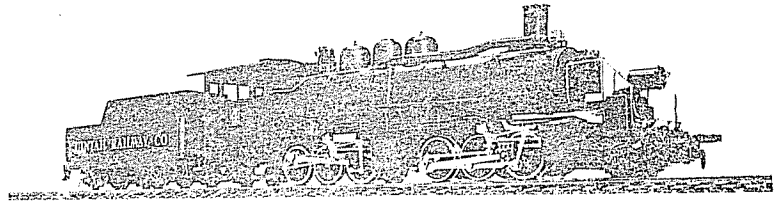


# MANHUA



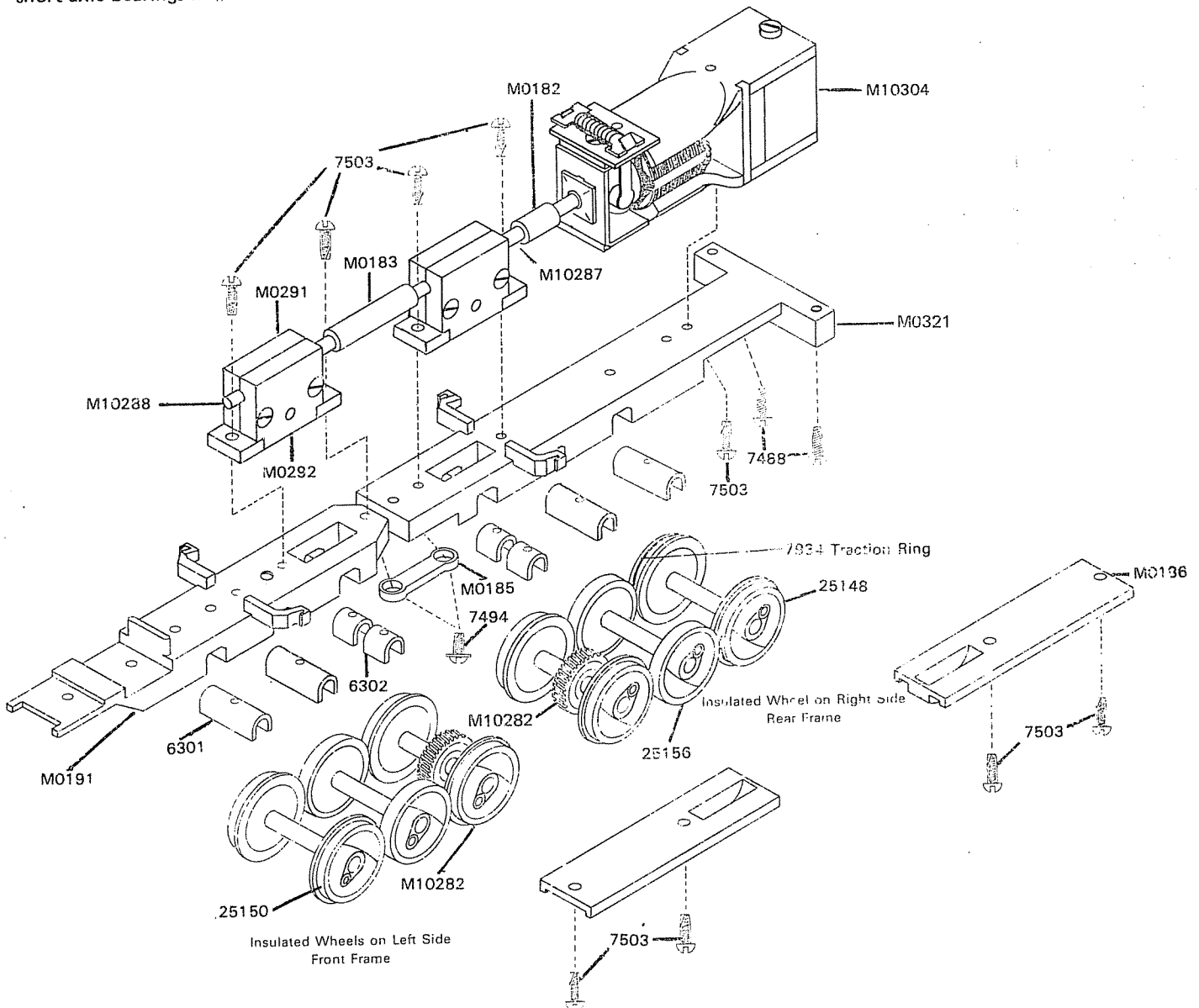
## 2-6-6-2 LOGGER WITH TENDER

### MECHANISM ASSEMBLY

1. Check all parts with replacement parts list. Study the drawings to identify parts. Read instructions through before starting and **BE SURE** you understand how each part is to be mounted and avoid disappointing errors. Smooth edges of all cast metal parts with a knife or fine file to remove all flash and burrs. Use sharp knife for plastic parts.
2. Assemble two #6301 long axle bearings and two #6302 short axle bearings in #M0191 front frame making

certain they are located on the pins and are properly seated in the bearing slots.

