTO CYLINDER)
MAIN FRAME TIE RIVETS (4) 1118
BEARING PLATE 1133 A
5-40 x 3/8" BEARING PLATE SCREW
5-40 x 1/4" BEARING PLATE SCREWS (2)
DRAWBAR BRACKET - 2127
DRIVER BEARINGS (6) 1132
MOTOR DRIVE MOUNTING SCREW HOLES
DELTA TRAILING TRUCK MTG. SCREW #1107

GENERAL MODELS CORPORATION
PACIFIC LOCOMOTIVE
STANDARD KIT

Read Carefully:

(1) All working parts have been machined and with the exception of small clean up jobs for flash and finish they are ready for assembly.

(2) Only the essential mounting holes have been drilled in the boiler. Several of these require tapping. Tapping information is covered in detail in the instructions to follow. See list of necessary tools.

(3) Caution! This is a hobbyists' construction kit. In the interests of economy some of the drilling and tapping has been left to the constructor. MOST MODEL RAILROADERS not only can but prefer to drill and tap a hole.

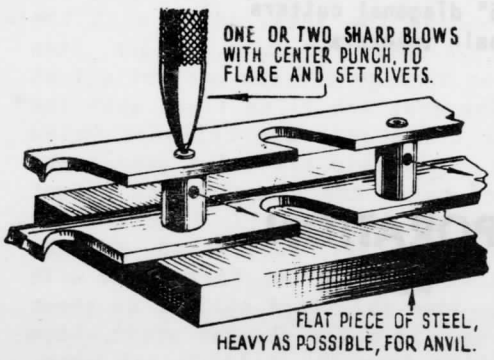
(4) Read the instructions carefully and study the diagrams and pictures before attempting to assemble this kit. The final results obtained will more than compensate for the few extra minutes required to thoroughly digest the instructions.

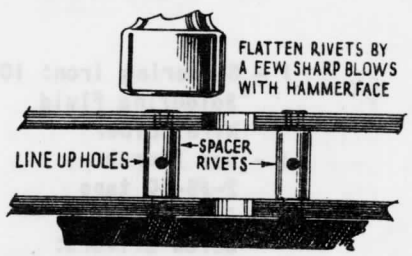
(5) Guarantee: All parts defective in manufacture will be replaced without charge provided the part is sent for exchange to the factory together with the kit packing slip. DO NOT SHIP YOUR LOCOMOTIVE to the factory for inspection or repairs. It will be returned Express collect.

(6) Parts & Service: See your dealer. If he does not carry loco parts contact your nearest Model Railroad Shop. Order parts by catalog number and description. (See Parts List enclosed.)

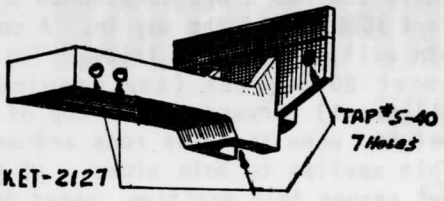
MECHANISM ASSEMBLY INSTRUCTIONS

THE MAIN FRAME of the locomotive is formed by riveting together the two stamped brass side frames item #1, Part #1108 with four main frame rivets, item #3, Part #1118. Put them together by hand and screw the assembly together with the bearing plate, item #2, Part #1133-A. This will line up all the holes in the rivets as the screws are put in them. The procedure for the riveting assembly is shown in the drawings. Use the center punch



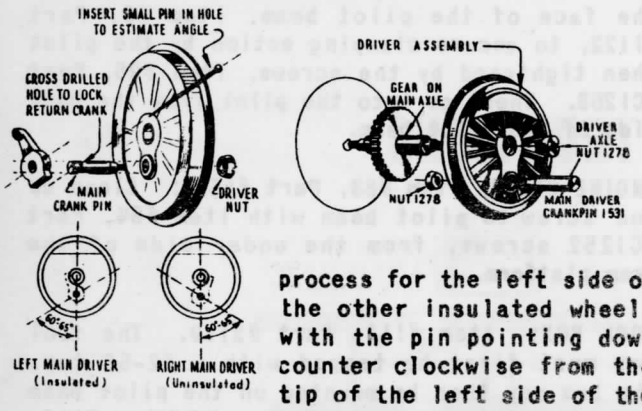


ground as shown in the sketch. Upset the rivet ends with a sharp rap of your hammer. Turn the assembly over and repeat on the opposite side. Then pean the rivet over with the flat face of the hammer as illustrated. It is not necessary that the rivets be flush with the side because a clearance is allowed for the wheels. Remove the bearing cover plate. The Draw Bar Bracket, item #7, Part #2127 is attached with screws, item #8, Part #C1506, after holes in bracket have been tapped. See sketch on next page for tapping information.



