

INSTRUCTIONS FOR English's #3-202 Bachmann J Mechanism

These instructions provide exploded view drawings, diagrams, step-by-step instructions and an itemized parts list. If for reasons beyond our control, any shortage or faulty part is found, write directly to the manufacturer, including name of your dealer and date of purchase. Return any defective parts for exchange. The builder should study the instructions and drawings to attain a working knowledge of proper procedure. Assembly work should be in sequence outlined in this manual to assure proper construction. We have included some extra parts in case you misplace or drop them on the floor. **DO NOT RUN THE MECHANISM OR ENGINE UPSIDE DOWN.**

TOOLS

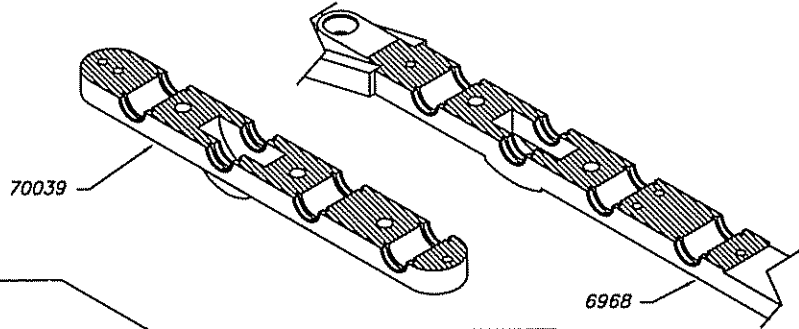
This is a builders kit, you will need a few tools. You will find use for the following: small hammer, several assorted pattern files, jewelers screwdriver (a set is convenient), a 6" flat file with a fairly fine cut, knife, pliers, flush cut nippers like Mascot #413 and tweezers.

BEFORE PAINTING YOUR MODEL OR DETAIL THE BOILER, WE RECOMMEND THAT YOU BUILD THE COMPLETE MECHANISM ATTACH THE UNDECORATED BODY AND THOROUGHLY TRACK TEST IT.

STEP #1

Clean flash from frames.

CLEAN ALL FLASH FROM EDGES OF BEARING SLOTS OF UNDERFRAME AND COVER PLATE WHERE SHOWN AS DARK LINES & SHADED AREAS.



STEP #2

Clean flash from edges of parts. File mating surfaces on a flat file. Check to see that the frame is straight. Assemble the drivers with insulated wheels on the left side of the frame as shown. Assure the wheels spin freely. Oil lightly. See Step 3a for method of loosening wheels.

Subkit 40023
FULL SIZE



256061



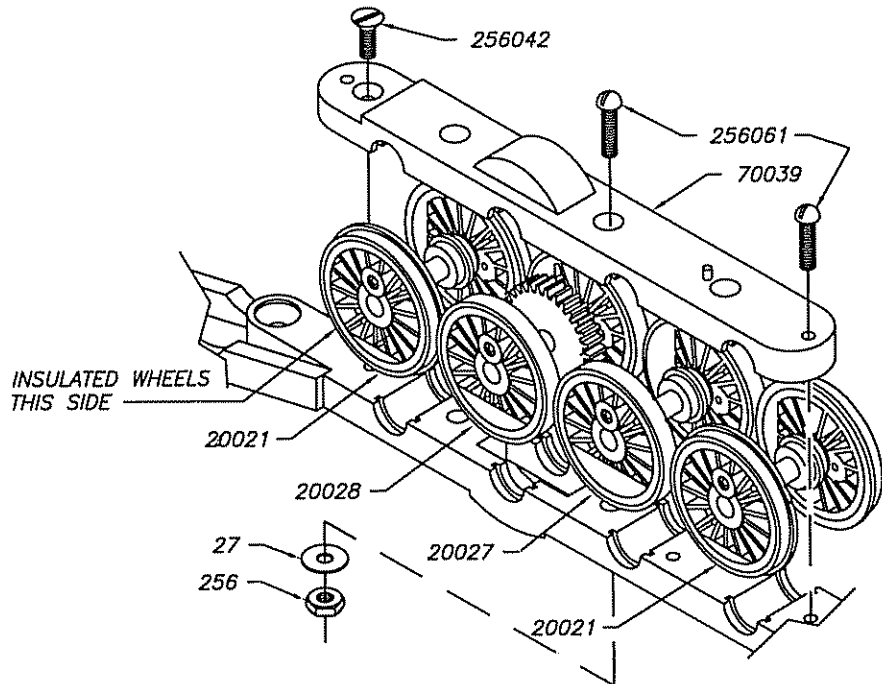
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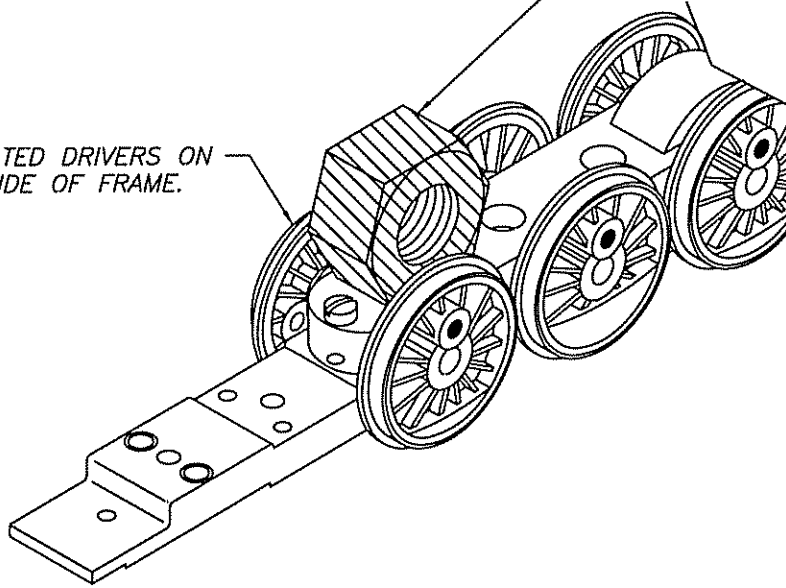
To find which wheel is insulated with two wires hooked to your power pack, touch one to the axle and one to a wheel rim. If you cause a spark that wheel is not insulated. The insulated wheel has a thin gray strip of insulation between the wheel and tire.