3. Place #25150 Fig. driving wheels in front slot and #25156 blind driving wheels in center slot and #M10282 Fig. driving wheels w/gear in rear slot. **ALL INSULATED WHEELS** on front frame are on left side.
4. Place #M0186 retainer plate in position and secure with two #7503 screws, #2-56 x 1/8" S.T.R.H.





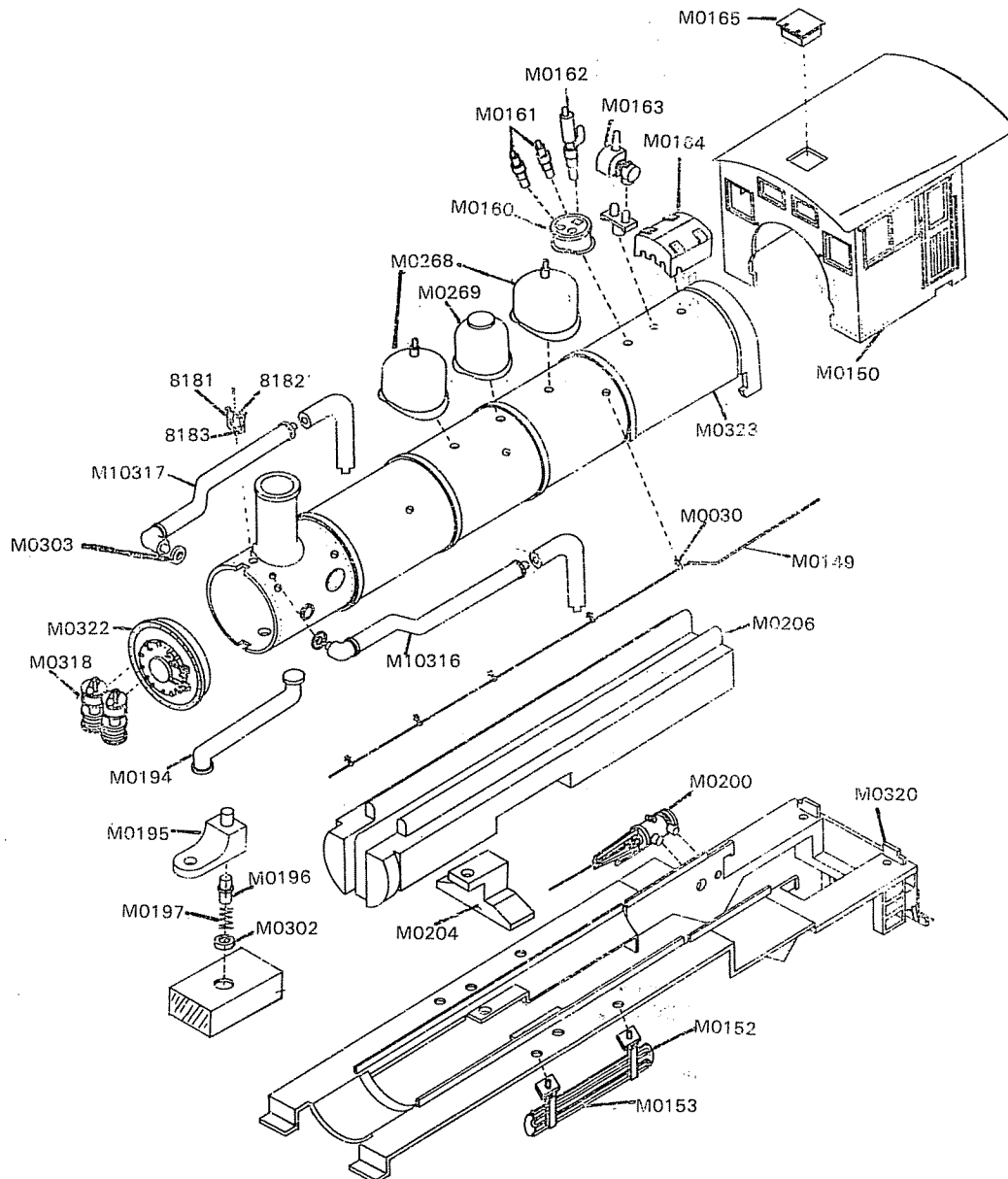
18. Pilot is fastened to front frame with #7488 screw.
19. Place #25151 30" wheel and axle set in slot of #M0187 lead truck frame and one set in #M0184 Trailing truck frame. Slide #3962 brass retainers forward through retaining slots until plate snaps into position in each truck.
20. Insert #7008 conical spring in cavities of each frame and place lead and trailing trucks over spring and boss. Fasten with #7494 2-56 x 3/16" W.H.S.T. screws as shown.

