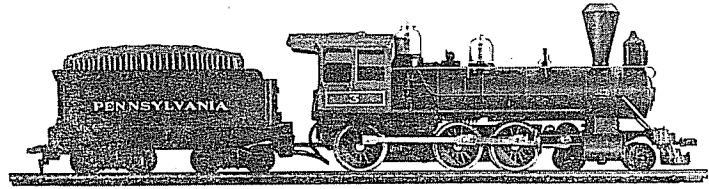


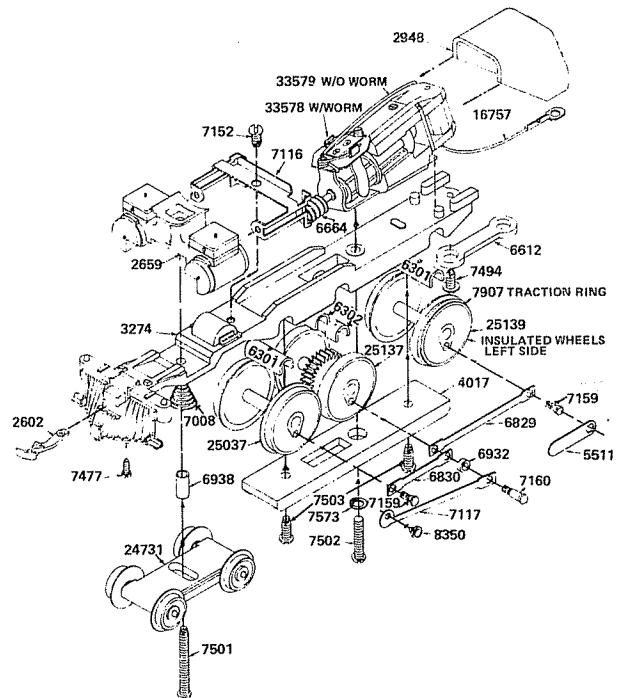
MANTUA



4-6-0 RODGERS

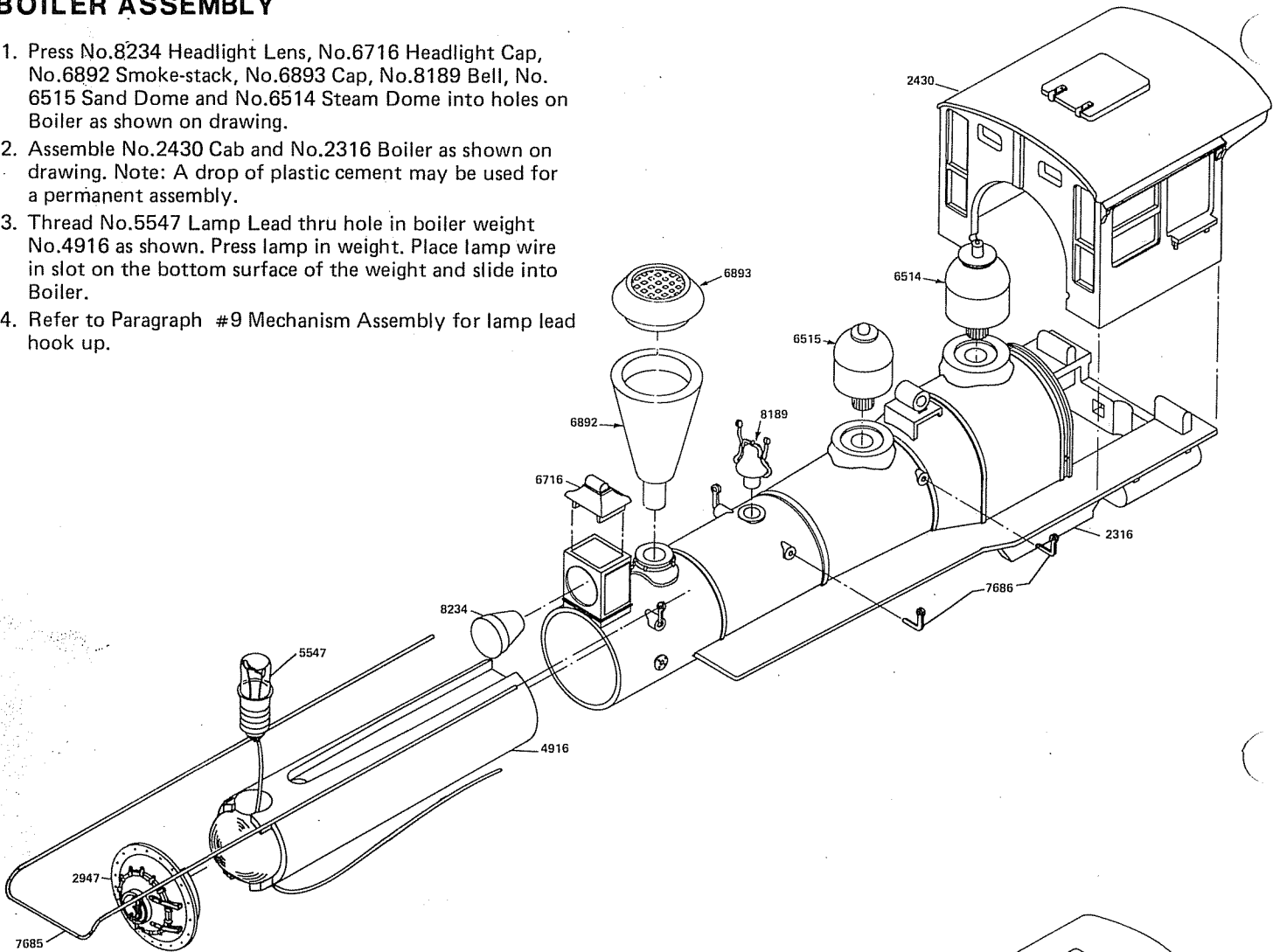
MECHANISM ASSEMBLY

1. Check all parts with the replacement parts list. Study drawings to identify the parts. Read instructions through before starting and **BE SURE** you understand **HOW** each part is to be mounted and avoid disappointing and expensive errors. Smooth edges of all castings with a knife or fine file to remove all flash and burrs.
2. Assemble two No.6301 long axle bearings and two No.6302 short axle bearings in No.3274 frame, making certain they are located on pins and properly seated in bearing slots of frame.
3. Place No.25037 driving wheels in front slot and No.25139 (with traction ring) in rear slot. Place No.25137 with gear and blind rims in center slot. **ALL INSULATED WHEELS** must be on the left side. (See drawing) Insulated wheels are identified by a white ring between the wheel casting and rim. Apply a few drops of light oil.
4. Place No.4017 retainer plate in position with two No. 7503 screws (#2-56x $\frac{1}{4}$ " Lg. R.H. thread cutting) as shown.
5. Make certain that each pair of wheels revolve freely in its bearing.
6. No.8350 crosshead is attached to No.7117 Main Rod by riveting. Assemble left side as shown on drawing and right side opposite as shown. Back up crosshead and peen to secure. Assemble left side rods No.6829, No.6830 and main rod as shown on drawing, right side opposite as shown. Use No.5511 #0-80 Wrench to tighten. **DO NOT USE PLIERS.**
7. Check rotation of coupled drivers. Tight spots in side rods may be freed by reaming slightly with a round needle file. **DO NOT REAM** any more than is absolutely necessary. Assembled mechanism should roll freely.