STEP #3

Assemble draw bar as shown.

TO SEAT BEARINGS, SUPPORT FRAME ON FINGERS NOT A SOLID BLOCK. PLACE A 5/16 NUT OVER BEARINGS AND STRIKE A SHARP BLOW USING A TACK HAMMER OR OTHER LIGHT HAMMER. REPEAT OVER EACH AXLE UNTIL EACH DRIVER SPINS FREELY. DO NOT PROCEED ANY FURTHER UNTIL ALL DRIVERS WILL SPIN FREELY.

INSULATED DRIVERS ON THIS SIDE OF FRAME.



STEP #4

Assemble side rods to drivers. Assure wheels spin freely. If binding occurs ream holes in side rods until eliminated. Oil lightly.

WHEELS MUST SPIN ABSOLUTELY FREE.

Subkit 40035

FULL SIZE



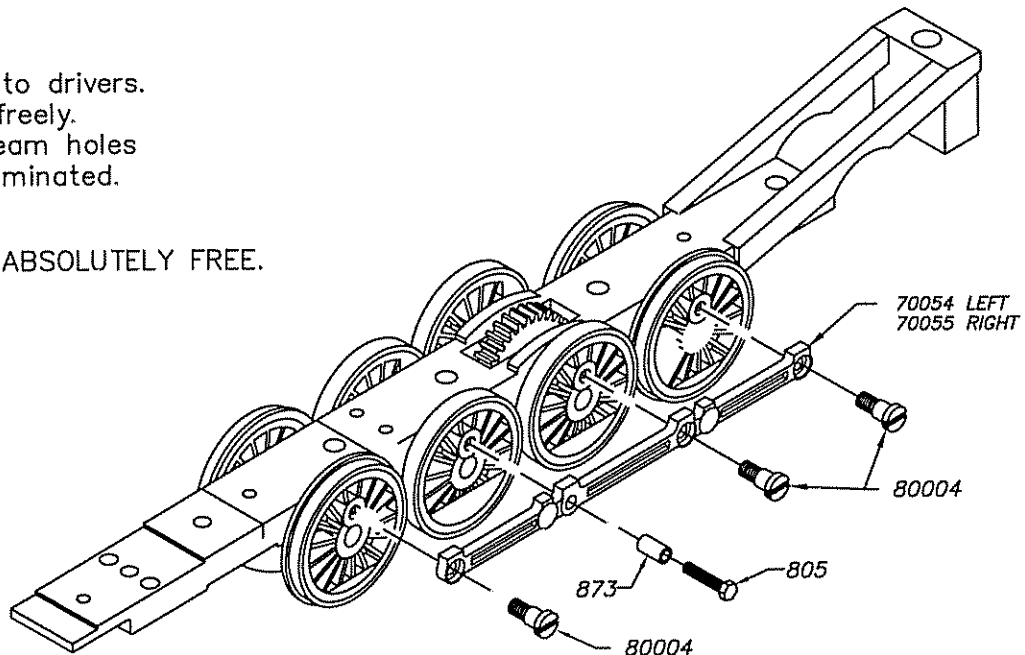
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805