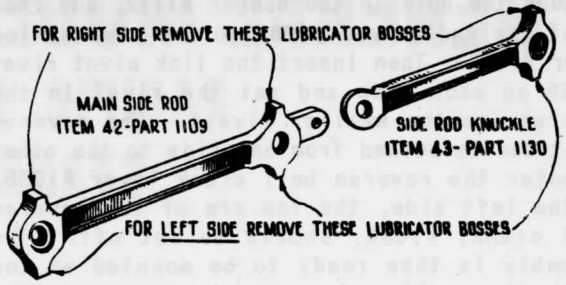
DRIVE WHEELS: Take the light weight driver uninsulated, item #28, Part #1580, shove the axle into the back of the driver. Be careful to line up the flat in the driver hub and the flat of the axle. If necessary, tap the wheel gently with a hammer to start, but do not damage the threads on the axles. Grind or file a small slot in the blade of a small screw driver to fit the special driver nuts. After the axle is started in, screw on the driver nut, item #39, Part #1278. This will draw the driver on firmly against the shoulder. Now place two bearings, item #4, Part #1132, on the axle and attach the other driver, uninsulated, item #29, Part #1581, in the same manner. Repeat this process with the forward drivers.

MAIN DRIVER: Insert the main crank pin, item #40, Part #1531, into the tapered hole on the front of the uninsulated wheel, item #27, Part #1579. Run the nut, item #39, Part #1278, on the pin from the back loosely. Now line up the hole in the crank pin so that when a straight pin is put through the hole, it would point clockwise down from the right side of the counter weight; then tighten the nut. See drawing for this operation. Repeat the



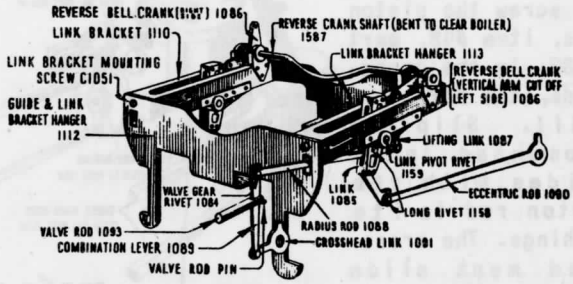
process for the left side on the other insulated wheel, with the pin pointing down counter clockwise from the tip of the left side of the counter weight, as shown in the drawing. The purpose of this is to make the eccentric crank lag the main crank in a forward direction on each side of the locomotive to properly time the valve motion. Put a driver bearing on each end of the geared axle and mount the drivers in the same way as the other drivers were done. Now drop the three pairs of drivers in the frame, insulated wheels on left side of the loco, with the bearings in place in the slots. Put the cover plate on and set the screws, items #5 and #6.

SIDE RODS: These are assembled as shown on drawing #1564-A-the knuckle rod to the rear. File off the lubricator bosses to make left and right assemblies. (See sketches) The

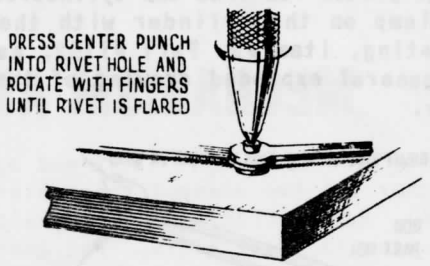


lubricators point up. Make doubly sure you have a right and left pair, and do not make a pair of lefts or a pair of rights. Attach the rods to the wheels with the crank pins #41, Part #1057. The mechanism should now roll freely if all the steps have been followed correctly.

VALVE GEAR ASSEMBLY: Assemble the links in sections as follows: the radius rods #1088, link #1085, lifting link #1087, reverse valve crank #1086, and the eccentric rod #1090 are



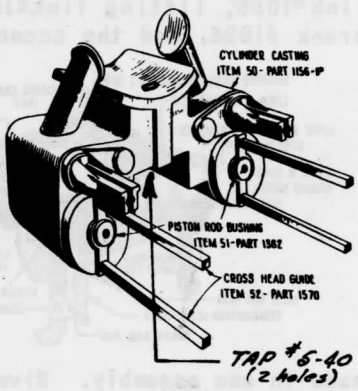
made in one assembly. Rivet to make right and left hand assemblies. The rivets #1084 and #1158 are set by inserting a center punch in the hollow end of the rivet. (See drawing)