## BOILER ASSEMBLY

1. Insert the tabs on front of #M0320 lower boiler under front of #M0323 upper boiler and carefully hook tabs at back end of both pieces.
2. Slide #M0206 weight into boiler from rear. Use #7152 screw, 2-56 x 3/16" S.T. to secure weight to boiler at the front.
3. Suspension support #M0204 is fastened to boiler weight with a #7503 screw, 2-56 x 1/4" S.T.
4. Assemble #M0149 handrail and five #M0030 handrail posts and insert in holes on L.H. side of boiler. Repeat for R.H. side.
5. #M10316 steam pipe is assembled as shown on left side of boiler and #M10317 steam pipe is assembled on right side of boiler.
6. #M0152 air tanks and #M0153 cooling coils are assembled and pressed into holes in running boards as shown.

Do this for each side. A drop of cement may be used for assembly of parts that will not be taken apart for servicing the locomotive.

7. Press two #M0161 pop valves and one #M0162 whistle into #M0160 whistle base. Press assembly into boiler at location shown.
8. Press two parts of #M0163 generator together and install generator on boiler as shown, also fit #M0164 Turret on boiler directly in front of cab.
9. Place two #M0268 domes and one #M0269 dome in boiler as shown.
10. Fasten double compressor #M0318 on boiler front #M0322 using holes provided. Power Reverse #M0200 fits on right side of lower boiler under rear end of running board.
11. Assemble #8183 bell bracket and #8181 bell and #8182 bell crank. Mount bell & bracket in front of stack on smoke box with #7477 screw, #2 x 7/32" S.T.
12. Assembled boiler is placed on top of mechanism (making sure lower steam pipe is inserted into slot at bottom of smoke box) and fastened with two #7503, 2-56 x 1/4" S.T. screws through rear cylinder and into boiler weight. Two #7488 screws #2 x 1/4" S.T. secure frame to lower boiler at rear.
13. Carefully put wires into front of boiler and snap #M0322 boiler front in place.
14. Insert handrails in holes in front of cab as it is snapped into position on the boiler.



