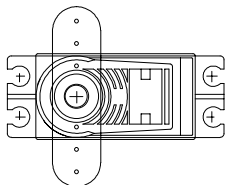
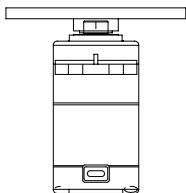
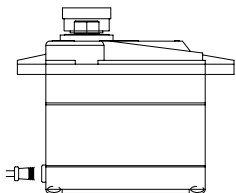




AIRTRONICS[®]



ALUMINUM MID CASE UPGRADE 101



99359-R Red
99359-S Silver
99359-B Blue
99359-G Gray

For some of you that have never opened up a servo before, this booklet will help you step by step on how to replace or upgrade your servo with an aluminum heat-sink mid case. The mid case I will be using is our 99359-G, One of the four colors available. For this lesson, I will be using our 94757Z Digital Servo.

Tools required for the upgrade:

- 2 small Phillips screwdrivers #00 and #1
- Small Clean rag
- Small Needle nose pliers

In the upgrade kit, you will find:

- (1) Aluminum Lower Mid Case
- (1) Black Nylon Plastic Upper Mid Case
- (1) Thin Black O Rings

Step 1

First center the servo by connecting it to a receiver and using a channel like the steering channel to center the servo. This will help you later when you open the servo.

Here is a list of servos the heat-sink will fit.

94359

94358

94357

94452

94453

94451

94151

94152

94257

94258

94157

94158

94757



Step 2

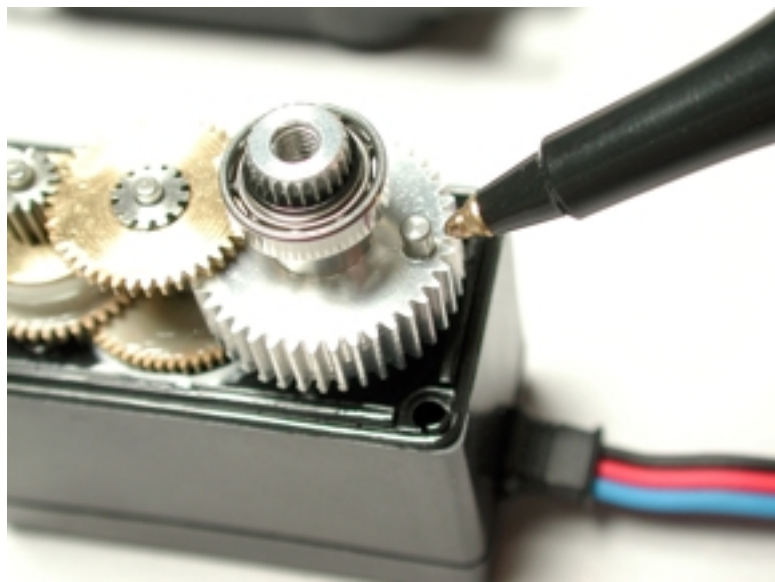
Remove the servo arm and be careful to keep the servo arm output shaft centered. Remove the 4 long screws located at the bottom of the servo. Notice that the long servo case screws have very small o rings on them.



Step 3

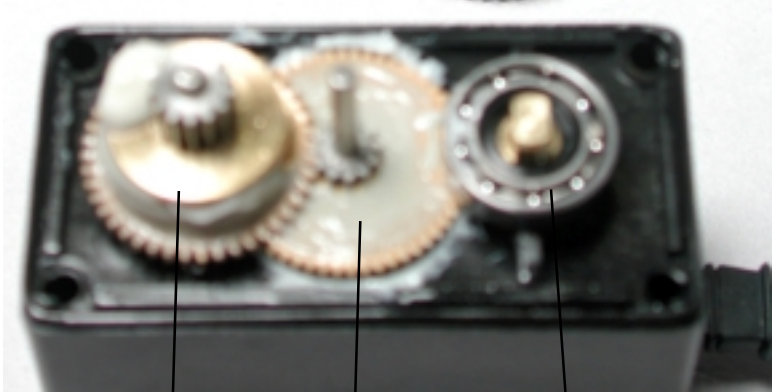
Using your two index fingers and your thumb, push down on the servo output shaft. After you have removed the top case, note the location of the output shaft pin. The pin should be in the straight or forward direction.





