

Arc Trainer® Elevation Motor Replacement

Kit No. 600AK029 and 630AK046

Installation Instruction

NOTE: This instruction sheet describes how to replace the elevation motor for the 600 series Arc Trainers.

TOOLS REQUIRED

- 9/16" Open-end wrench (2)
- 3/16" Allen wrench
- Side Cutter
- Cloth or rag
- Phillips screwdriver (Long Shaft)
- Flat head screwdriver (600AK029 kit only)

1. Read and understand all instructions thoroughly before installing this kit.

2. Verify 600AK029 kit contents. See Figure 1a.

NOTE: Skip to Step 3 for Kit 630AK046.

- A. Elevation Motor 115V (1), MR-16518
- B. Cap (1), PL-16535
- C. Cable tie (1), EW000028
- D. Loctite (1), YA000201
- E. Nut Jam 3/8-16 BLK ZN (2), HN-60064
- F. Screw, HHCS .375-16 x 2.50 (1), HC701230
- G. Screw, HHCS .375-16 x 2.0 (1), HC701226
- H. Elevation Mounting Bottom Sleeve (1), FT-17243
- I. Elevation Mounting Top Sleeve (1), FT-17242

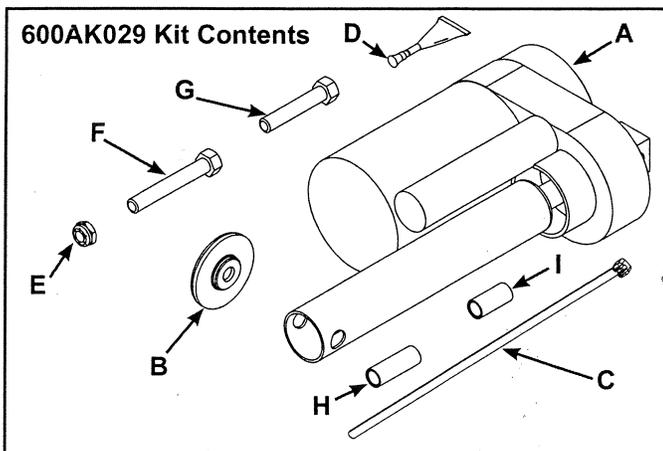


Figure 1a

NOTE: Skip to Step 4 for 600A/610A unit.

3. Verify 630AK046 kit contents. See Figure 1b.

- A. Elevation Motor 12VDC (1), MR-18446
- B. Cap (1), PL-16535
- C. Cable tie (1), EW000028
- D. Loctite (1), YA000201
- E. Nylon Locknut .375-16 (2), HN704902
- F. Screw, HHCS .375-16 x 2.50 (1), HC701230
- G. Screw, HHCS .375-16 x 2.0 (1), HC701226
- H. Elevation Mounting Bottom Sleeve (1), FT-17243
- I. Elevation Mounting Top Sleeve (1), FT-17242
- J. Elevation Motor Cover (1), 740A-354
- K. Nylon Countersunk Washer (2), HS100000
- L. Screw, Self Tapping 10-24 x .50 (2), HT572512

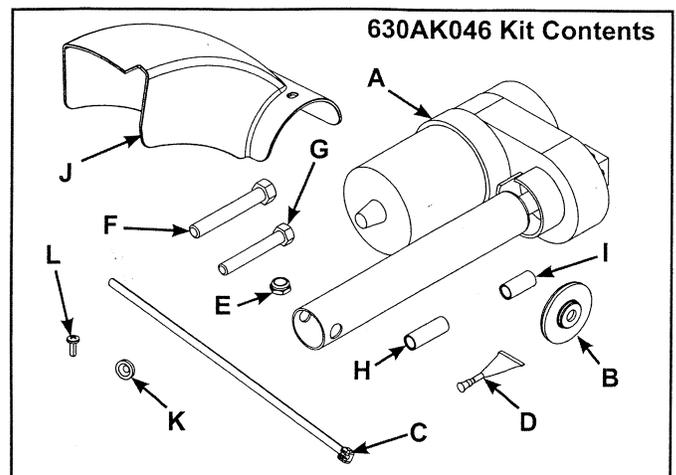


Figure 1b

4. Check elevation of unit and disconnect the power source.

- A. Check elevation of unit. **NOTE:** Elevation must be set to level three. Adjust if needed.
- B. If unit has optional A/C Power Kit, unplug the power cord from the power outlet.