NO. IN KIT	DESCRIPTION	PART NO.	UNIT PRICE EACH
<b>MECHANISM</b>			
1	Frame, Front	M0191	\$
1	Frame, Rear	M0321	
4	Bearing, Long	6301	
4	Bearing, Short	6302	
2	Retainer Plate	M0186	
18	Screw, #2-56 x 1/4" S.T.R.H.	7503	
1	Wheel and Axle, 50" Flg.	25150	
2	Wheel, Axle and Gear, 50" Flg.	M10282	
2	Wheel and Axle, 50" Blind	25156	
8	Side Rod	6828	
2	Crosshead and Piston Rod R.H.	8471	
4	Screw, Short Side Rod	7159	
4	Screw, Intermediate Side Rod	7161	
4	Shouldered Bushing	6390	
2	Crosshead and Piston Rod. L.H.	8470	
4	Hex Head Side Rod Screw	7165	
4	Main Rod	7096	
1	Cylinder, Front	M0192	
1	Cylinder, Rear	M0193	
1	Truck Frame, Lead	M0187	
1	Truck Frame, Trailing	M0184	
2	Wheel and Axle Assem. 30" Ins.	25151	
2	Retainer	3962	
2	Spring, Conical	7008	
8	Screw, #2-56 x 3/16" W.H.S.T.	7494	
1	Drawbar	M0185	
1	Pilot	M0202	
3	Screw, #2 x 1/4" S.T.	7488	
2	Handrail, Pilot	M0188	
2	Handrail Post	M0189	
1	Handrail, Pilot Beam	M0029	
14	Handrail Post	M0030	
4	Screw, 0 x 7/32" S.T.	7477	
1	Light Housing	M0168	
1	Bulb Holder	M0018	
1	Bulb and Lead Wire	M0028	
1	Coupler	2601	
1	Steam Pipe	M0194	
1	Boiler Support Holder	M0195	
1	Boiler Support Pin	M0196	
1	Boiler Support Spring	M0197	
1	Suspension Support	M0204	
1	Insulator	M0302	
1	Worm, Shaft Assembly	M10287	
4	Self Centering Bearings	M0293	
2	Idler Gear	M0289	
2	Idler Gear Shaft	M0290	
8	Washers	7556	
2	Gear Box Half, Large	M0291	
2	Gear Box Half, Small	M0292	
1	Worm, Shaft Assembly	M10288	
1	MG-81 Motor	M10304	
2	Flexible Coupling	M0183	
1	Wheel & Axle, 50" Flg. w/Traction	25148	
1	Wrench, 0-80	5511	
6	Rivet, Long	8355	

### VALVE GEAR

Valve Gear Kit

NO. IN KIT	DESCRIPTION	PART NO.	UNIT PRICE
<b>BOILER</b>			
1	Boiler, Upper	M0323	
1	Boiler, Lower	M0320	
1	Boiler Front	M0322	
2	Handrail	M0149	
1	Bell Bracket	8183	
1	Bell Crank	8182	
1	Bell	8181	
2	Dome, Steam	M0268	
1	Dome, Sand	M0269	
1	Whistle Base	M0160	
2	Pop Valve	M0161	
1	Whistle	M0162	
1	Generator	M0163	
1	Turret	M0164	
1	Cab	M0150	
1	Hatch, Cab	M0165	
2	Steam Pipe, Vertical	M0324	
1	Steam Pipe L.H.	M10316	
1	Steam Pipe R.H.	M10317	
2	Steam Pipe Flange	M0303	
2	Cooling Coil	M0153	
2	Air Tank	M0152	
3	Insulating Tubing	7811	
2	Lead Wire	M0301	
1	Reverse Power	M0200	
1	Compressor, Double	M0318	
1	Weight	M0206	
2	Screw, 2-56 x 3/16" S.T.	7152	

### TENDER PARTS

1	Tender Body	2292
1	Tender Frame	3285
1	Tender Trucks	34803
4	Screw, #2-56 x 3/16" W.H.S.T.	7494
1	Coupler Pocket	2603
1	Coupler	2601
1	Screw, #0 x 7/32" S.T.R.H.	7477
1	Drawbar	6612

### 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.