Exert just enough pressure with your fingers in a circular motion, swiveling the center punch around to slightly flare the rivet. A hammer is unnecessary and very likely to spoil the rivet. Do not use it. Next assemble the right and left hand assembly of the valve rod #1093 and combination lever #1089 with the crosshead link #1091. The valve rod pin, item #69, is driven through the rod and cut off at each end. The ends are filed flush with the valve rod to slide into the cylinder valve guide freely. Assemble the valve gear frame consisting of guide and link bracket hanger (front), item #53, Part #1112, link bracket hanger (rear), item #54, Part #1113, and the two link brackets, item #56, Part #1110 with the 4 screws, item #57, Part #C1051, as shown in the drawing. Form the reverse shaft, item #73, Part #1587 from the 1/16" brass wire, item #107, and insert in the link brackets as

shown. Next, insert the radius rod #1088 through the hole in the hanger #1112, and then rivet the radius rod #1088 to the combination lever #1089. Then insert the link pivot rivet #1159 on each side and set the rivet in the same way as the smaller rivets. The reverse shaft can be pushed from one side to the other to enter the reverse bell crank lever #1086. On the left side, the top arm of the reverse bell crank, #1086, should be cut off. The assembly is then ready to be mounted on top of the locomotive frame, using screws, item #55, Part #C1500, which thread into the frame rivets.

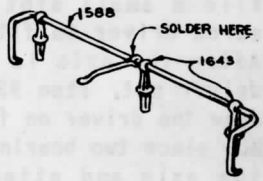
CYLINDERS, #1156: First tap the two holes on the under side of the cylinder casting with a #5-40 tap as indicated. Insert the piston rod bushing item #51, Part #1382, in the holes and tap in with a hammer. The crosshead guides, item #52, Part #1570, should be carefully driven into the square holes of the back of the cylinder. Now screw the piston rods, item #48, part #1383, in the crossheads, item #47, Part #1111. Slip the crosshead in the guides with the piston rod in its bushings. The crosshead must slide freely. If any binding is noted, check the guides for alignment. Now work the valve rod into the cylinder guide and the crosshead piston rod into the cylindered bushing. Clamp on the cylinder with the pilot beam casting, item #9, Part #1152, as shown in the general exploded drawing of the frame assembly.



MAIN RODS: These are filed to remove the lower lubricator bosses to make right and left hand rods. (See drawing) Put washer, item #72, Part #C1806, over the main crank pin, item #40, Part #1531, and place the rod on the crank, lubricator boss pointing up. Connect the small end of the main rod to the crosshead, item #47, Part #1111, with the crosshead link, item #58, Part #1091, under the head of the crosshead pin screw, item #46, Part #1058.

RETURN CRANKS, (Eccentric), item #70, Part #1056. Place the eccentric on the main crank pin over the main rods. Tap it in place until the pin holes line up as shown in the drawings. Drive the #20 x 3/8 escutcheon pin, item #71, Part #C2011, all the way in. A common straight pin will also do the trick. The cranks point about 20 degrees (see drawing for proper alignment) forward to the top of the counterweight, when the side rods are on the bottom. This applies to both sides. If the cranks do not assume this position, reset the main crank pins to secure it.

PILOT: Item #24, Part #1079. The coupler lifting rod assembly on top of the pilot is clearly shown in the photographs of the mechanism and the forward view of the locomotive, as well as this sketch showing construction. Thread the three stanchions, item #77, Part #1643, on to the wire to shape as shown. Drive the stanchions into the three holes provided in top of the pilot. The flag stanchions, item #82, Part #1035, are driven into the holes in the ends of the beam. If these driven pins don't fit snugly, flatten the shank slightly with a pair of pliers and a snug fit will result. Insert the front coupler (short one), item #80, Part #1592-B, into the pocket and fasten with cotter pin, item #81, Part #C2002. Next, cut the boiler bracers, #85, from 1/16" brass rod. These are clearly shown in the photograph of the mechanism. Make them long so they can later be cut to fit against the boiler. Insert the ends in the grooves in the pilot beam as you screw the pilot to the pilot beam. If they're not tight, file off the face of the pilot beam, item #9, Part #1122, to secure clamping action by the pilot when tightened by the screws, item #25, Part #C1253. These go into the pilot from the back side of the pilot beam.



ENGINE STEPS, item #83, Part #1572: Clean up and screw to pilot beam with item #84, Part #C1252 screws, from the under side of the beam platform.

TOOL BOX: Item #111, Part #2119. The tool box must first be tapped with a #2-56 tap. The box may then be mounted on the pilot beam using tool box mounting screw, item #112, Part #C-1264.

REVERSE SWITCH: (Use optional with AC-DC motor), (not supplied) item #100, Part #1584: No specific instructions are included on mounting a reversing switch because individual requirements will vary as will the type of reversing switch used. Wire the motor for reversal per diagram and solder all connections after worm drive and motor have been assembled to mechanism. Solder the terminal, item #108, to 6 inches of lead wire from the armature for connection to tender for 2-rail operations. If third rail operation is desired this wire goes to a third rail pickup shoe, not furnished in this kit.