WARNING: Disconnect the power cord before continuing this procedure. Keep wet items away from inside parts of the unit. Electrical shock could occur even if the unit is unplugged.

5. Remove the elevation motor cover.

- A. Using a Phillips screwdriver, remove the two screws and two nylon washers securing the elevation motor cover. See Figure 2.

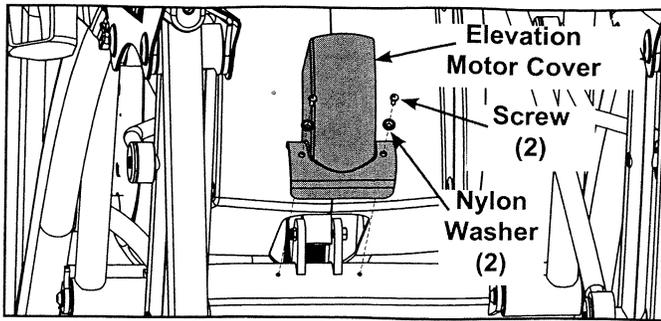


Figure 2

B. Remove the elevation motor cover.

6. Remove lower elevation motor support screw, sleeve and nut.

A. Using two 9/16" open-end wrenches, remove the screw, sleeve and nut, securing the elevation motor to the main frame. See Figure 3.

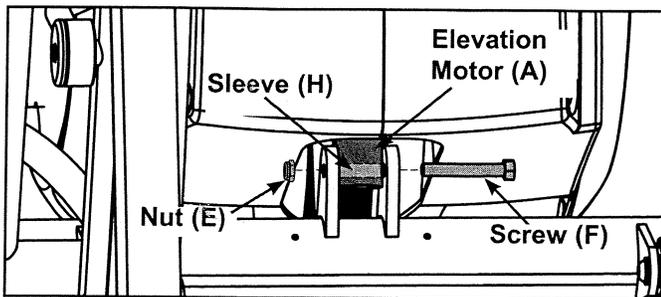


Figure 3

7. Tilt front end assembly forward.

A. Carefully tilt the front end assembly forward until it stops. See Figure 4.

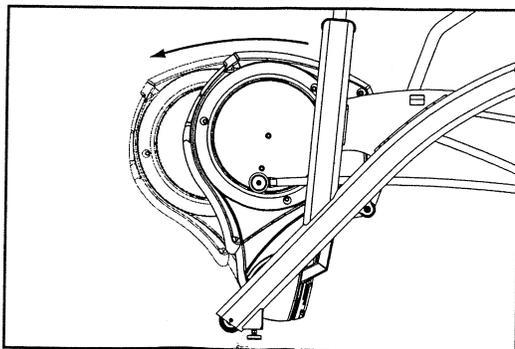


Figure 4

8. Remove the access cover.

A. Using a Phillips screwdriver, remove the two lower screws (one screw on each side) securing the access cover. See Figure 5a or 5b.

NOTE: For the 600A/610A access cover removal, screws are located on the front of the unit. For the 620A/630A access cover removal, screws are located on each side of the unit.