8. Fasten No.33578 motor assembly to No.3274 frame with No.7502 screw (#2-56x $\frac{7}{16}$ " Lg. R.H.) used with No. 7573 Lock Washer. When screw is tightened the worm and gear should mesh without binding but with minimum backlash. Should adjustment be necessary, remove metal from pad surface carefully with a fine file as follows: To bring worm and gear closer remove from front pad and for wider setting from rear pad.
9. To connect No.16757 Motor Lead and Lug Assembly to No.33578, use a drop of solder on front brush post as shown in drawing or it may be connected under brush spring loop. Remove brush assembly, rotate the spring so loop end is free from fibre plate. Place strapped end of lead in loop of spring. Rotate spring back to original position. Replace brush assembly. **CAUTION!** Make sure lead is locked between loop of spring and fibre plate. Headlight lead is also connected in the same manner.
10. Assemble No.24731 Lead Truck (long end of truck forward) using No.7501 Screw (#2-56x $\frac{13}{16}$ " Lg. R.H. thread cutting) inserted thru lead truck, No. 6938 spacer, No.7008 spring, loco frame and cylinder unit. Fasten temporarily with a No.7427 nut #2-56 Hex.
11. Place assembled crosshead and main rod in slots of No. 7116 crosshead guide as shown on boiler and frame assembly drawing. With crosshead in slots, place guide on frame, locating small holes on pins at rear of cylinder unit. Fasten to frame with No.7152 screw (#2-56x $\frac{3}{16}$ " Lg. R.H. thread cutting).
12. Check unit with 12 volts, D.C. power in both forward and reverse motion.
13. Attach No.6612 draw bar from tender to rear of frame with No.7494 screw (#2-56x $\frac{3}{16}$ " Lg. Washer head thread cutting).
14. Lubricate worm and gear with Lubriplate or any good light grease. Apply a drop of light oil to all other moving parts. Turn mechanism upside down and in this position run-in mechanism for not less than 30 minutes with 12 volts, D.C. Power. Reverse motion.
15. Attach No.2602 Front Coupler with a No.7477 screw (#0x $\frac{7}{32}$ " S.T.R.H.). Position coupler so hook is over center line and will couple with other cars easily.