873



70055 RIGHT



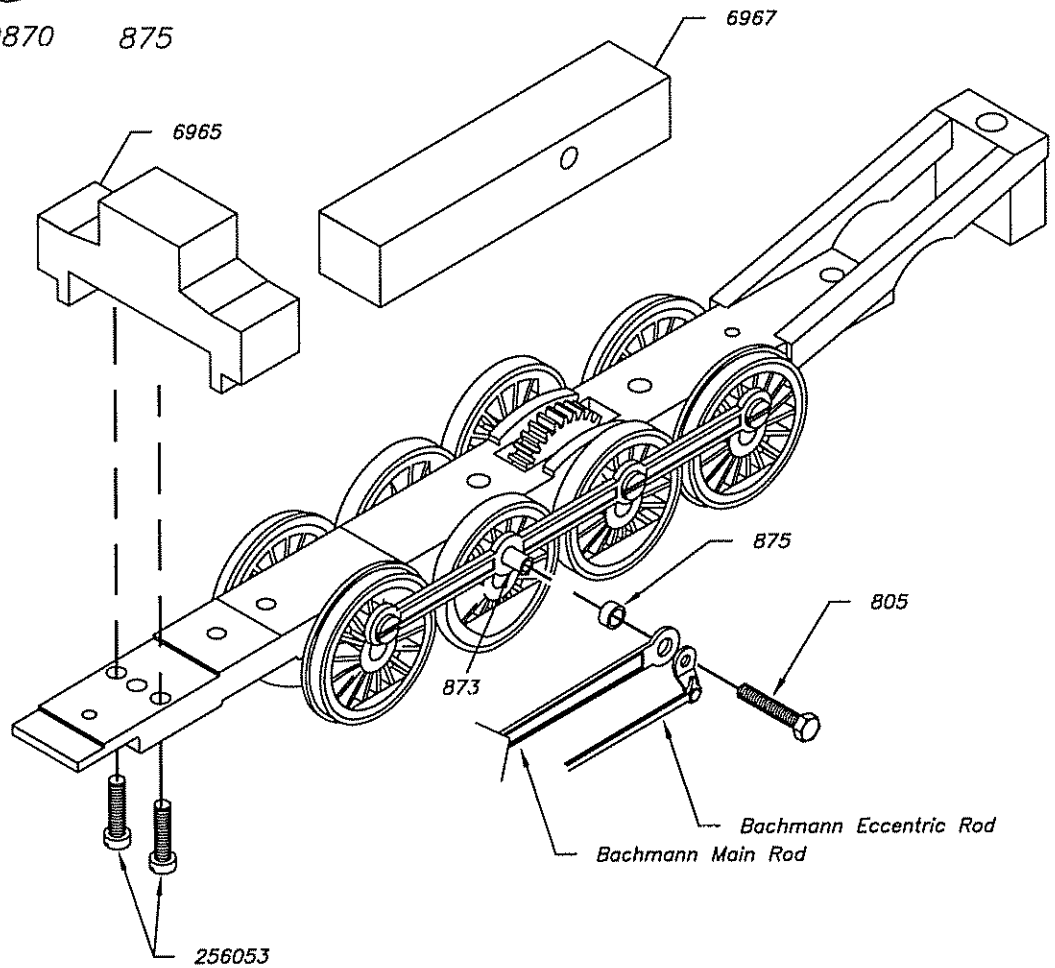
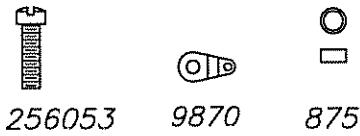
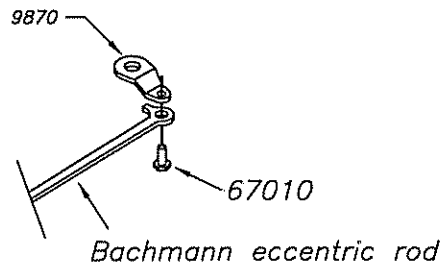
70054 LEFT

STEP #5

Assemble cylinder covers, valve rods & main rods to mechanism.