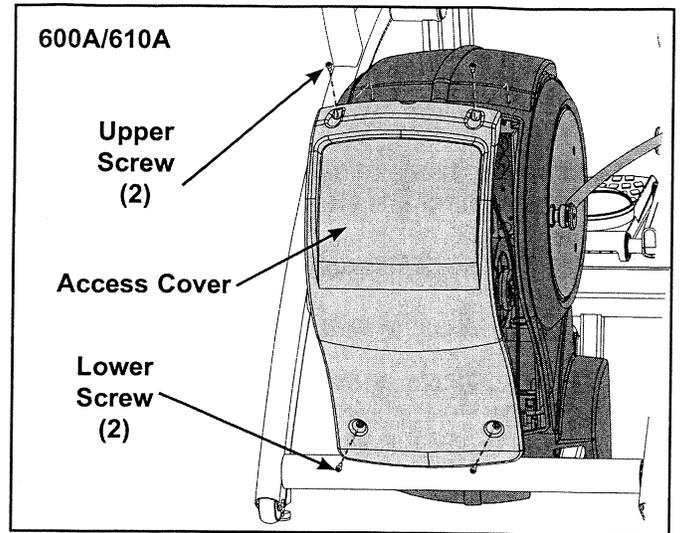


Figure 5a

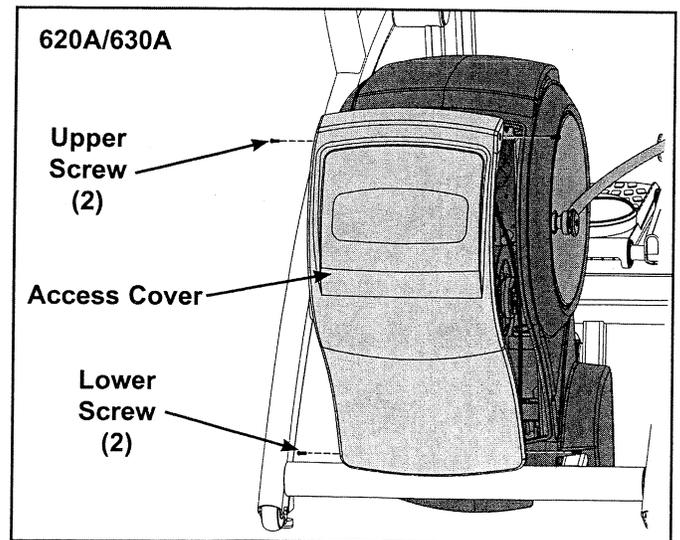


Figure 5b

B. Remove the two upper screws (one screw on each side) securing the access cover.

C. Remove the access cover.

9. Detach the left linkage arm.

- A. Using a 3/16" Allen wrench, remove the Socket Head Cap Screw (SHCS), flat washer, cap and spacer securing the left linkage arm. See Figure 6.

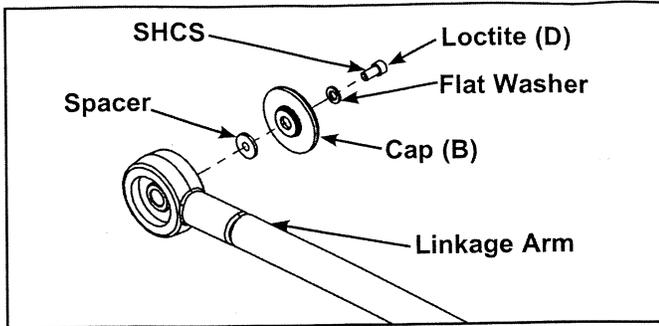


Figure 6

- B. Lay linkage arm down on the frame. **NOTE:** Place a cloth or rag in between linkage arm and frame to prevent scratches.

NOTE: Skip to step 11 for 620A/630A unit.

10. Remove the 600A/610A left shroud.

- A. Remove the six screws and washers securing left shroud in place. See Figure 7.

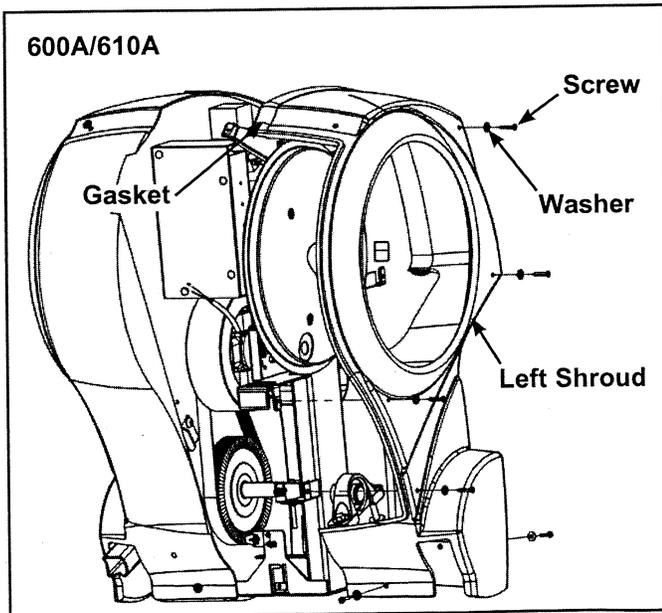


Figure 7

- B. Remove left shroud. **NOTE:** The gasket will come off with shroud

- C. Skip to step 12 for 600A or 610A unit.

11. Remove the 620A/630A left shroud.

- A. Using a Phillips screwdriver, remove the ten screws and two washers securing left shroud cover in place and remove shroud. See Figure 8.