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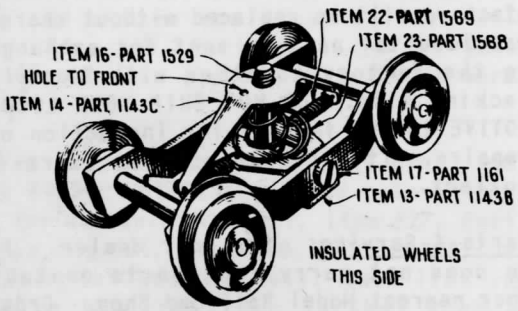


PILOT TRUCK #1162

PILOT TRUCK, Part #1162: Assembly is obvious as shown by the drawing. Note that the 1/16" hole in the centering bracket, item #14, Part #1143C, is forward, with the insulated wheels on the left side. Mount the assembled truck with the center pivot screw, item #16, Part #1529, in the hole provided in the pilot beam. The 1/16" hole in the centering bracket locks over the boss on the under side of the pilot beam to prevent turning. The truck must be removed at the time the boiler is attached and subsequently replaced.

DELTA TRAILING TRUCK: The Delta Trailing Truck, item #118, Part #2118, which comes completely assembled, is attached to the main bearing plate, Part #1133, at the rear hole using screw, Part #1107, which fastens to the rear main frame tie rivet.

WORM DRIVE MECHANISM: Insert the worm shaft, item #97, Part #1638, into the ball bearing of bracket item #87, Part #1565, and lock with a driver nut, item #39, Part #1278. Place the drive coupling, item #94, Part #1228, on worm shaft and insert cotter pin, item #95, Part #C2001, through hole in coupling and shaft. Tighten, bend, and cut off cotter pin. Assemble the motor bracket, item #88, Part #1566, and the motor to drive bracket, item #87, Part #1565, with screws, item #89, Part #C1605. The motor bracket has slotted holes to allow adjustment of worm and gear after assembly to mechanism. Insert cotter pin through the motor shaft and coupling slot. Tighten, bend and cut off cotter. The motor should turn freely. Assemble the drive unit to the mechanism with screws, item, #105, Part #C1507, and item #6, Part #1502, to mesh the worm and gear. When motor is turned, worm and gear should have slight backlash or clearance. If the meshing is too tight, or loose, unfasten screws, item #89, and raise or lower to provide free movement.

This completes the mechanism, which is now ready for the boiler.

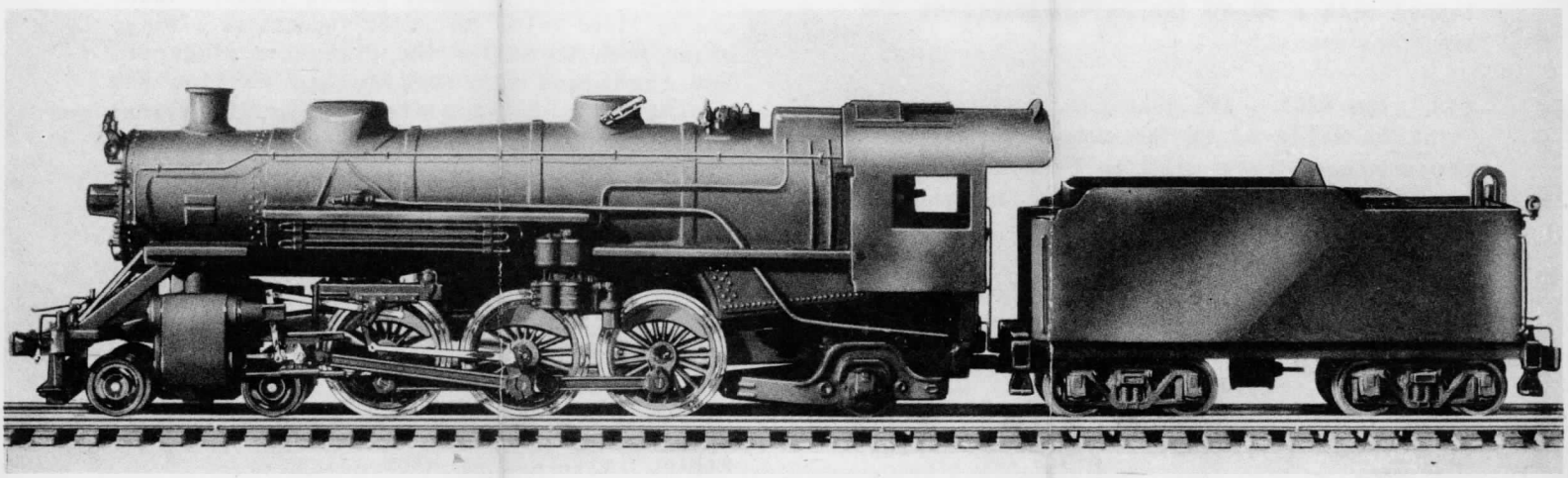
Tools Required:

- 1 - Soldering iron: 100-200 watt.
  - Soldering Fluid
  - Wire Solder
- 1 - Tap Wrench
  - 2-#5-40 taps
  - 2-#2-56 taps
  - Screw Drivers:
  - 1-6", 1-3", 1 jewelers 1-8" blade
- 1 - Center Punch
- 1 - 2 oz. Ball pien hammer
- 1-8 oz. Ball pien hammer
- Files:
  - 1-6" flat mill bastard
  - 1-6" slim taper (3 corner)
  - 1-4" round
  - 1-6" round
- Pliers:
  - 1-Needle nose
  - 1-5" diagonal cutters
  - 1 pair tweezers

GENERAL MODELS CORPORATION

O-GAGE PACIFIC BOILER ASSEMBLY INSTRUCTIONS

SECTION II



BOILER CASTING, item #201-P, Part #1602-P. File off the parting lines and gates.

Boiler surface finishing can be cut to a minimum by filing off only the surface grains. The filler, to be applied later, will cover the tiny pit marks that cannot be easily filed.

SMOKE BOX FRONT, item #236, Part #2129: Drill the 3 handrail stanchion holes which are spotted in the casting using a #56 drill. The 3/16" stanchions, item #235, Part #1643, are then mounted in the 3 holes, with the wire, item #243. See the photograph of the model and drawing #1801-A. If the stanchions do not fit tightly, the shanks may be squeezed to flatten slightly, or they may be riveted at the back of the casting. The wire must be bent to the proper curve, and the excess wire clipped off after the posts are seated.

The marker lights, item #240, Part #1607, are mounted as shown on the drawing #1801-A, by first drilling a 1/16" hole in each of the marker light brackets on the smoke box front casting. The marker lights may then be inserted in the holes and peaned over on the under side to hold them securely in position.

The three pop valves, item #221, Part #1126, are assembled in muffler, item #220, Part #1127, by driving them into the holes provided in the muffler. Flatten the shanks with a file to a slight taper to secure a nice tight fit. This assembly then fastens to the boiler by screw, item #227, Part #C1255. Remove the assembly until the boiler is ready for final finish.

Clean up with a file the fittings for the boiler casting, generator, item #215, Part

#1600, and bell bracket, item #216, Part #2130. The bell, item #217, Part #1083 is fastened to bell bracket with screw item #218, Part #C-1050 .

The whistle, item #222, Part #1125, is mounted on the side of the steam dome in the lug provided. A hole must first be drilled in the lug using a #31 drill, The whistle may then be secured firmly by sweat soldering the whistle stem into the hole.

The smoke box front is fastened in position by means of the bell bracket mounting screw, item #230, Part #C-1055 and item #218, Part #C-1051. The two mounting holes in the front end of the boiler smoke box must first be tapped with a #0-80 tap before mounting the smoke box front.

CAB, item #202. The rear cab bulkheads must first be soldered to the cab body. Holding these pieces in a vise or by some similar means will facilitate this operation, and assure a nice assembly. Install the smoke deflector, item #206, Part #1603D. Tabs are mounted in slots in the cab roof and bent to give rear slant to deflector. Solder in place.

The front cab bulkhead is integral with the boiler casting. The cab is held in position by means of three #00 x 3/16" drive screws, item #256, Part #C-1901. The top center mounting hole is drilled but the two side mounting holes must be drilled using a #55 drill. These holes should be accurately located, center punched, and then carefully drilled. The cab is then fastened in position by driving the drive screws in place with a hammer. Before fastening the cab, the boiler backhead, item #255, Part #2128, should be mounted using the two 0-80 x 1/8" screws, item #257, Part #C-1051. Two mounting holes in the boiler must first be drilled using a #56 drill and then tapped using a #0-80 tap.

CAB HATCHES, with rails, item #207, part #1604 are delicate castings. Handle carefully. Screw them to the cab roof with item #202, Part #C1250. Now form the grab rails and solder to the cab.

BODY ASSEMBLY: Check to fit the mechanism to that front mounting screw, item #232, Part #C-1515, and the 2 rear screws, item #233 Part #C-1500, can be screwed in place without binding. This may occur at the fire box where it touches the frame, or at a point where it fits the saddle of the cylinders. After fitting, the remainder of the boiler fittings and piping may be applied.

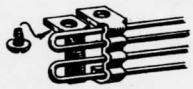
AIR COMPRESSOR, item #252, Part #1610 is mounted with screw, item #247, Part #C-1259. The mounting hole must first be tapped using a #2-56 tap. Some dexterity with a small screw driver will be necessary to start the screw, and by using long nosed pliers it may be tightened, entering from the inside of the boiler.

