

Installation Instructions for WB-EMBSC-FBK and WB-EMBSC-FNK, WipeBoy™ OEM-Style Windshield Wiper Upgrade, 1976-1986 Jeep® CJ

Rev. 01-Jan-07

Important: Before you begin, make sure your vehicle is out of gear with the emergency brake set. When installing the WipeBoy™ Wiper Upgrade, you will be working with electrical components on your Jeep® vehicle. We recommend that you disconnect your battery until you have completed the installation process.

What you will need to complete the WipeBoy™ installation:

- ✓ T30 Torx driver (other sizes if you have a hard top)
- ✓ Needlenose pliers or small screwdriver for removing retaining clips
- ✓ Small mallet or hammer
- ✓ Slotted (flat) screwdriver
- ✓ Bench vise
- ✓ 10mm socket or combination wrench
- ✓ Indelible ink pen or grease pencil

Directions:

Step (1) Remove the old wiper arms and blades from the window frame. Using a screwdriver to gently pry the bottom end of the wiper arm as you lift the wiper arm assembly away from the windshield may make this process easier. Cover the screwdriver tip with a cloth or shop towel to prevent marring if you wish to use the arms later.



Step (2) Fold the window down to get access to the wiper motor. Note: it takes a bit more time if you have a hardtop installed. Remove the bolts, only loosening the back bolts that hold the hardtop on. Have someone help you lift the front of the top a little so it clears the lip of the window frame. Now you can fold the window down.



Step (3) Once you've got the window lying on the hood, you can see the wiper motor. Find the 3 screws that hold it to the frame, and then the plastic cover next to them. Remove the plastic cover; now you can see where the linkage from the wiper motor attaches to the rest of the wiper linkage. Remove the retaining clip. Take care not to lose the clip, since you will need to put it back on later. Lift the linkage off the stem you just removed the clip from, and just set it to the side. The linkage will slide out with the wiper.



Step (4) Remove the 3 Torx screws from the wiper motor (you don't have to disconnect the wires). You just need to be able to slide the motor and linkage out. There may be a small screw that holds the wire to the bottom of the frame, in which case you might have to remove the screw to give you the slack to pull the motor out.



Step (5) Drape a towel or blanket over your window so you don't scratch the window. Slide the wiper motor out, and the linkage will slide out with it .

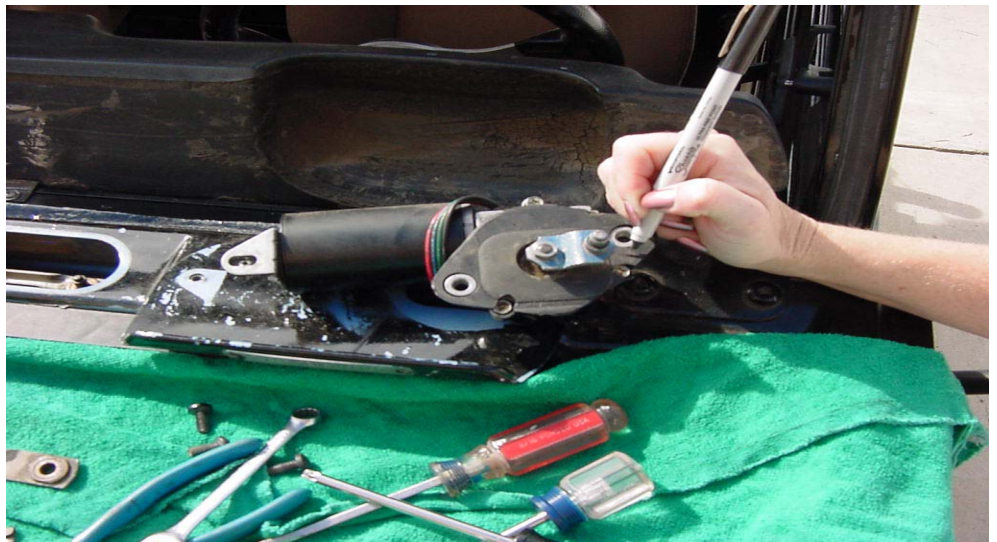
Step (6) You should now have the wiper motor with a short piece of linkage out and lying on your blanket.

Step (7) Remove the clip that holds that linkage to the wiper motor arm. **STOP!** Look carefully at how it is attached so you can put it back the same way. Remove the linkage piece. You should now have just your wiper motor with a small arm that the linkage was attached to. Hint: taking a photo of the parts before disassembly can help you remember how it goes together later.