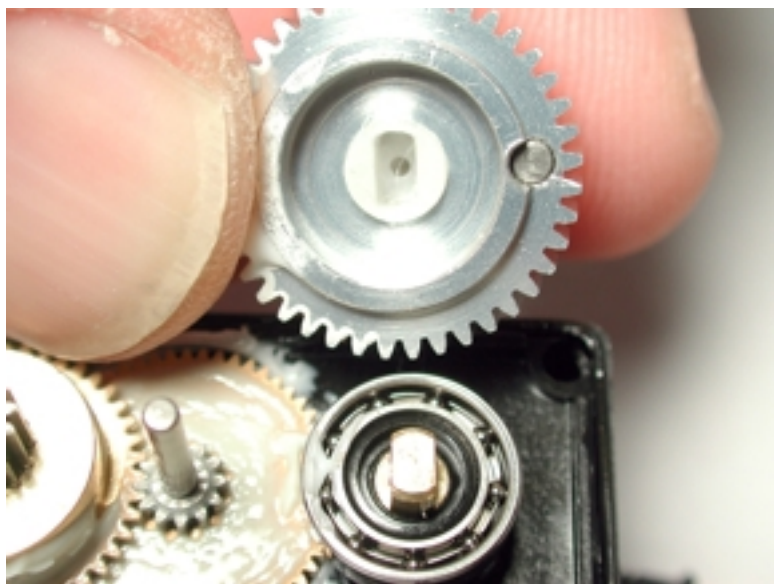
Step 4

Remove the output shaft and the top gear by working them back and forth while pulling up at the same time.



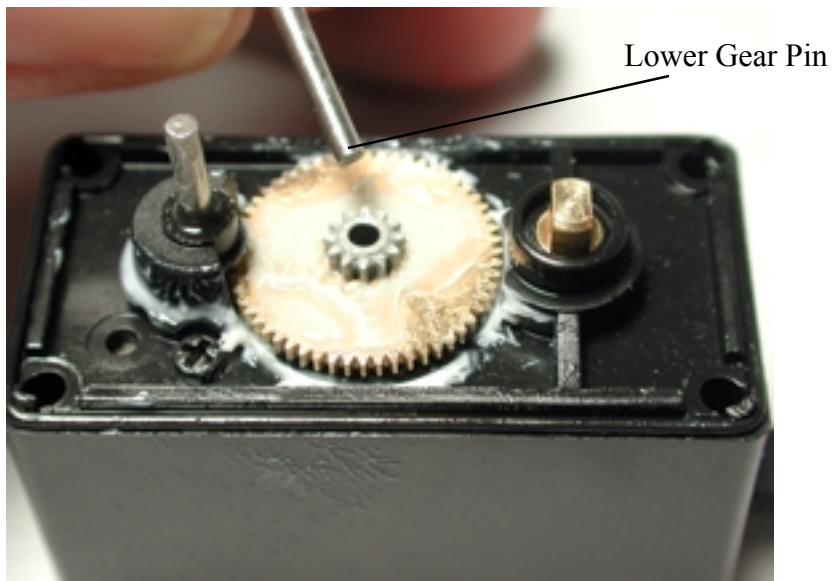
Rear Gear Lower Gear Output Shaft Bearing

Remove the lower output shaft bearing and install it back into the output shaft.



Remove the rear gear.

Remove the lower gear pin before removing the lower gear.