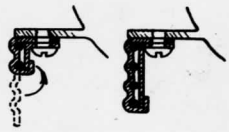
PREPARATION OF THE BOILER for painting is done after the various fittings have been fitted, installed and removed. All these parts should be taken off when the casting is in preparation for the undercoat finish. (See paragraph on painting). Boiler undercoat paint should be applied before piping is installed.

PIPING: Apply the heavy piping first. There are no fixed rules for model locomotive piping, other than to follow the plans and pictures. The technique for bending and fitting the piping wire is one of bending as sharply as possible but keeping uniform radii on the curves.

Sand pipes can be formed to fit around the wheels as shown in the photographs and inserted through holes in the running board.

Piping wires which lead down under the cab can be securely fastened to each other at points where they cross one another by a spot of solder at that point. Small piping is formed by wire, item #234, Part #1903. Air pipe cooling loops on the left side should be formed and fitted into the pipe hanger bracket, item #245, Part #1649 A and B. They are fastened by screw, item #208, Part #C1250. When the pipes have been formed and fitted into the hangers and clamped, the bottom tab can then be clinched up as shown in the sketches.





AIR TANKS: are mounted as shown in the drawings. The short tank, item #226, Part #1609, is mounted on the left side by screw, item #231, Part #1256, behind the pipe hangers. The long tank, item #225, Part #1608, is mounted on the right side by screw, item #231, Part #C1256.

HAND RAILS: The holes for the handrail stanchions must first be drilled in the boiler casting using a #56 drill. These holes are spotted on the casting. The chief precaution that must be taken is to assure that the holes are drilled perpendicular to the surface of boiler casting. A simple wooden cradle, or other suitable means of holding the boiler steady, will facilitate this drilling operation. Cut pieces of wire, item #234, Part #1903, a little longer than the boiler. Thread

on the stanchions, item #235, Part #1643. Start at the rear of the loco and tap the first stanchion in lightly. The stanchions must drive in with a close fit. If loose, squeeze a flat on the shank to slightly enlarge it. If the hole to too small, file the stanchion shank to a small taper at the tip. Then drive in place. Proceed forward, driving one stanchion at a time and keep the wire straight. When all posts are seated, the wire is straightened further by pulling from front or rear and the stanchions lined up by tapping to produce a straight rail throughout its length. Trim the wire at the front, and at the rear so that it may butt against the cab. The hand rail on the lower side of the smoke box is applied in the same manner.

POWER REVERSE: The power reverse, item #250, Part #2121, must first be tapped with a #2-56 tap. Screw, item #254, Part #1258, is used to mount the power reverse in position. Before mounting, it is suggested that a small hole be drilled in the front end of power reverse with a #64 drill for attaching a rod to be run over to the reverse bell crank on the valve gear mechanism. This rod is made from the .032" (small) brass wire supplied with the kit.

PAINTING: Poor painting frequently ruins the appearance of the best models; here are some tips:

(1) Remove the boiler fittings and file the entire boiler lightly with a FINE file to knock off the highest parts of the grain. Sharpen the edges of running boards.

(2) Clean well in gasoline or carbon tetrachloride to remove all oil and grease.

(3) Brush, or preferably, spray a fairly heavy coat of automotive primer, let dry and then sand smooth with 8/0 "wet or dry" finishing sandpaper, using water as a lubricant; this is important if you want a smooth, even finish. Sand filler until it assumes a dull polished appearance.

(4) Now add all boiler fittings except the bell, pops, hand rail stanchions and hand rails, and spray primer one coat over all, and rub down with rubbing compound.

(5) You now are ready to spray the color coat, and remember two or three thin coats are better than one heavy one. Use a good grade of black lacquer, preferably a semi-gloss black, permitting it to dry between each coat. If you want more gloss, just rub down lightly with automobile rubbing compound.

After the final finish is completed, the hand rails, bell and whistle are installed. The hand rails and stanchions are painted by hand, or left shiny brass if you prefer.

Tools Required:
Files - 6" & 8" flat mill bastard
Hand drill, electric drill, or drill press
Tap wrench
Taps - #2-56, #0-80
Drills - #64, #57, #53, #5 #48, #42, #31, #28
Center punch
Soldering iron - 100-200 watts. Soldering fluid & wire solder
Hammer (machinists) 2 oz. & 8 oz.
Pliers - Needle nose, diagonal side cutters, tweezers

GENERAL MODELS CORPORATION

"transportation in miniature"

Model Railroad Division

WHEATON, ILLINOIS

May 7, 1948

KIT PACKING LIST (SECTION I)

GENERAL MODELS CORPORATION O GAGE PACIFIC LOCOMOTIVE

(Insulated for 2-rail)

