



40 - 60 Size Main Gear Retracts



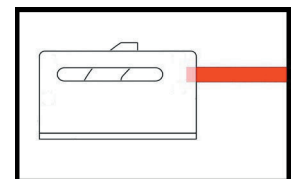
Thank you for purchasing 3DXtreme's 40 - 60 size Main Gear Retracts. Our gear are unlike any other on the market. Aside from the fact that they are machined from High Quality Aircraft-Grade Aluminum, (Not molded plastic like many of our competitors), the unique Over-Center Spring design allows the most effortless operation of any unit available.

Setup:

Before installing the gear, the pushrod must be attached (Note: You may use the gear without the pushrod to plan your mounts, but the pushrod must be attached before final installation). The gear are designed to use a Flexible Nylon pushrod, but you may use a solid wire instead if you choose (See section on using solid wire pushrod).

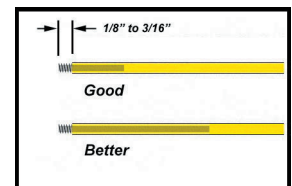
For Flex-Rod Installation:

1. Insert a piece of outer flex-rod into the hole on the side of the gear. (Fig. 1)



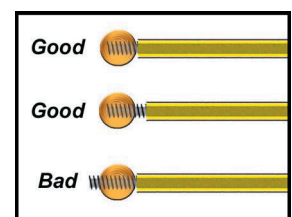
(Fig. 1)

2. Screw the threaded rod into the end of the inner pushrod, or insert a longer piece of 2/56 pushrod into the end of the inner rod. In either case, cut the end of the threads so that no more than 1/4" of thread protrudes from the end of the inner tube (3/16" is ideal, but the dimension is not critical). (Fig. 2)



(Fig. 2)

3. Insert the inner rod through the outer housing until it protrudes into the unit, Slide the Actuator Pin into the unit and screw the pushrod into the threaded hole in the actuator pin. (Note: When the actuator pin is installed properly, it will be aligned with the sides of the retract unit) It is very important that the pushrod screw DOES NOT protrude from the far end of the actuator pin. (Fig 3)



(Fig. 3)

Using A Solid Wire Pushrod

If you choose to use a solid wire pushrod, you will need to add a small length (About 2") of inner Flex-Rod tubing over the wire at the actuator pin end (Fig 4).

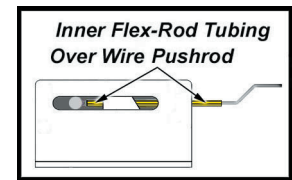


Fig. 4

Adjusting Spring Tension:

While the gear are set up at the factory to greatly reduce the strain on your servo, you'll find that by turning the screw on the side of the housing (Opposite the Actuator Arm) you can adjust the spring tension if needed to support larger, heavier wheels.

If you have tightened the spring as far as it will go and you still want more spring tension, you can shorten the spring by cutting it with a pair of cutting pliers.

To cut the Over-Center Spring:

1. Remove the 4 screws on the side of the housing.
2. Gently pry the two halves apart. As you do, you'll notice that the Over-Center Spring is attached to a screw that goes through the front (Screw Side) of the housing. Once the two halves are separated, the screw will easily slide out.
3. Remove the screw from the end of the spring and cut 1/8" off of the end of the spring, then replace the screw.
4. With the gear in the retracted position, pull the screw past the outside of the housing and place the removed side back in place making sure that the screw slides into the slot.
5. Replace the 4 screws.

Installation:

Installation is like most sets. Just install the retract into the mounting plate in the wing and secure each unit with 4 wood or sheetmetal screws. One thing to note is that the Strut does not come out of the center of the unit, but rather it is slightly offset and the two units are mirror images of each other. This usually does not create any problem, nor does it matter which gear goes in which wing, we only mention it to show you that the offset is there, and that this can be used to an advantage (Albeit very small) to position the gear slightly forward or back depending on which way they are installed.

1. Guide the pushrod through the wing until the gear is in position. If using a Flexible pushrod, anchor the outer housing to the wing where it will not interfere with the retracted wheel. If the unit ever needs to be removed, the pushrod housing can stay in position.

2. Connect the ends of the pushrods to the servo so that they have a travel of 1".

3. Pull the pushrod so the gear are down and locked, and connect the pushrods to the servo and check for proper operation.