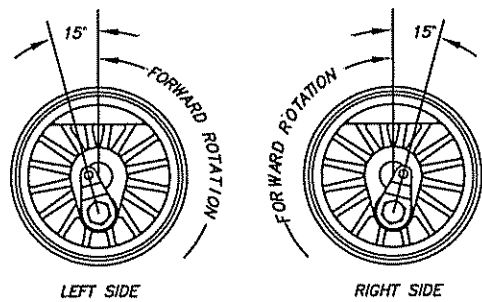
Subkit 40023 & 40035

FULL SIZE



Glue Bachmann cylinder cover and valve gear assembly to the cylinder spacer #6965 (Goo or Ambroid original cement recommended)
 Slip the back post of the Bachmann assy into the holes of block #6967
 Glue this block on the underframe (Goo or Ambroid original cement recommended)

Install valve gear on mechanism.
 Time valve gear as shown.
 Mechanism at this point must be absolutely free of any binds before proceeding any further with assembly. Do not mount motor until it is free running.

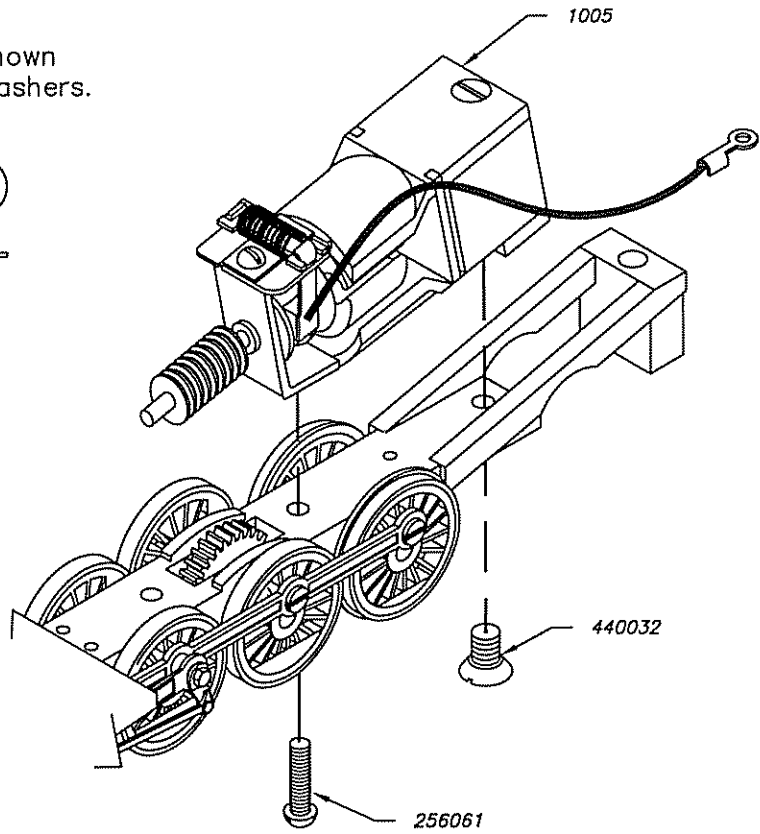
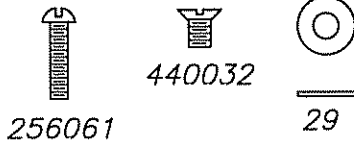


STEP #6

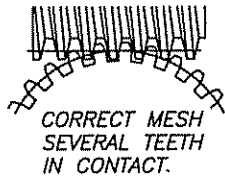
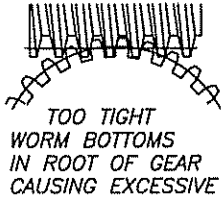
Install motor. Check gear mesh as shown in drawing. Adjust mesh using #29 washers.

Subkit 40023 & 40035

FULL SIZE



DRAG ON GEARS.