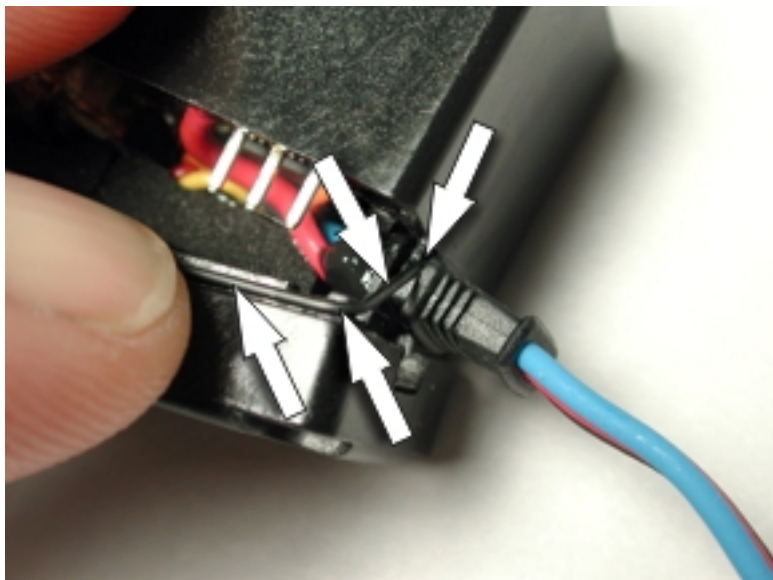


Remove the rear gear pin by pulling up.

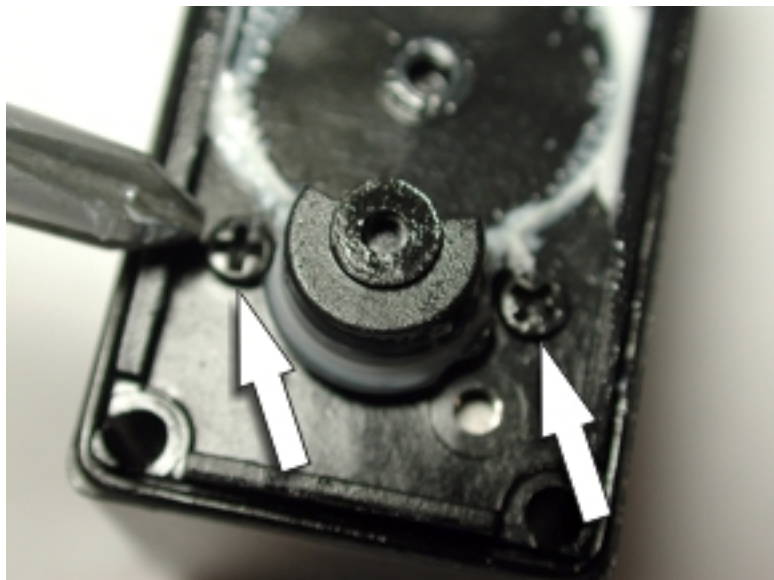
Step 5

Remove the lower case and be careful not to brake the O ring between the lower and mid case.

Remove the lower O ring.

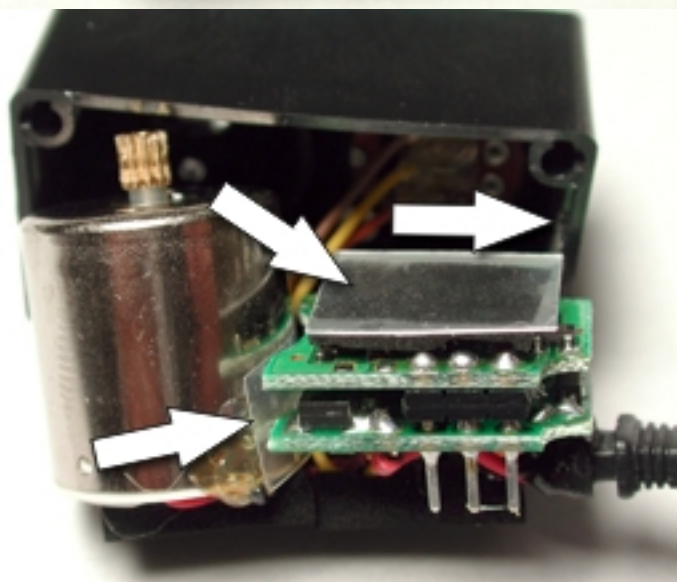
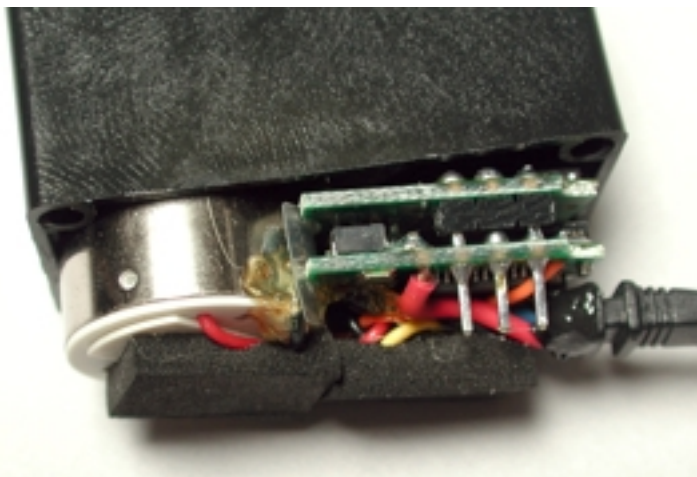