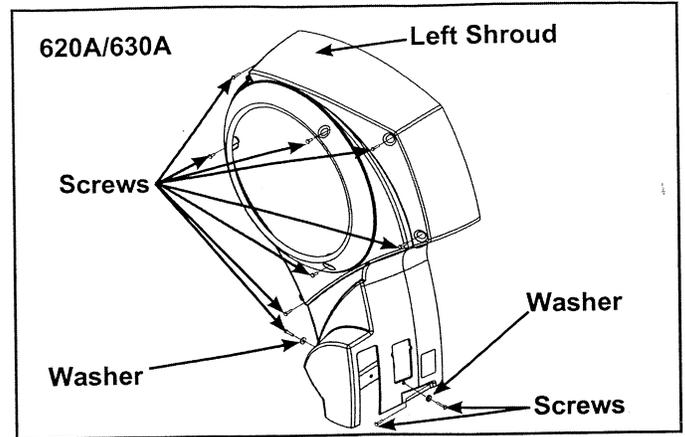


Figure 8

12. Unplug elevation motor cable.

- A. Using a flat head screwdriver, remove the two fasteners/screws and the controller cover. See Figure 9. **NOTE:** 600A/610A uses finned fasteners. The 620A/630A uses screws.

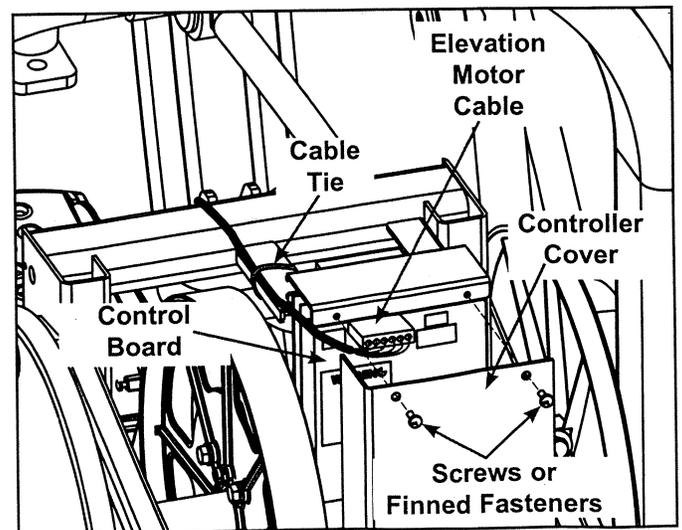


Figure 9

- B. Using a side cutter, cut cable tie. See Figure 9.

- C. Unplug elevation motor cable from control board.

13. Remove elevation motor.

- A. Using two 9/16" open-end wrenches, remove the screw, sleeve and nut securing the elevation motor to the drive frame assembly. See Figure 10.

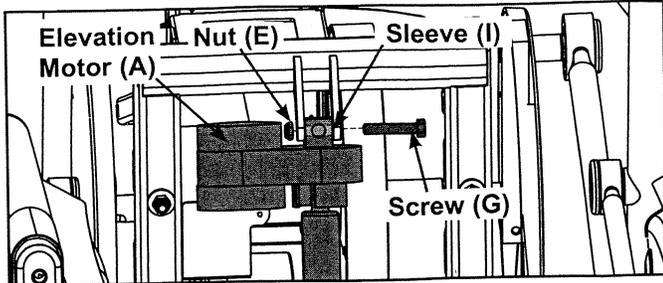


Figure 10

- B. Remove elevation motor.

14. Attach new elevation motor.

- A. Place new elevation motor (A) in position.

NOTE: Verify center of holes is equal to 11.37" (28.9 cm). See Figure 11.

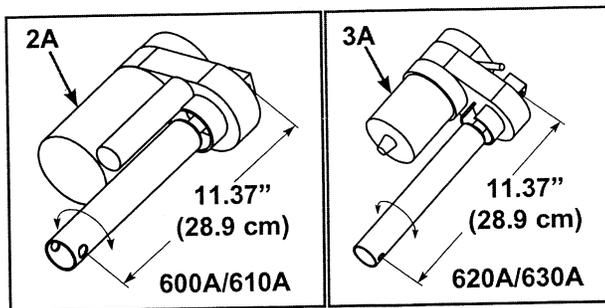


Figure 11

- B. Using two 9/16" open-end wrenches, attach sleeve (I), screw (G) and nut (E) securing the new elevation motor (A) to the drive frame assembly. See Figure 10. **NOTE:** Verify sleeve is in place between the screw and nut.
- C. Plug the new elevation motor (A) cable into the control board.
- D. Attach a cable tie (C) securing the new elevation motor (A) cable to the frame. See Figure 9.
- E. Using a Phillips screwdriver, attach controller cover to frame with the two finned fasteners or screws removed in step 12A. See Figure 9.