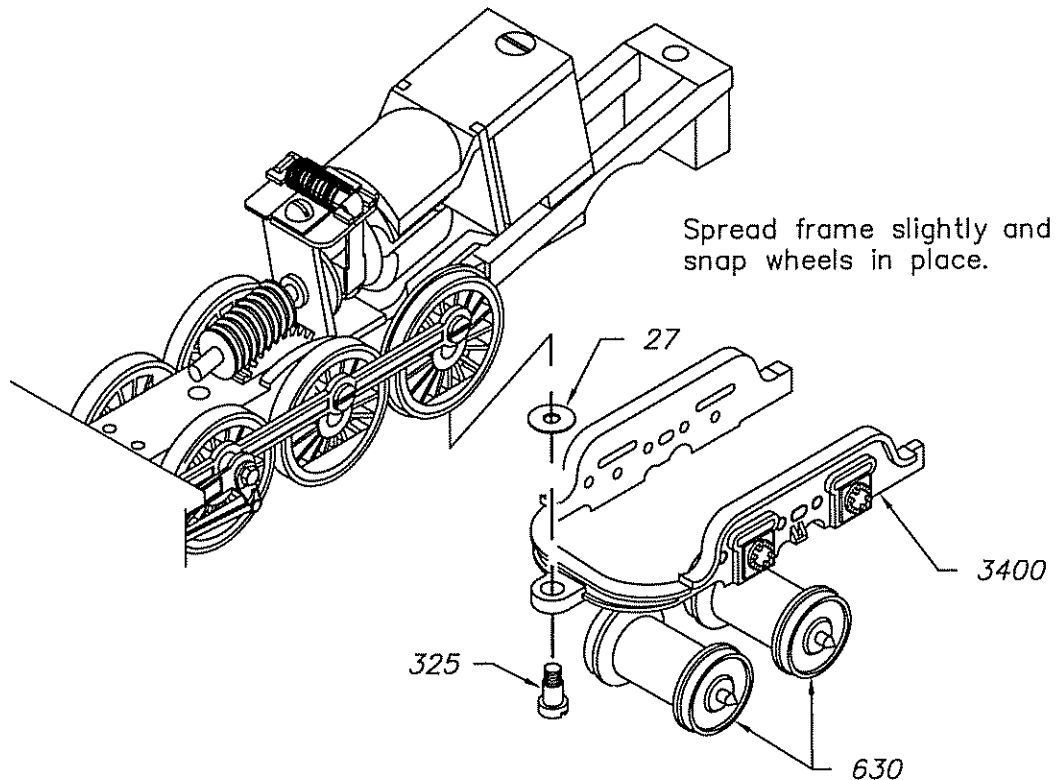
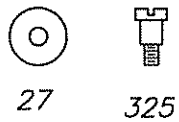
Too Tight - put a #29 washer between front motor bracket and frame
Too Loose - put a #29 washer between the rear motor bracket and the frame

STEP #7

Assemble trailing truck.

Subkit 40023

FULL SIZE

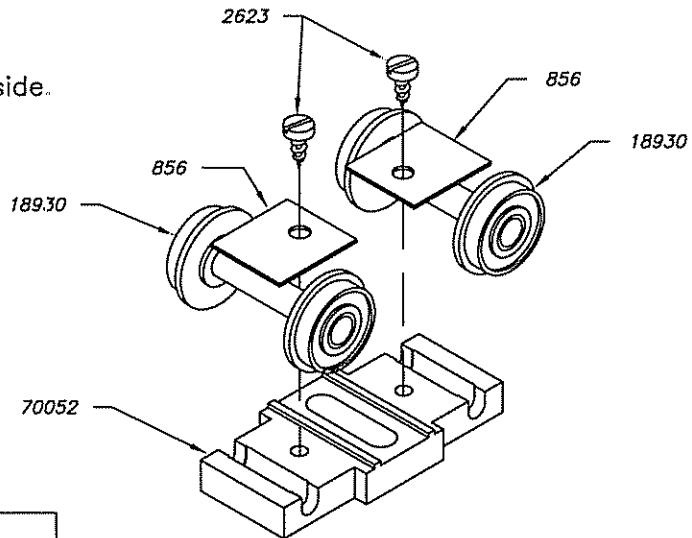


STEP #8

Assemble lead truck
Keep insulated wheels on same side.