Remove the 2 Phillips screws on top of the mid case to remove the motor and electronics.

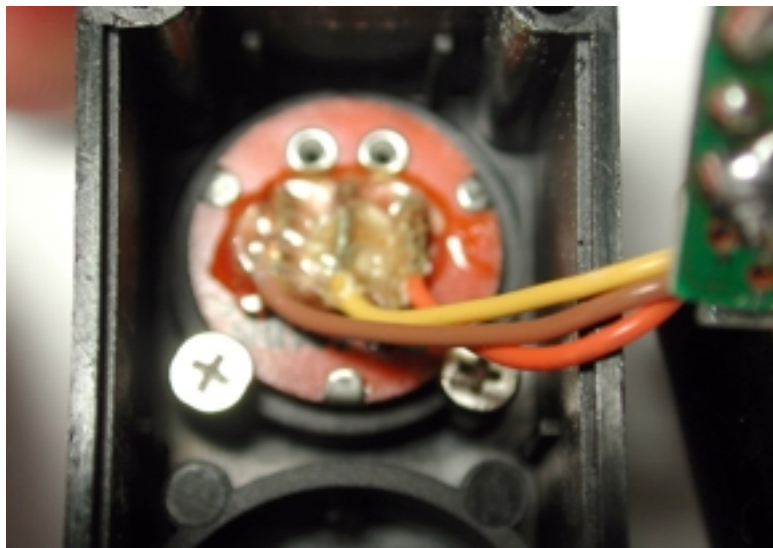


Gently pull down on both the motor and PC board to remove them from the mid case.

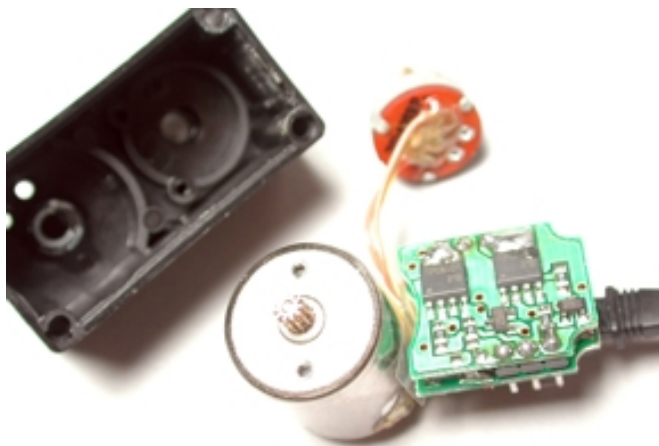
Note the clear plastic protector between the PC board and motor, and the foam protector between the PC board and Pot. The Pot at this point is still located in the mid case.



Remove the 2 Phillips screws holding the Pot and gently push the top of the Pot down to remove.