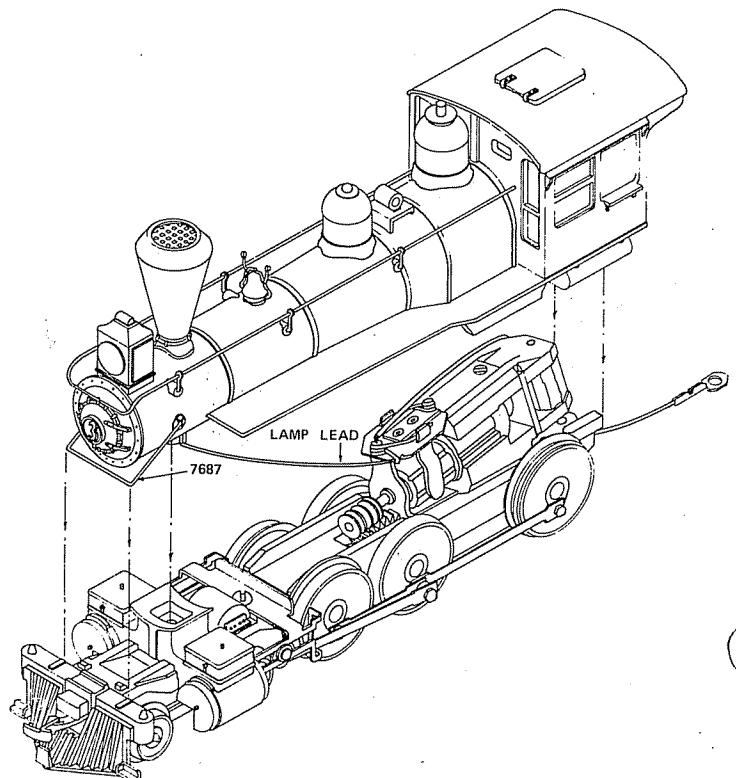
BOILER ASSEMBLY

1. Press No.8234 Headlight Lens, No.6716 Headlight Cap, No.6892 Smoke-stack, No.6893 Cap, No.8189 Bell, No.6515 Sand Dome and No.6514 Steam Dome into holes on Boiler as shown on drawing.
2. Assemble No.2430 Cab and No.2316 Boiler as shown on drawing. Note: A drop of plastic cement may be used for a permanent assembly.
3. Thread No.5547 Lamp Lead thru hole in boiler weight No.4916 as shown. Press lamp in weight. Place lamp wire in slot on the bottom surface of the weight and slide into Boiler.
4. Refer to Paragraph #9 Mechanism Assembly for lamp lead hook up.