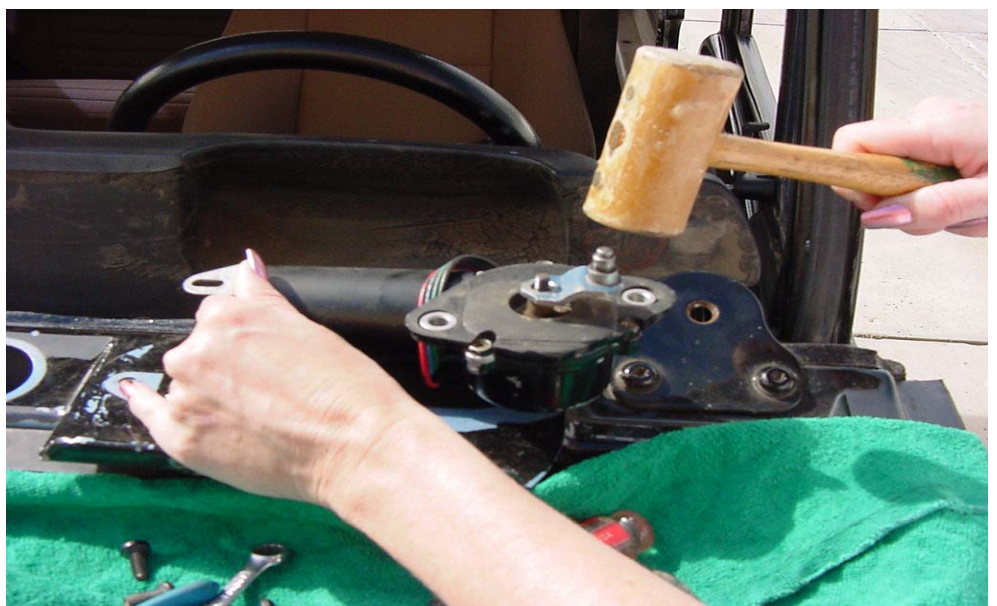


Step (8) IMPORTANT!

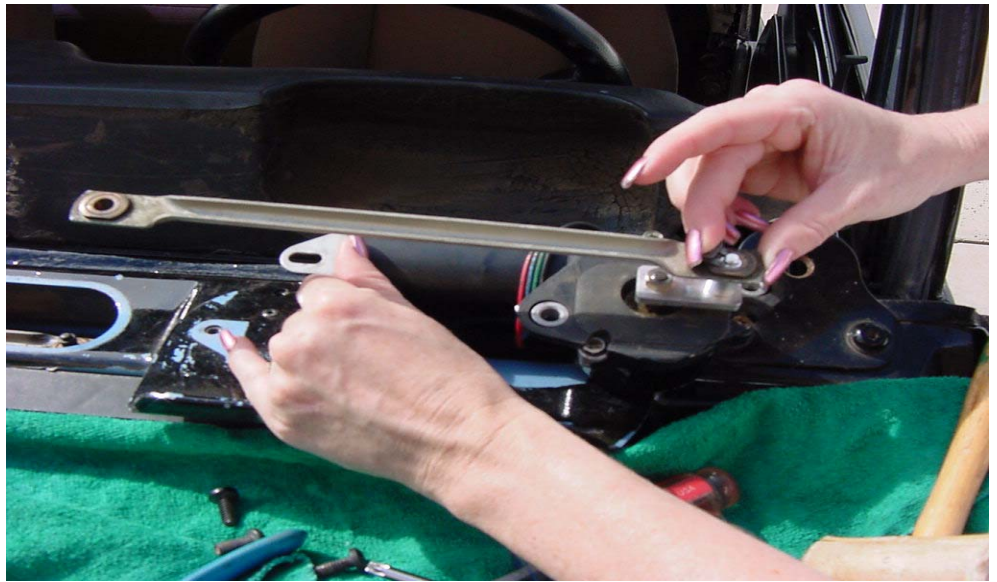
Take a pen and make a mark where the little arm on the wiper motor is pointing. You will be removing the nut that holds it on and you want to make sure that you get the new one pointing exactly the same way.



