

Kit No. 754 Valve Gear Assembly

1. Check all parts with the replacement parts list. Riveting the valve gear links together requires a reasonable amount of care and study.

On a sheet of white paper place all the valve gear parts just as they will be assembled on the locomotive. The drawing shows the exact relation of the parts to each other. Check your layout over again with the drawing as each part must overlap the other as shown.

3. A few tools will be required for the riveting operation:

- A small flat block of steel as an anvil
- A flat fine cut needle file
- A small center punch
- A light hammer

4. Start with riveting together the No. 8458 eccentric crank and the No. 8459 eccentric rod, using No. 8351 rivet. On valve gear being assembled for use with Prairie & Big 6 Locomotive use long eccentric rod No. 8449 and rivet No. 8458 eccentric crank to it using No. 8351 rivet. Just insert a small center punch in the hollow end of the rivet and tap lightly with the flat face of the hammer until it pulls the eccentric crank and the eccentric rod together snugly but not tight. All the rods and levers must operate freely before assembling them on the locomotive frame. Finish both sides before going to the next step, being careful to keep the eccentric crank projecting lug up thus distinguishing the left from the right assembly. Important Note: All No. 8351 rivets are placed with the head outside. A few extra rivets are supplied for your convenience.

5. Left Side -- Rivet No. 8459 to No. 8473
FOR BIG SIX AND PRAIRIE
Rivet No. 8449 to No. 8473

Right Side -- Rivet No. 8459 to No. 8473
FOR BIG SIX AND PRAIRIE
Rivet No. 8449 to No. 8473

6. Left Side -- Rivet No. 8473 to No. 8474

Right Side -- Rivet No. 8473 to No. 8474

7. Left Side -- Rivet No. 8474 to No. 8475

Right Side -- Rivet No. 8474 to No. 8475

8. Left Side -- Rivet No. 8475 to No. 8478

Right Side -- Rivet No. 8475 to No. 8478

9. Left Side -- Rivet No. 8475 to No. 8472

Right Side -- Rivet No. 8475 to No. 8472

Remove the No. 7160 shouldered long side rod screw from each side of the drivers with main rods attached, main rod spacers, cylinder unit, main rods assembled on No. 8470 (L.H.) and No. 8471 (R.H.) crosshead assemblies and No. 8467 crosshead guides.

10. Left Side -- Rivet No. 8473 to No. 8476

Right Side -- Rivet No. 8473 to No. 8477

11. The valve gear linkage is now ready to be installed in place on the locomotive. Insert crosshead assemblies in No. 8476 (L.H.) and No. 8477 (R.H.) crosshead guides and reverse link hangers as shown in drawing (insert).

12. Left Side -- Rivet No. 8472 to No. 8470

Right Side -- Rivet No. 8472 to No. 8471

This completes the entire riveting job of the valve gear.

13. Insert the piston rod in cylinder unit followed by the single point end of crosshead guide into the elongated hole above it. Hold in position on frame and insert double point end of crosshead guide and reverse link hanger to fit on guide bracket, making sure that the lower point is placed between the two small projecting lugs on bottom of guide bracket. When in proper position cylinder unit will drop in slot in frame.

14. Insert screw up thru frame, cylinder unit and into boiler and screw up snugly. Check and see that the crosshead assemblies slide freely in the guides.

15. Slip the end of the main rod over the No. 6390 bushing. Insert the No. 6390 main rod bushing in place between the main rod and side rod. Now, with the No. 8458 eccentric crank placed over the end of the No. 6390 bushing, insert one No. 7165 hex, head main rod screw (0-80 x 1/4") thru bushing and screw up tight.

16. The eccentric crank may be set at any angle from 0 degrees to 30 degrees. The 0 degree setting allows a minimum amount of movement of the valve gear. A 30 degree setting allows a maximum amount of movement and also more wear on the valve gear. Insert drawing shows 0 degree angle in dotted line position and 30 degree angle in solid line.

17. Put a small drop of oil at each riveted link and run in mechanism the same as mentioned in the mechanism assembly "break-in" period.