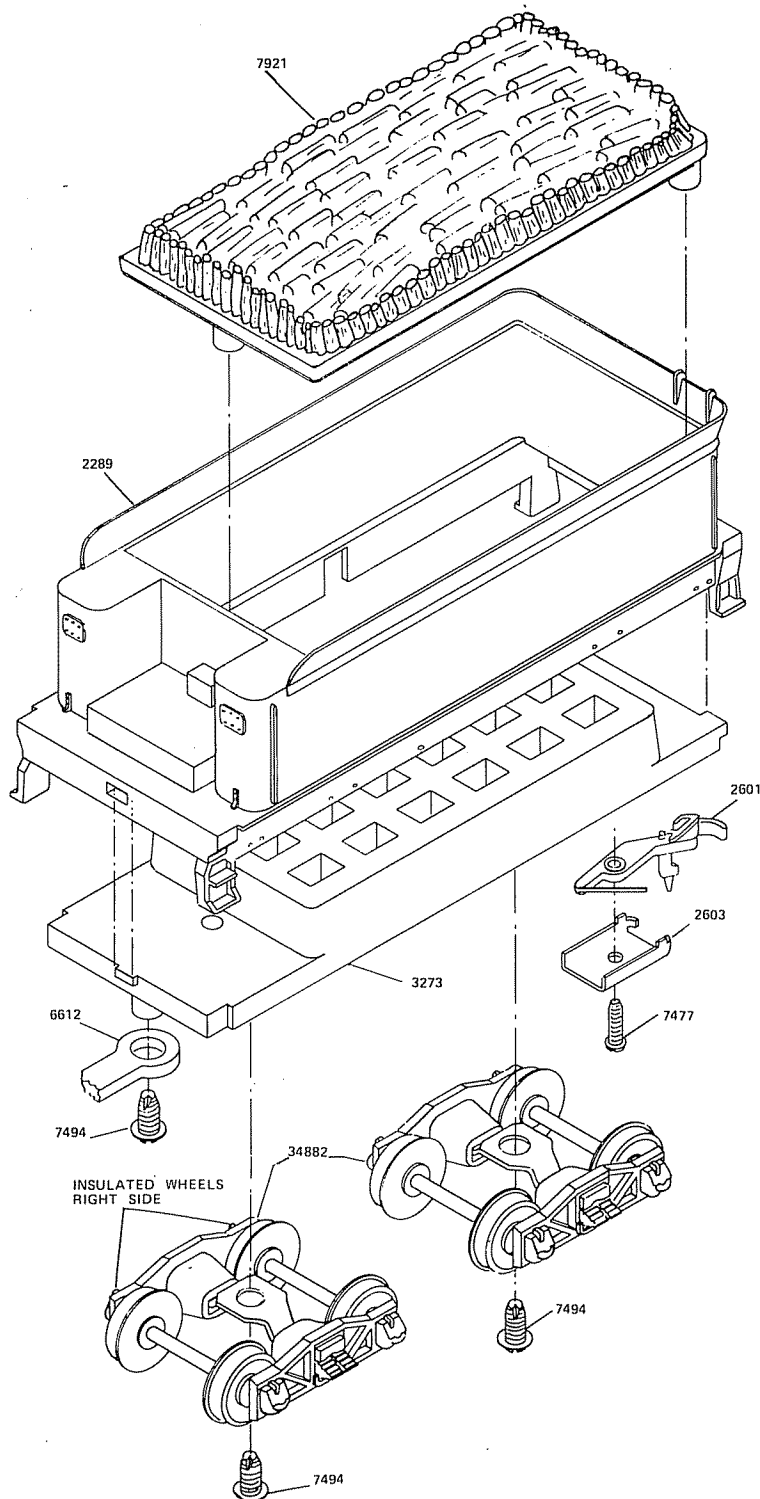
BOILER AND MECHANISM ASSEMBLY

1. Remove No.7427 Nut #2-56 Hex from No.7501 screw on mechanism assembly. Place rear lugs on No.3274 frame into holes provided at the rear of boiler assembly. Screw No.7501 into Boiler Weight No.4916. Place No.7687 Smoke Box Support on boiler as shown and locate bottom behind sill on frame No.3274. Then tighten screw.
2. Press No.2947 Boiler Front on Boiler.
3. Press six No.7686 Handrail Posts in holes on boiler as shown. Thread No.7685 handrail thru the posts and before pressing into holes in cab put a small flat or spline on each end with a pair of pliers so as to hold hand rail in position after pressing into place.
4. Position motor lead as it shows on drawing and insert No.2948 motor housing thru rear of cab and press onto back of motor.