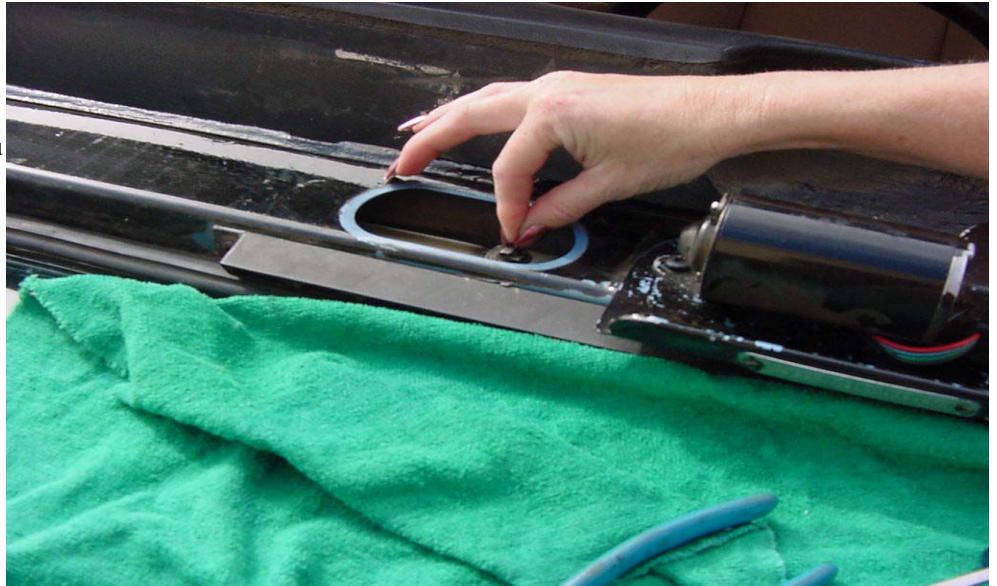
Step (9) Once you've marked the position of the old wiper motor arm, remove the 10mm nut from the wiper motor. With a small hammer, GENTLY tap the shaft end of the motor arm; it should break free. If it does not easily break free, soak it with penetrating oil and let it sit overnight, and try again.



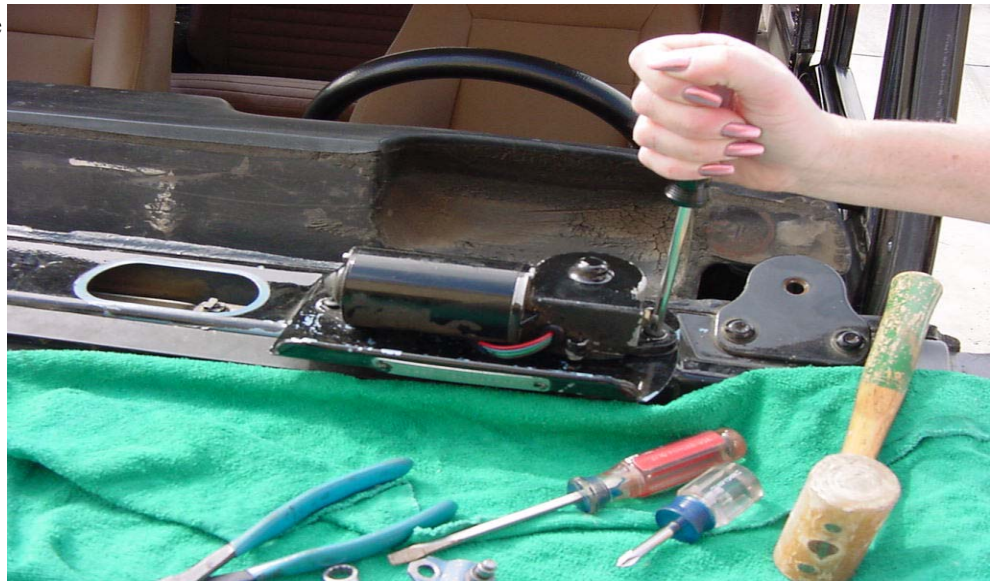
Step (10) Install the new motor arm (WB-EMBSC-A), oriented to the same angle as the original, using the pen mark you made in Step 8 for reference.



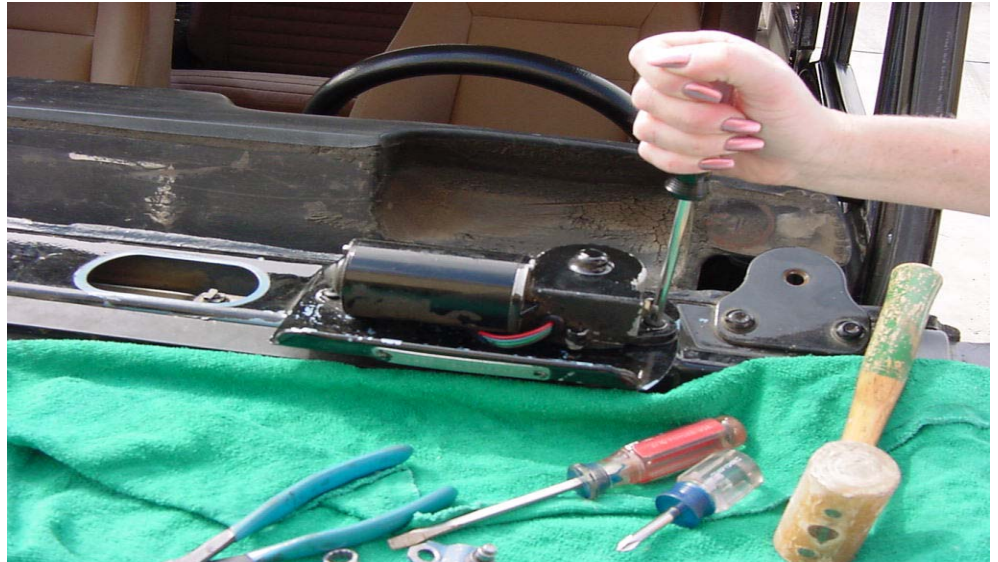
Step (11) Install the linkage with the retaining clip. At this time, you may want to put a little grease or oil on the linkage. Slide the linkage back into the window frame. If it doesn't seem to want to go you might have the linkage on the wrong way; it should slide in like it came out.