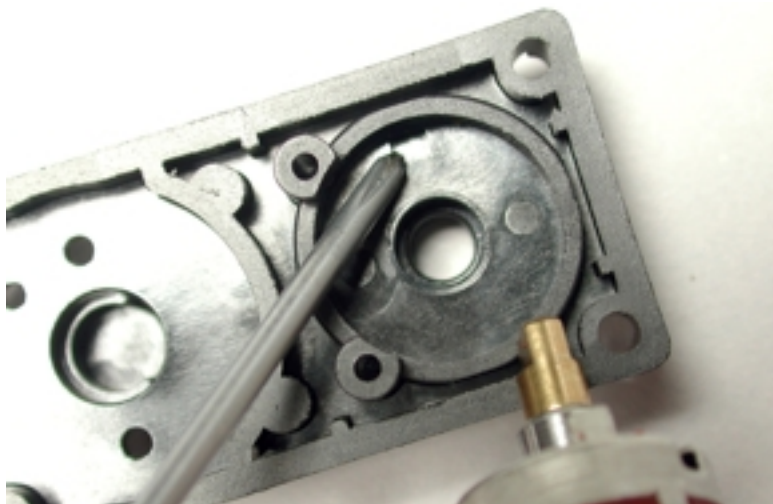


Your halfway there.....101

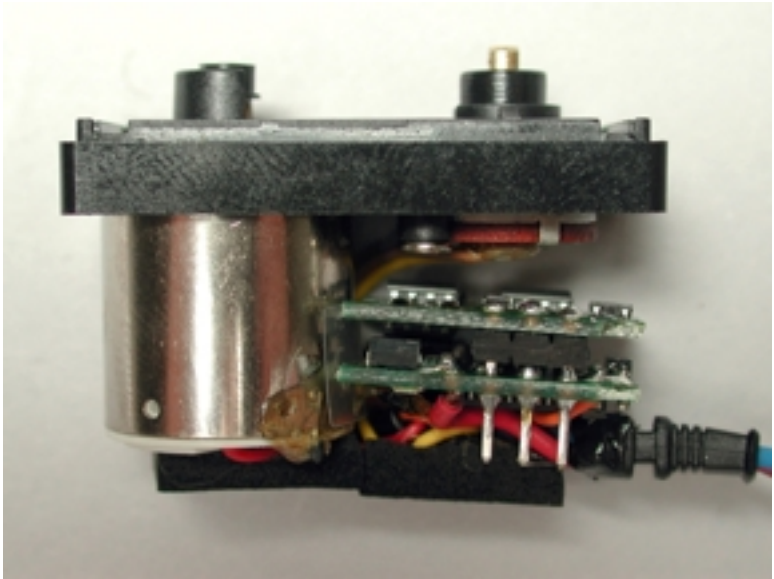


Step 6

Locate the new upper mid case and install the Pot using the alignment slot to align the Pot in place. Tighten the 2 screws (do not over tighten and strip them).

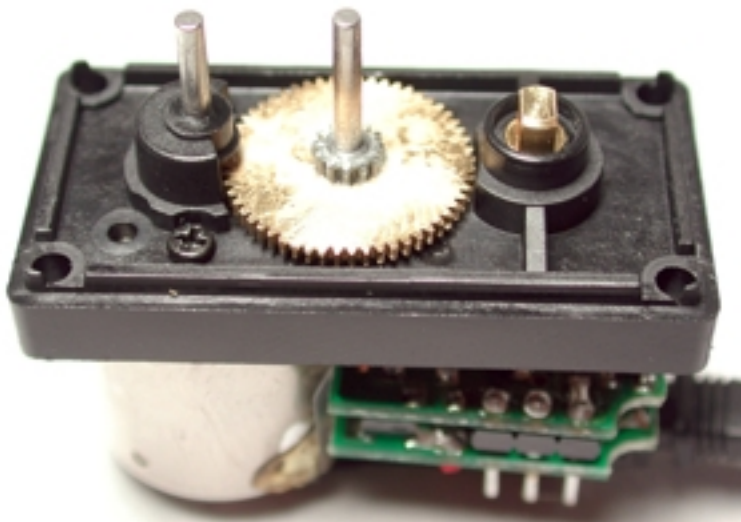


Install the motor with the 2 Phillips screws.
Put a very small amount of grease around the lower gear pin area. Use some of the grease left on the old mid case.