TENDER ASSEMBLY

1. Check all parts with replacement parts list.
2. Assemble No.2289 Tender Body to No.3273 Frame. Insert two rear lugs on frame into openings on body and press front lug into slot on body.
3. Place No.2601 Coupler in No.2603 Coupler Pocket and insert No.7477 Screw (#0x7/32" Lg. S.T.R.H.) as shown on drawing. Screw into hole provided on tender under frame No.3273. Be sure coupler is under spring tension and moves freely.
4. Install No.34882 Trucks with insulated wheels on right hand side (opposite side to loco insulated wheels). Screw into place with two No.7494 screws (#2-56x3/16" Lg. washer head thread cutting).
5. Place No.6612 Draw Bar over Boss at front end of tender frame. Over this place motor lead wire terminal. Secure with a No.7494 screw. The other end of draw bar slips over boss at the rear of loco frame. A No.7494 screw is also used to secure this end.
6. Place No.7921 Wood Pile in position as shown. For permanent assembly, a drop of plastic cement may be used.



NO. IN KIT	DESCRIPTION	UNIT PART PRICE NO. E
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MECHANISM PARTS

1	Main Frame, Loco	3274
2	Bearing, Long Axle	6301
2	Bearing, Short Axle	6302
1	Wheel, Axle and Gear Assembly	25137
1	Wheel and Axle Assembly, Rear with Traction Ring	25139
1	Traction Ring	7907
1	Wheel and Axle Assembly, Front	25037
1	Retainer Plate	4017
2	Screw #2-56x1/4" S.T.R.H.	7503
1	Coupler, Front	2602
1	Screw #0x7/32" S.T.R.H.	7477
2	Side Rod	6829
2	Side Rod	6830
2	Spacer, Main Rod	6932
2	Screw, Shld. Side Rod, Long	7160
4	Screw, Shld. Side Rod, Short	7159
2	Main Rod	7117
2	Crosshead Rivet	8350
1	Crosshead Guide	7116
1	Screw #2-56x3/16" S.T.R.H.	7152
1	Wrench	5511
1	Lead Truck	24731
1	Spacer	6938
1	Spring	7008
1	Screw #2-56x13/16" R.H.S.T.	7501
1	Cylinder Unit	2659
1	Nut, #2-56 Hex, Temporary Assembly	7427
1	Motor and Worm Assembly	33578
Parts for Above:		
1	Motor PM-1	33579
1	Worm 56 Pitch	6664
1	Screw, #2-56x7/16" R.H.	7502
1	Lockwasher	7573
1	Motor Lead and Lug Assembly	16757

BOILER PARTS

1	Boiler, Plastic	2316
1	Cab, Loco	2430
1	Weight, Boiler	4916
1	Lamp and Lead Assembly (Headlight)	5547
1	Smoke Box Support	7687
1	Boiler Front	2947
6	Handrail Post	7686
1	Handrail	7685
1	Lens (Headlight)	8234
1	Headlight Cap	6716
1	Smoke-stack, wood burning	6892
1	Smoke-stack Cap	6893
1	Bell	8189
1	Sand Dome	6515
1	Steam Dome	6514
1	Motor Housing	2948
1	Smoke-stack, coal burning (alternate)	6894

NO. IN KIT	DESCRIPTION	UNIT PART PRICE NO.
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TENDER PARTS

1	Tender Body	2289
1	Frame	3273
2	Truck	34882
1	Coupler	2601
1	Coupler Pocket	2603
1	Screw, #0x7/32" S.T.R.H.	7477
1	Wood Pile	7921
1	Coal Pile (alternate)	7922
1	Draw Bar	6612
4	Screw, #2-56x3/16" W.H.S.T.	7494

REPLACEMENT PARTS

See your Hobby Dealer. If he cannot supply them you may order from the factory. Please send check or money order for parts required, plus \$1.00 for postage and handling.

DEFECTIVE PARTS

RETURN PARTS ONLY – NOT COMPLETE MODEL. Any defective part will be replaced at no charge. If complete or partially completed model is returned only the defective part will be replaced, not installed.

Please enclose check or money order for \$1.00 to cover the cost of postage and handling.

MANTUA FULL ONE YEAR WARRANTY

All Mantua Products are thoroughly inspected and tested prior to shipment and are guaranteed to operate satisfactorily and be free from factory defects. If within one (1) year from the date of purchase this product fails due to defect in material or workmanship Mantua will repair or replace it free of charge. This guarantee does not apply to (a) electric bulbs, (b) damage caused by accident, abuse or mishandling, dropping and (c) units which have been subjected to unauthorized repair. To prevent damage in transit please pack securely and return to: Mantua Service, Grandview Avenue, Woodbury Heights, N. J. 08097.