QUAN.	ITEM NO.	PART NO.	DESCRIPTION	REMARKS
			SECTION "AP", 33 pieces: Mechanism . Accessories, enclosed in bag "AP"	
4	3	1118	Main Frame Tie Rivet	
6	4	1132	Driver Bearing	
2	5	C1501	Bearing Plate Screw-#5-40 x 1/4"	Round Hd.-Brass
2	6	C1502	Bearing Plate Screw-#5-40 x 3/8"	Round Hd.-Brass
4	8	C1506	Draw Bar Bracket Screw-#5-40 x 5/16"	Fil. Hd.-Steel
2	10	C1509	Pilot Beam Screw-#5-40 x 1/2"	Flat Hd.-Brass
2	25	C1253	Pilot Mounting Screw-#2-56 x 1/4"	Fil. Hd.-Brass
3	77	1643	Coupler Release-3/16" Stanchion	
1	81	C2002	Coupler Pin	3/64" x 1/2" Cotter Pin
2	82	1035	Pilot Beam Stanchion	
2	84	C1252	Step Mounting Screw-#2-56 x 3/16"	Rd. Hd. Brass
2	103	1107	Draw Bar Screw	
1	112	C1264	Tool Box MTG. Screw	
			SECTION "A-1", 6 pieces: Drivers and Main Drivers, enclosed in bag "A-1"	
1	26	1578	70" Main Driver assembly - Insulated	
1	27	1579	70" Main Driver assembly - Uninsulated	
2	28	1580	70" Driver Assembly - Insulated	
2	29	1581	70" Driver Assembly - Uninsulated	
			SECTION "B", 9 pieces: Pilot truck kit in Cellophane bag, Catalog #1162	
1	Assy.	1162B	Wheels and axles, assembled on truck sides	
1	13	1143B	Pilot truck bolster	
1	14	1143C	Pilot truck centering bracket	
1	16	1529	Pilot truck Pivot Screw	
2	17	1161	Pilot truck side screw	
2	22	1569	Pilot truck centering spring	
1	23	1568	Pilot truck Pivot spring	
			SECTION "C", 3 pieces: Driver axles, enclosed in bag "C"	
2	35	1277	Driver Axle-Plain	
1	36	1562	Driver Axle & Gear Assembly	
			SECTION "D", 37 pieces: Rods, Crossheads, etc. enclosed in bag "D"	
9	39	1278	O Ga. Driver Axle Nut	Used with items 40, 26, 29 (Axle Nut-Item 39)
2	40	1531	Main Crank Pin	
4	41	1057	Crank Pin Screw	
2	42	1109	Main Side Rod	
2	43	1130	Side Rod Knuckle	

QUAN.	ITEM NO.	PART NO.	DESCRIPTION	REMARKS
			SECTION "D" (continued)	
4	44	1215	Side Rod Knuckle Screw	Used with items #70
2	45	1131	Main Rod	
2	46	1058	Crosshead Screw	
2	47	1111	Crosshead	
2	48	1383	Piston Rod	
2	70	1056	Return Crank (Eccentric)	
2	71	C2011	Return Crank Lock Pin	#20 x 3/8" Escutcheon pin
2	72	C1806	Main Rod Spacer Washer	#6 Brass Washer
			SECTION "EP", 12 pieces: Mechanism Accessories, enclosed in bag "EP"	
1		1114	Draw Bar - Bakelite	
2	51	1382	Piston Rod Bushing	
4	52	1570	Cross Head Guide	
1	80	1592B	Coupler, Short Shank	Cast 0 ga. dummy
2	83	1572	Engine Step	
1	93	1639	Worm	
1	97	1638	Worm Shaft	
			SECTION "F", 46 pieces: Walschaert Valve Gear Kit - Cellophane Bag	
1	53	1112	Guide & Link Bracket Hanger	Front
1	54	1113	Link Bracket Hanger	Rear
2	55	C1500	Mounting Screw-#5-40 x 1/8"	Items #53 & 54
2	56	1110	Link Bracket	
4	57	C1051	Link Bracket Screw-#0-80 x 1/8"	Fil. Hd.
2	58	1085	Link	
2	59	1159	Link Pivot Rivet	
4	60	1158	Long Rivet	
12	61	1084	Valve Gear Rivet	(8) Needed
2	62	1086	Reverse Bell Crank	
2	63	1087	Lifting Link	
2	64	1088	Radius Rod	
2	65	1089	Combination Lever	
2	66	1090	Eccentric Rod	
2	67	1091	Cross Head Link	
2	68	1093	Valve Rod	
2	69	C2011	Valve Rod Pin	#20 Escutcheon Pin
	73	1587	Reverse Crank Shaft	See Item #107
			SECTION "G", 9 pieces: Motor Drive Accessories, enclosed in bag "G"	
1	108	C2017	Terminal	
2	95	C2001	Cotter Pin 1/16" x 1/2"	
1	105	C1508	Worm Drive Mounting Screw	#5-40 x 1" Rd. Hd. Br.
1	115	1594	Drive Coupling	
2	116	1595	Motor Spacer	
2	117	C1602	Screw #6-32 x 1/2"	Rd. Hd. Steel
			"S" - 14 Separate Parts Packed in Section I, set-up box but not in Separate Containers	