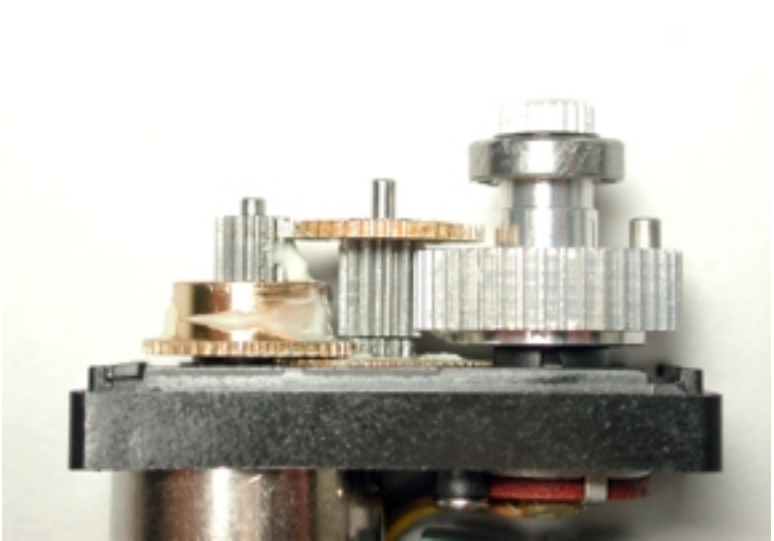
Install the lower gear. The only gear you need to align properly is the output gear.

Install both gear pins. The long one goes in the middle through the lower gear.



Install the rear gear.

Install the output shaft and top gear at the same time but pay close attention to the alignment of the output shaft to the Pot. Remember to align the pin of the output shaft to the front or forward direction.

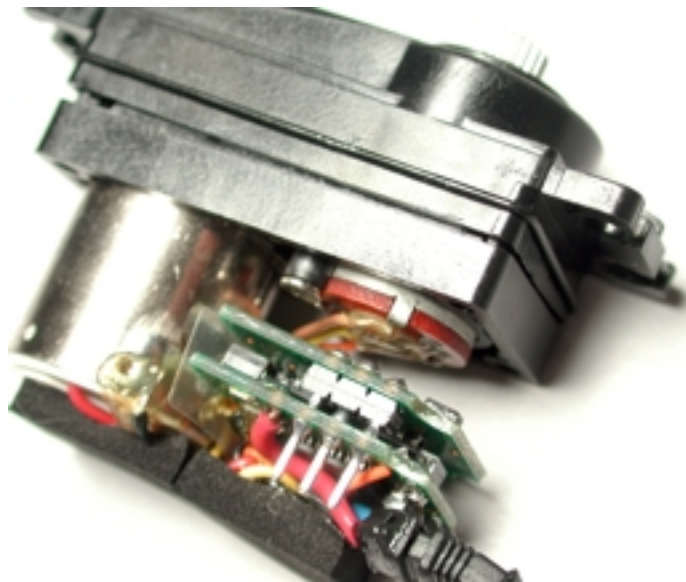


Step 7

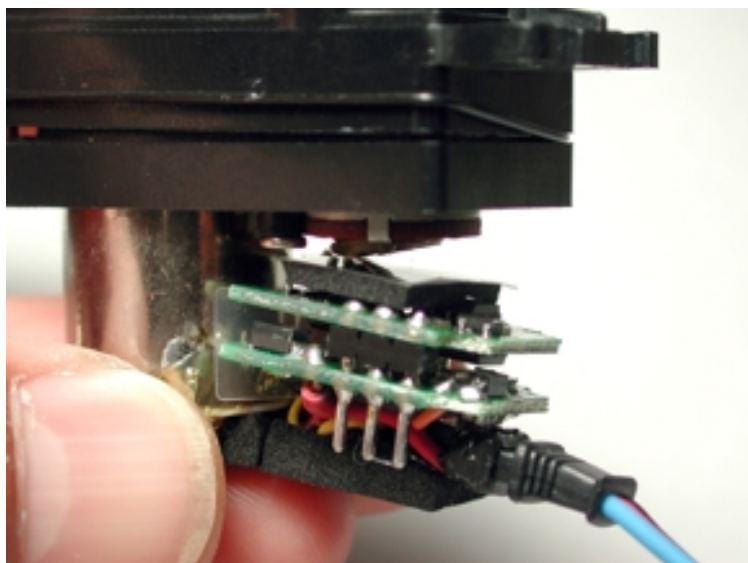
Slide 1 O ring onto the upper case.



Install the upper case to the upper mid case. Do not slide the O ring into place as of yet.