Step (12) Attach the motor-side linkage to the windshield-side linkage, remembering to put the other clip back on. Now would be a good time to put a few drops of oil on the remaining linkage joints.



Step (13) Replace the 3 screws that hold the wiper motor to the window and put the plastic covers back on. Fold the window back up, and put it back together the way it came apart. Don't tighten the top down until you make sure everything works correctly.



Step (14) *MAKE SURE YOUR Jeep[®] IS IN NEUTRAL WITH THE PARKING BRAKE ON.* Turn your key to the "accessory" position (do not start). Turn the wiper motor on for a few seconds, and then turn it off in the middle of a cycle so the wipers return to the park position. Turn the key back to the "off" position.

Step (16) Attach the new blades. One is a 10" blade and one is a 12" blade. The 10" blade goes on the passenger side. Leave about ½ inch of clearance between the window and the new blade. You may wish to paint the blades black, depending on your preference.



Step (17) Making sure your vehicle is still out of gear, turn the key to “accessory” and turn the wipers on. Make sure that everything is working properly. You may need to adjust the position again so they lay flat after operating it for a few seconds.

Step (18) You can now tighten down you hardtop (if you have one) and make sure your windshield is tightened as well (with the 2 wing bolts that hold it to the dash).



Step (19) You did it! Now you have wipers that not only wipe more of the window, but are out of your vision. And they just look so much better!

Troubleshooting. In some CJ vehicles, especially those with aftermarket windshields, that one or more of these conditions may occur:

- (1) **Binding.** (a) If the wiper system binds or stops before a full cycle has been completed, one possible cause is that the wiper motor position is not allowing the full stroke, due to increased sweep angle. Loosen the motor mounting bolts slightly (just enough to allow the motor to shift when pressure is applied by the mechanism), and run the wiper motor long enough to see if the binding has been eliminated. Tighten the bolts with the motor in the position that it has been shifted to by the mechanism movement. If binding returns, you may need to experiment with washers as shims to get the optimum positioning. (b) Another possible solution is to check to see if interference with the weld flange inside the windshield frame exists. You may need to bend the flange with a pair of vise-grip locking pliers to gain clearance. If the problem cannot be solved with these two methods, then contact us for additional assistance. Please be prepared to take measurements and/or digital photos, if it is possible.
- (2) **Windshield coverage less than expected.** (a) The first item to check is the motor arm itself (WB-LMBSC-A). Ensure that the motor arm is not slipping on the shaft. If it is, you may need to tighten the retaining nut slightly to drive the arm further down onto the tapered shaft. BE CAREFUL – it does not take much to twist the threaded stud right off of the shaft. If this happens, you will likely need to replace the entire motor. If you are not comfortable tightening this bolt, contact us, and we can provide a complimentary Loctite® product that will firmly cement the arm onto the shaft. (b) If the motor arm is firmly attached and not slipping, check to see that the original linkage parts are not excessively worn. Such wear can take up travel and reduce coverage. If you can move your wiper arms more than approximately 2-3 inches, system wear might be an issue. (c) To compensate for excessive wear or aftermarket windshield tolerance problems, we have a part that we will exchange, free of charge, for part number WB-LMBSC-A. Mail the part back to us with a copy of your invoice, and indicate that you would like to exchange the part for WB-LMBSC-A50, which has a working radius that is 0.050” greater than the standard part supplied with the kit. This should provide the needed extra sweep angle. Please contact us by telephone or e-mail prior to sending the part, to confirm that this step is necessary.



ATTENTION! We have billet wiper arms available for CJs and YJs. For customers who already have the WipeBoy motor arm upgrade, we can offer the wiper arms only for a lower price. We also carry wiper refills for modified stock wiper arms.

Thank you for purchasing a WipeBoy wiper upgrade from RipTech Engineering. Please feel free to contact us for any reason.

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