

DISASSEMBLY OF OLD STYLE OPEN #4 ARBOR MOTORS



Open style Arbor Motor used on Table Saws from 1931 – 1957

1. Mark the front and rear end bells to assist in reassembly.
2. Remove rear bearing cover. Cover is held in place with 4 5/16 hex bolts.
3. Remove rear bearing brass bearing nut. This nut has a right hand thread. A pin punch and a hammer will be needed to rotate the nut anti-clockwise.
4. Remove rear end bell. The rear bearing will come off with the end bell. The end bell is held in place with 4 3/8 hex bolts. Depending on how tight the fit is between the bearing inner race and the motor shaft, a puller may have to be rigged to draw the rear end bell with bearing off of the arbor shaft.
5. Remove the sheet metal air baffle that is sandwiched between the rear end bell and the start housing.
6. Remove the internal fan that is attached to the rear end of the rotor. The fan is attached with 4 10-24 round head machine screws. The fan and rotor should be index marked for reassembly.
7. Remove arbor nut and loose saw collar.
8. Remove front end bell / rotor shaft assembly from the stator housing. The end bell is held in place with 4 3/8 hex bolts. A few taps with a hammer should separate the end bell from the stator housing.
9. Remove the tight saw collar and woodruff key. A puller or a bearing splitter and arbor press will be needed to pull the tight saw collar from the arbor shaft.
10. Remove the front bearing cover. Cover is held in place with 4 5/16" hex bolts
11. Remove front bearing brass retaining nut. This nut has a left hand thread. A pin punch and a hammer will be needed to rotate the nut clockwise.

12. Press the rotor shaft assembly through the front bearing that is in the end bell. An arbor press works well for this operation.
13. Press bearings out of the front & rear end bells. There is an inner race spacing collar that sits between the bearing and the bottom of the end bell bearing bore, set aside for reassembly.
14. Clean up parts, blow sawdust from between the stator housing and the windings, and from the end relief on the rotor.
15. Pack the 2207 double row self aligning bearings with grease. Place an inner race spacing collar in the relief at the bottom of each end bell bearing bore. Press the greased bearings into the end bell bearing bores.
16. Trim and fit new felt seals into the front & rear bearing covers. The belt should only project above the bore about 1/32". Be sure to saturate the felt seals with oil or they will seize themselves to the rotor shaft at startup.
17. Drive the front end bell with bearing onto the arbor end of the rotor shaft. Replace the front bearing nut and tighten. Replace the front bearing cover with oiled felt seal.
18. Install woodruff key into rotor shaft and drive on the tight saw collar to its shoulder.
19. Slide the rotor / end bell assembly into the appropriate end of the stator housing. Bolt the front end bell to the stator housing.
20. Stand the partially assembled motor on its end, being supported by the face of the tight saw collar.
21. Replace the internal fan onto the rotor end observing any indexing orientation.
22. Position the sheet metal air baffle on to the end of the stator housing. If there is an offset on the enter bore, it should be up to allow additional clearance for the fan blades.
23. Drive the rear end bell with bearing onto the rotor shaft. Replace the rear bearing nut and tighten. Replace the rear bearing cover with oiled felt seal.
24. Install loose saw collar and arbor nut.
25. Check rotor for free rotation. There may be some noise from the bearings on startup due to excess grease working its way out of the bearings.