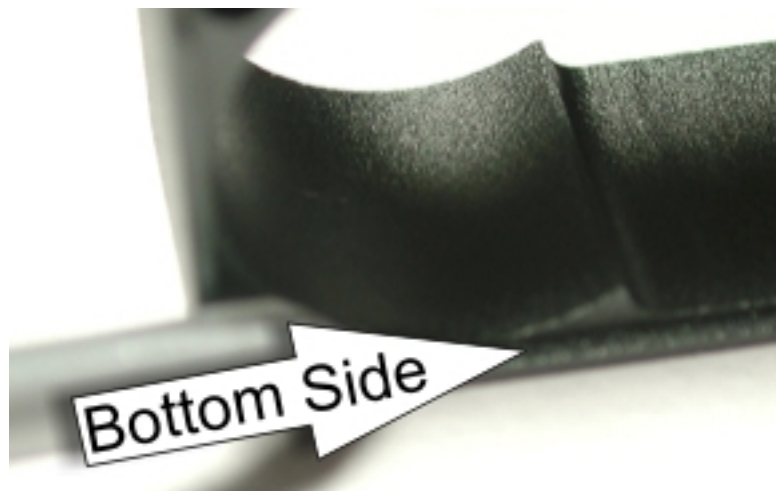
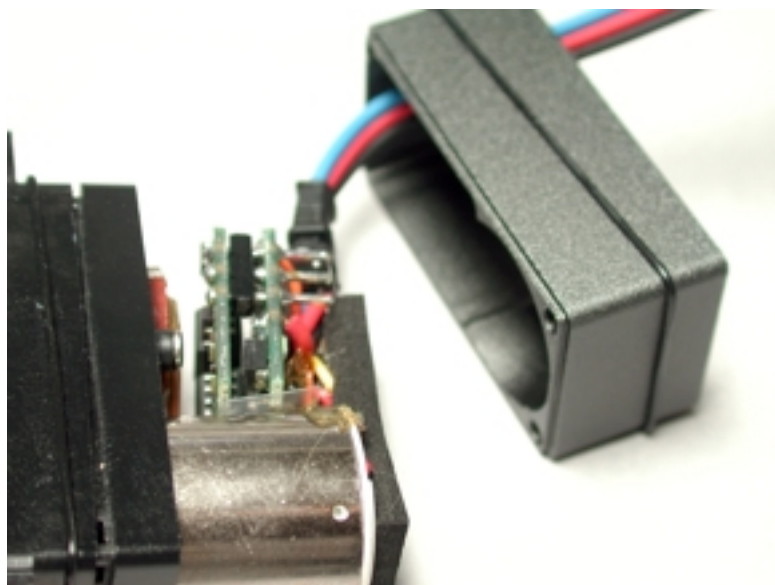


Install foam protector in place between the PC board and Pot.



Slide servo wire through the aluminum heat-sink and install 2 O rings around the middle of the heat-sink.

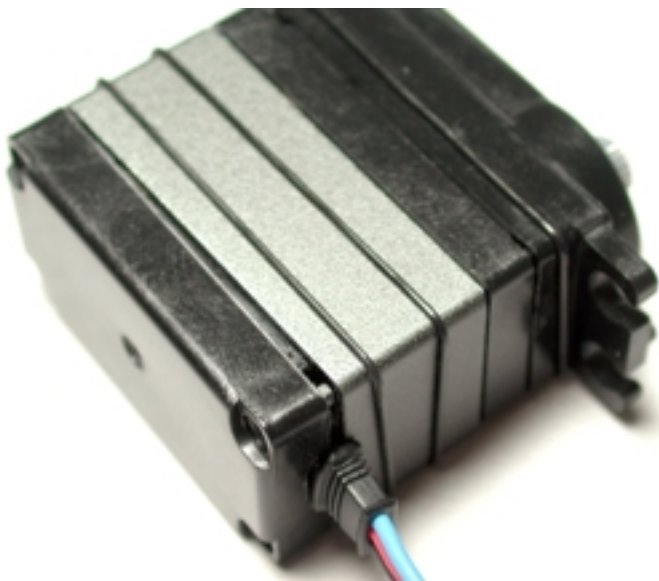
NOTE: The Aluminium Heat Sink is designed to be installed only in one direction. Look closely at the picture below to identify the direction.



Slide the clear plastic protector down between the lower mid case and the PC board.



Install the lower servo case with 4 long screws, do not tighten. You will need to slide all 3 O rings into place before you tighten and secure the case.



Tighten servo case and check servo operation.

END OF 101