QUAN.	ITEM NO.	PART NO.	DESCRIPTION	REMARKS
2	1	1108	Main Side Frame	
1	2	1133A	Bearing Plate	
1	7	2127	Draw Bar Bracket	
1	9	1122	Pilot Beam	
1	24	1079	Pilot	
1	78	1588	Coupler Release Rod	5" wire - .032" dia.
1	50	1156P	Cylinders	
1	87	1574	Worm Drive Bracket Assem.	
1	88	1566	Motor Bracket	
1	110	1905	6" Hook-up Wire #20 Standard Push Back	
1	114	1381	Pittman Permag Motor DC-93	
1	111	2119	Tool Box	
1	118	2118P	Delta Trailing Truck	

SPECIAL NOTE FOR PITTMAN PERMAG MOTOR

The Pittman D.C. 93 is the stock motor for this kit. It requires 12 volts direct current. Alternating current will damage the motor. Wire the motor by running one brush lead wire to the tender. Insulated tender wheels should be on the right side. The other brush lead wire is grounded. The wiring diagram shown on Drawing No. 1800A illustrates the hook-up for a wound field universal (AC-DC) motor and a reversing switch. No reversing switch is required with the Pittman Permag motor.

The new Pittman AC-93 motor will fit in the General Models Pacific. General Models carries these motors in stock and they may be exchanged by returning the Permag. There is a $1.00 service charge for handling and to cover the additional price of this motor.

GENERAL MODELS PACIFIC LOCOMOTIVE KIT PACKING LIST

SECTION II BOILER ASSEMBLY

QUAN.	ITEM NO.	PART NO.	DESCRIPTION	REMARKS
			Section "HP" 23 pieces Cab Accessories & Boiler Fittings	
1	206	1603D	Smoke Deflector	
2	208	C1250	Screw 2/56 x 1/8"	Used to attach cab hatches
1	232	C1515	Screw 5/40 x 1¼" Flat Hd. Steel	Used to attach boiler
2	233	C1500	Screw 5/40 x 3/16" Rd. Hd.	Use to attach to Mech.
1	220	1127	Pops Muffler	
3	221	1126	Pops Valve	
1	215	1600	Generator	
1	216	2130	Bell Bracket	
1	217	1083B	Bell	
2	218	C1051	Screw #0-80 x 1/8" Fil. Hd.	Use to mount bell, Item 236
1	222	1125	Whistle	
2	227	C1264	Screw #2/56 x 5/16" Rd. Hd. Br.	Use with Item #215, & 220
1	230	C1055	Screw #0/80 x 5/16" Rd. Hd. Br.	Use with Item 216
1	254	C1258	Screw #2/56 x 1/2" Rd. Hd. Br.	Use with Item 250
3	256	C1901	#00 x 3/16" Drive Screws	Use to mount Item 202
			Section "JP" 34 pieces: Accessories for handrails, air system	
2	208	C1250	Screw #2/56 x 1/8" Rd. Hd.	For pipe hanger brackets
3	231	C1256	Screw #2/56 x 3/8" Fil. Hd.	Air Tanks, Item 252
19	235	1643	Stanchion 3/16" drive in type	
2	245	1649A	Pipe Hanger Bracket-inside	
2	246	1649B	Pipe Hanger Bracket-outside	
2	240	1606	Marker Light	
2	257	C1051	Screw #0/80 x 1/8" Fil. Hd. Br.	Use with Item 255
2	207	1604	Cab Hatch	
			Section "KP" 4 pieces: Boiler and cab fittings	
1	250	2121	Power Reverse	
1	252	1610	Air Compressor	
1	225	1608	8' -0" Air Tank	
1	226	1609	7' -0" Air Tank	
			"S" 9 Separate parts packed in Section II set-up box but not in separate containers	
1	201P	1602P	Boiler	
1	202	1603A	Cab Body	
1	202	1603B	Cab Bulkhead, rear	
3	244	1904	Wire -.062" dia. x 11½" long	
1	243	1903	Wire -.032" dia. x 3'6" long	
1	236	2129	Smoke Box Front	
1	255	2128	Fire Box Backhead	

PACIFIC RUNNING BOARD TEMPLATE

#1 Horizontal lines across running board template indicate where pins will be under boards.

#2 Both boards start at off-set at smoke box, right hand goes into front cab window.

#3 Left side rear board starts directly below left front but for purpose of cutting template we had to leave gap.

#4 Cut out templates & temporarily paste to 1/32 X 3/8 flat brass furnished in kit.

#5 Adhesive back safety tread material furnished if you want the effect of safety tread.