NOTE: Skip to step 16 for 620A/630A unit.

15. Attach 600A/610A left shroud.

- A. Place left shroud in position in the rubber gasket. See Figure 7.
- B. Using a Phillips screwdriver, tighten the six screws and six washers securing left shroud.
- C. Skip to step 19 for 600A/610A unit.

16. Attach the 620A/630A left shroud.

- A. Using a long Phillips screwdriver, reattach the ten screws and two washers (removed in step 11a) securing left shroud in place. See Figure 8.

17. Attach left linkage arm.

- A. Replace the left linkage arm on the crank arm.
- B. Apply a drop of loctite to the SHCS (removed in step 9A) and into where it will be threaded.
- C. Using a 3/16" Allen wrench, attach the SHCS, flat washer, new cap (B) and spacer securing the left linkage arm. See Figure 6.

18. Attach the access cover.

- A. Hold the access cover in place.
- B. Using a Phillips screwdriver, first tighten the two upper screws removed in step 8B. See Figure 5a or 5b. **NOTE:** Do not over tighten screws.
- C. Tighten the two lower screws, removed in step 8A. **NOTE:** Do not over tighten screws. See Figure 5a or 5b.

19. Attach lower elevation motor support screw and nut.

- A. Carefully tilt the front end assembly backward until holes in elevation motor (A) align with the holes in the support bracket on the main frame. See Figure 3.
- B. Using two 9/16" open-end wrenches, attach sleeve (H), screw (F) and nut (E) securing the elevation motor to the main frame. See Figure 3. **NOTE:** Make sure the sleeve is in place between the screw and nut.

20. Attach the elevation motor cover on units using the 600AK029 kit.

- A. Using a Phillips screwdriver, attach the elevation motor cover to the main frame using the two screws and two nylon washers removed in step 5A. See Figure 2.

21. Attach the new elevation motor cover on units using the 630AK046 kit.

- A. Using a Phillips screwdriver, attach the new elevation motor cover (J) to the main frame using the two screws (L) and two nylon (K) washers from kit 630AK046. See Figure 1b and Figure 12.

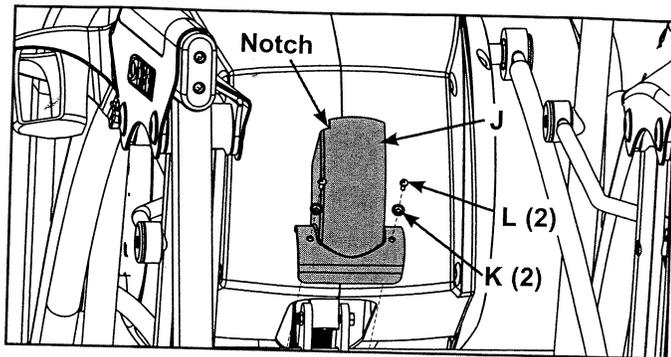


Figure 12

22. Connect the external power source.

- A. If unit has the optional AC Power Kit, plug the power cord to the power outlet.

23. Perform elevation calibration.

- A. Press and hold down any button on the keypad. Continue to hold the button down and begin striding.
- B. Continue to hold the button until "KEY ##" is displayed. Release the button, the display will then change to "SArc" unit is in *TEST mode*.

NOTE: As the Arc is self powered, striding must continue throughout this procedure. If striding is stopped, the procedure must be restarted.

- C. Press and release the "cal/hr" button. The upper displays will change to "GRD/CAL".
- D. Press the up or down arrowhead button to the right of the **ENTER** button to change the lower display from "CuSt CAL" to "Auto CAL".
- E. Press and release the **ENTER** button. The lower display will change to "In CAL" and the calibration procedure will begin. The upper displays will show "CAL" and display a number incrementing while the elevation calibrates.

NOTE: As calibration completes the number will stop incrementing and the upper displays will change to "GRD/CAL" and the lower displays "In CAL" will revert to numerals.

- F. Press **PAUSE/END** to exit elevation calibration.

NOTE: Keep striding to continue the resistance calibration procedure. If striding is stopped at this point, unit returns to dormant mode. Test mode must be entered again to perform the resistance calibration. See steps 23A and 23B.

24. Test unit for proper operation.