INSTRUCTION SHEET NO: 55-0021

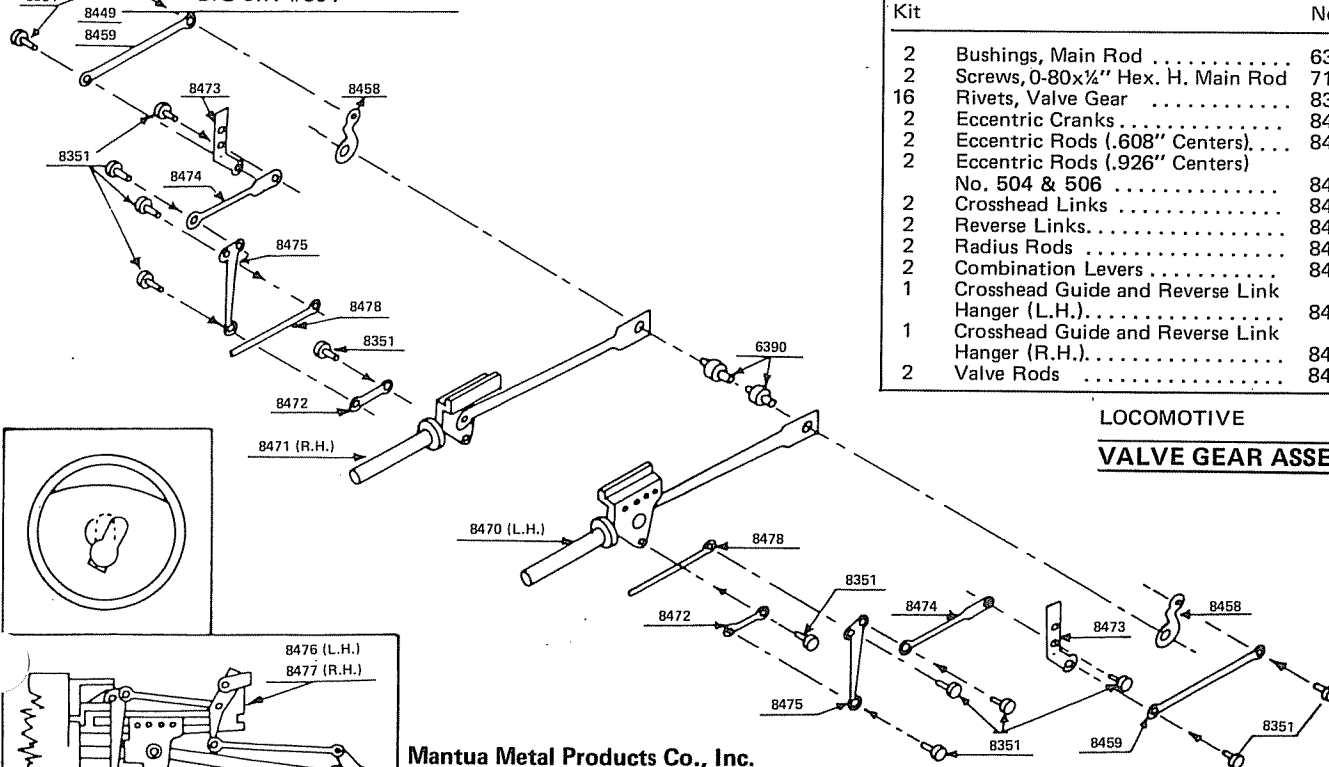
Any quantity of replacement parts may be purchased at retail list price. Add \$1.00 to cover postage and handling.

NOTE: We reserve the right to make changes in design and changes or improvements upon our products without imposing any obligation upon ourselves to install the same change or improvements upon our products previously manufactured.

This valve gear kit can be used on 301, 302, 303, 304 & 305 locomotives.

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

FOR USE WITH PRAIRIE #506 AND
BIG SIX #504



No. In Kit	DESCRIPTION -- KIT NO. 754	Part No.	Unit
2	Bushings, Main Rod	6390	
2	Screws, 0-80x1/4" Hex. H. Main Rod	7165	
16	Rivets, Valve Gear	8351	
2	Eccentric Cranks	8458	
2	Eccentric Rods (.608" Centers)	8459	
2	Eccentric Rods (.926" Centers)		
	No. 504 & 506	8449	
2	Crosshead Links	8472	
2	Reverse Links	8473	
2	Radius Rods	8474	
2	Combination Levers	8475	
1	Crosshead Guide and Reverse Link Hanger (L.H.)	8476	
1	Crosshead Guide and Reverse Link Hanger (R.H.)	8477	
2	Valve Rods	8478	

LOCOMOTIVE
VALVE GEAR ASSEMBLY

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