Subkit 100404

FULL SIZE

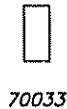
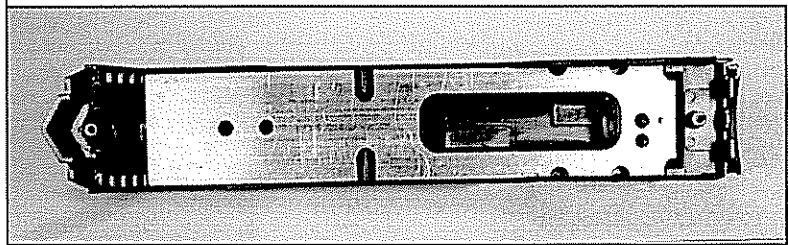


STEP #9

Assemble mechanism of body
Glue weight in body - see picture

Subkit 100404 & 40023

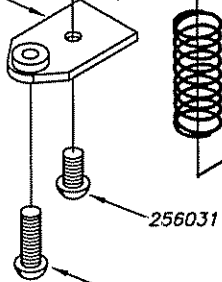
FULL SIZE



2-56 nut - remove when mounting mechanism to body

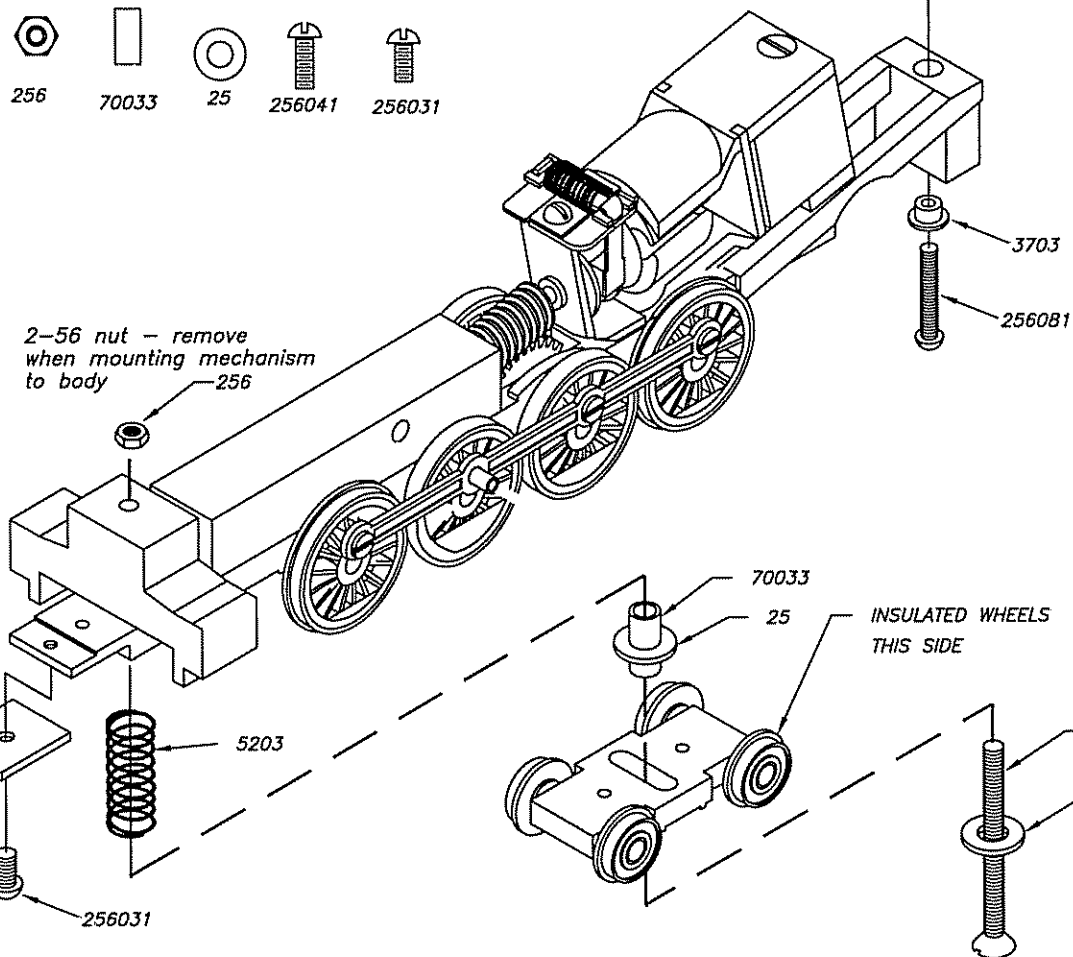
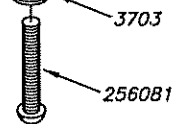
256162

