

## REPOWERING THE: RIVAROSSO-AHM HO GAUGE 4-8-8-4 BIGBOY, ETC. ARTICULATEDS (C1970S/80S)

This project helps you re-motor the Rivarossi HO articulated locomotives, specifically the 1970-1980s era units with motor mounted in the cab area at the rear of the locomotive. Generally adaptable to the various 4-8-8-4, 4-6-6-4, 2-8-8-2, etc. large articulateds prior to the re-designed units of the 1990s. We here describe the general process which can be accomplished in about 2 hours (plus overnight caulk set time if used) if proper materials and tools are on hand. This procedure results in an elegant, hidden, efficient drive system with greater power, control and operating quality than was possible with the original power system.

Tools required: Miniature screwdrivers

Jewelers or similar small flat file

3/32" or 2.4mm drill (if using a motor with 2.4mm shaft)

Skill required: This job assumes you have reasonable proficiency in soldering and disassembly /assembly of mechanical devices. If not, your learning experience here will be valuable despite problems you may encounter in achieving quick and satisfactory completion – patience will reward you.

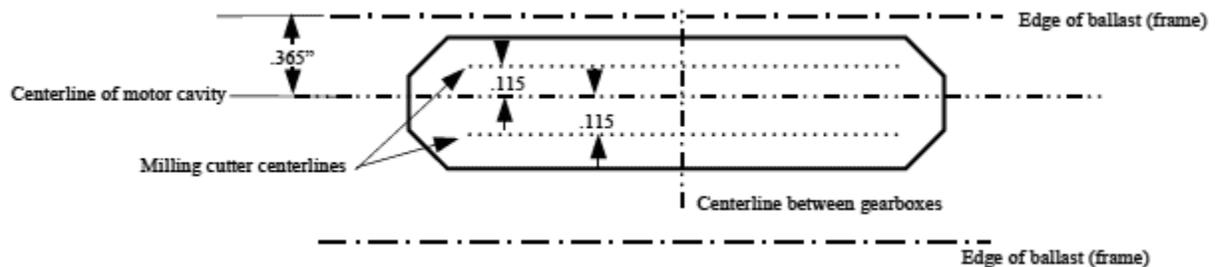
Time required: About 2 hours (plus cure time for bonding agent and sealant)

Parts required: motor #18337-9, u-joint #488-6

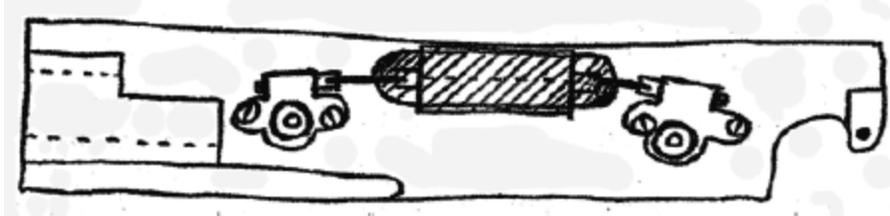
may require: Silicon sealant (sold at hardware stores as bathtub caulk, window caulk, etc.)

28 or 29 gauge wire (#10003-9, #10004-9 or similar).

1. Remove the boiler (superstructure) from the chassis. Remove the original motor and drive connections.
2. Remove both transfer (upper) boxes from the boiler weight/frame casting and put aside for revision and re-installation.
3. A 'motor bed' will be milled into the frame/ballast casting between the gearbox locations, parallel but offset toward the edge of the frame (fig. 1).  
We used a 1/2" ball mill, take light cuts— .025" or less at a pass—and slow cutter speed .



4. The screw holes in the gearboxes need to be elongated as shown in fig. 2. This allows the gearboxes to be rotated to better align the shaft toward the motor shaft. Note: The elongations of the holes must be mirror images from one gearbox to the other.
5. The gearbox and motor shafts can be cut to length just enough to mount the universal cups as close as possible. This permits the maximum length (space) for the cardan (dogbone) shafts between the motor shaft and the gearbox shaft (which also must be cut to minimum length). The finish layout should look like this:



6. The motor is set in place in a “puddle” of clear silicon sealant in the frame, equal distance from the two gearboxes.
7. The neg (-) wire lead can be attached under the nearest gearbox screw (or run back to your DCC unit). A long wire is soldered to the pos. (+) motor terminal and is to be attached to the drawbar connection (or DCC as appropriate).
8. Have (more) fun!