6909



Into front mounting post on body

Into brass weight



INSULATED WHEELS THIS SIDE

256162

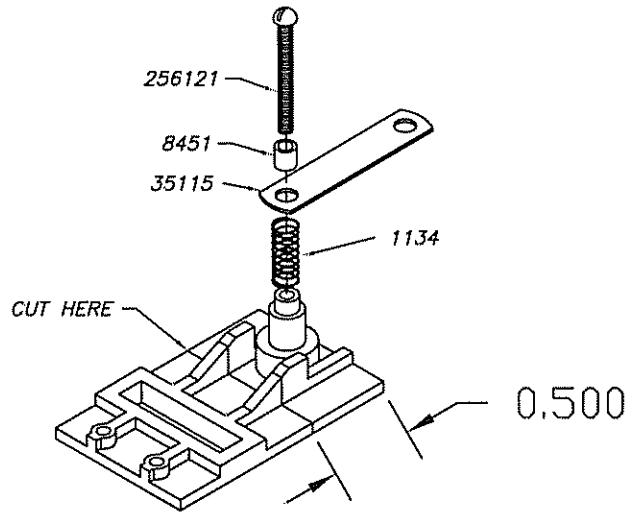
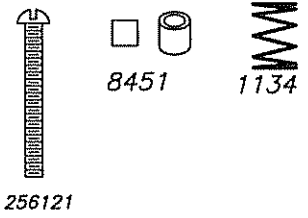
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STEP #10

Assemble drawbar to frame

Parts in Subkit 40023

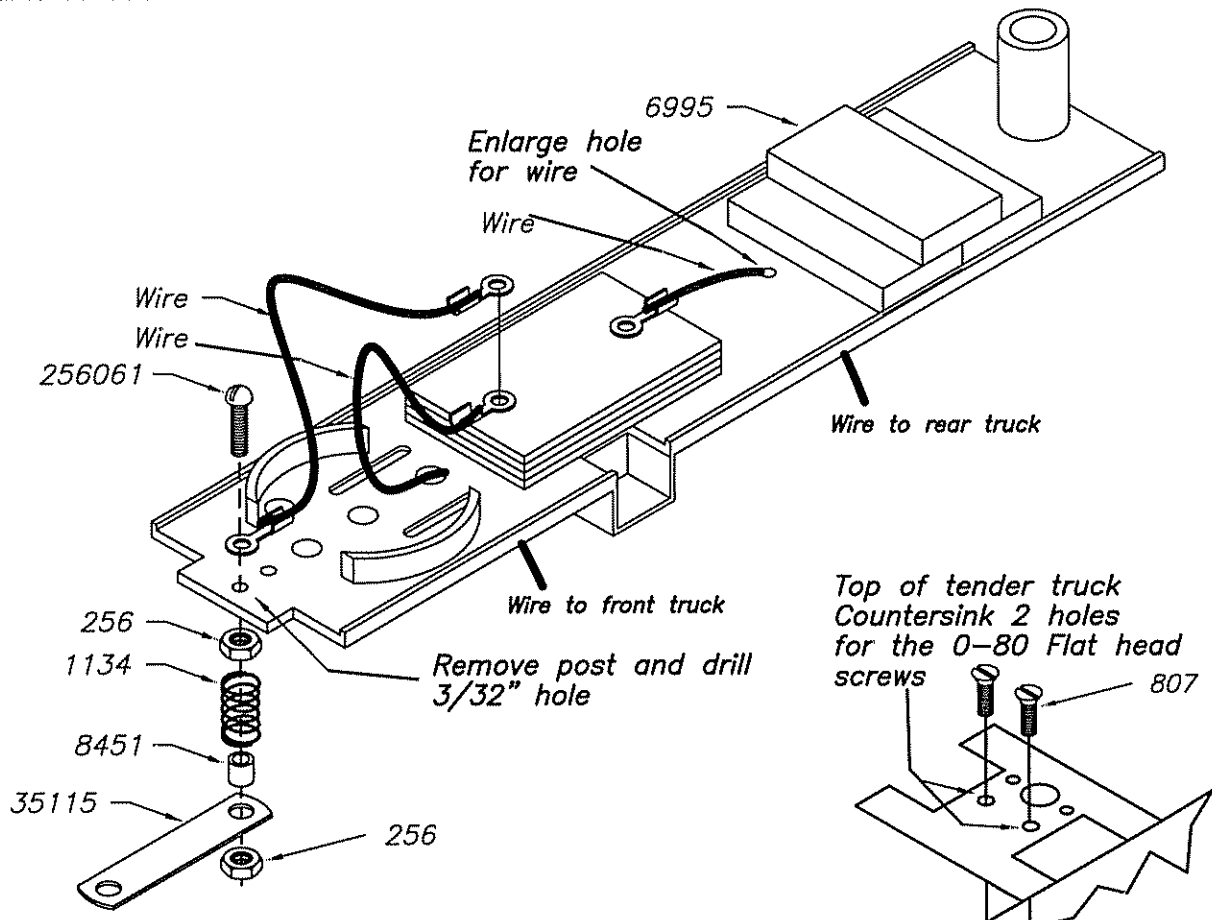
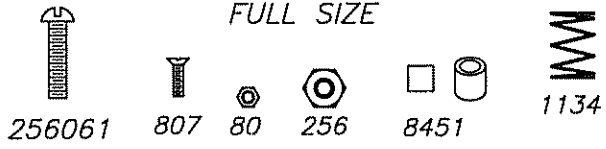
FULL SIZE



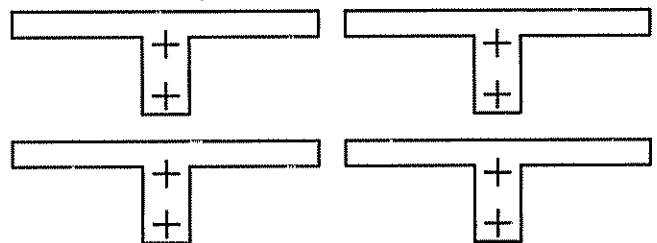
STEP #11

Assemble tender parts

Parts in Subkit 40023



Tender pickup drawings - Cut out and glue onto the .002 brass shim stock. Cut on line and Drill 2 1/16 holes on the x's.



3.206-6

INSTRUCTIONS FOR MECHANISM KIT

#3-202

BACHMANN N&W Class J LOCOMOTIVE AND TENDER

TENDER INSTRUCTION

Remove tender body from floor. Remove trucks. Save all parts. Cut post from underside front of frame. Drill 3/32" hole in the same location. Pass a 2-56 x 3/8" screw through terminal on wire 6992, down through frame and turn on 2-56 nut. Tighten nut.

For electrical pickup, cut out two pickup drawings and glue to .002 brass. Cut out with sharp scissors and drill two 1/16" holes on the x's. Remove paper. Extra drawing and brass supplied.

Countersink by hand the top of truck frame with a 3/16 drill for 0-80 flat heads. Mount to tender truck using 2 0-80 flat head screws through frame, brass pickup, one screw through terminal on 6992 wire and 0-80 nuts. Keep pickups on the tenders left. Shape the pickup to ride on the metal part of the wheels on the left side of tender.

Pass free ends of wires up through floor and fasten to weights. Glue three weights (6995) over rear truck.

Attach engine and tender by putting spring (1134), spacer (8451) and drawbar from engine over front screw and turn on a 2-56 nut.

OPERATING SUGGESTIONS

You will want to make a test run. This model is built to run on direct current, not to exceed 12 volts. Lubricate all wheel and motor bearings with light oil and make sure gears and axles are well lubricated at all times.

If loco does not operate satisfactorily, check assembly and electrical connections. See that motor is mounted securely with gears properly meshed. Make sure all **INSULATED WHEELS** are on **LOCOMOTIVE'S LEFT** and **TENDER'S RIGHT**.

Our locomotives run best after a long break in period. Ten to twenty hours is a good start.

To make your Bachmann loco with an English's mechanism pull better, add weight to the body. Mix together lead shot (from a hunting supply store) and glue (such as Walther's GOO) and coat the inside of the body. Be careful not to build up where it could interfere with the mechanism. Apply several layers, trying to add equal weight to front and rear and balance between middle drivers.

PAINING

We suggest that you do not paint your loco until it is thoroughly track tested as disassembly and handling generally ruins a paint job. Take your locomotive apart so that the various parts may be painted without getting paint on moving parts. Valve gear, side rods, bearings, pony truck etc. will not operate properly if paint gets into joints or moving parts.

Metal parts to be painted should be degreased with a solvent like paint thinner and pickled in vinegar for a few minutes before applying paint. Several manufacturers make etching agents for this purpose. See your dealer.

CAUTION: Do not immerse wheels, underframe or coverplate in vinegar or cleaners. Brush cleaner and/or vinegar on metal frames of lead and trailing trucks and on underframe surfaces to be painted, **NOT ON WHEELS, AXLES OR BEARING SLOTS**. Drivers are preblackened and can be touched up, after removing flash, without using cleaner or acid.

Apply a smooth, uniform coat of good grade model railroad paint. Work carefully to avoid piling up paint around small details. Painting exposed surfaces of main frame will add to final appearance of model, but be careful not to get paint in any bearings.