

Installing and Adjusting your 8IGHT Throttle/Brake Linkage

Before proceeding, become familiar with the operation of your radio system. Refer to your operation manual and become familiar with the End Point Adjustment (EPA) or Travel Adjustment for throttle, brake, and all trim adjustments.

Brake Disc and Pad Set-up

Proper brake pad to disc clearance is essential for optimal braking performance, use this method for initial set-up and maintenance and to check the presets from the factory. Due to normal brake wear, this setting should be checked after every 60-90 minutes of use.

1. With the radio tray powered off and the throttle servo arm removed, move the brake linkage wires towards the engine to the full throttle position.
2. Push the brake pads closed towards the center diff mount by hand. The brake cams and linkage should not engage, if they are engaged the pads will not compress all the way to the center diff mount.
3. Using a 4-40 washer as a gauge, adjust the brake screw to set the gap between the head of the screw and the brake pad to .020 - .030" (0.5 - 0.75mm). The washer should fit snug into the gap. (Fig. 1)

NOTE: Removing the center diff assembly will make this adjustment easier.

4. Repeat on all four brake screws.

Installing the Throttle Linkage

1. Turn on your transmitter. Adjust the throttle trim on the transmitter to the neutral or centered position, this will allow for fine adjustment later.

2. With the servos, receiver, switch and charged receiver battery installed and connected, turn on the radio tray. When throttle is applied, ensure the servo is rotating in the proper direction. (Fig.2)

NOTE: To change the servo rotation, locate the servo reversing function on your transmitter and switch the direction of the servo.

3. Select a servo adapter that matches the number of splines on your servo (refer to your owners guide).

4. Place the servo arm adaptor onto the output shaft of the servo. Aligning the throttle servo arm parallel with the side of the servo case, place the arm onto the splines of the adaptor. If there is a slight angle, use the trim adjustment on your radio to position the arm as shown (Fig. 3). Secure the throttle servo arm with the screw supplied with the servo.

NOTE: If the arm cannot be positioned as shown using trim adjustment, the angle can be changed by removing the arm and adaptor and rotating the adaptor one spline in either direction until the arm is positioned as shown (Fig. 3).

5. Snap the throttle linkage ballcup onto the carburetor ball. The linkage should be level with the bottom of the chassis, and NOT hitting the servo case. Test for free movement. If necessary, rotate the ball/ring on the carburetor. (Fig. 4)

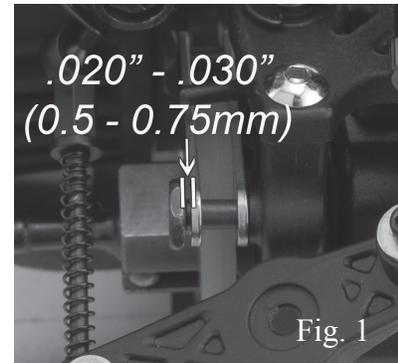


Fig. 1

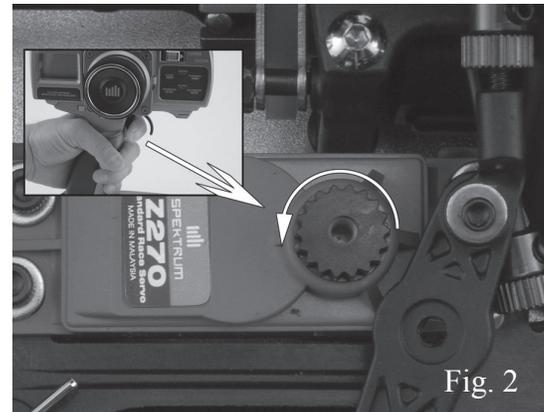


Fig. 2

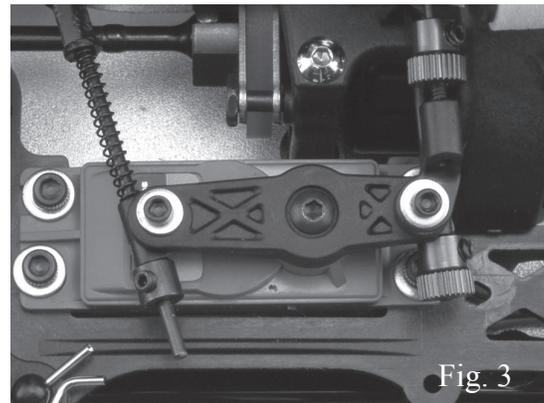


Fig. 3

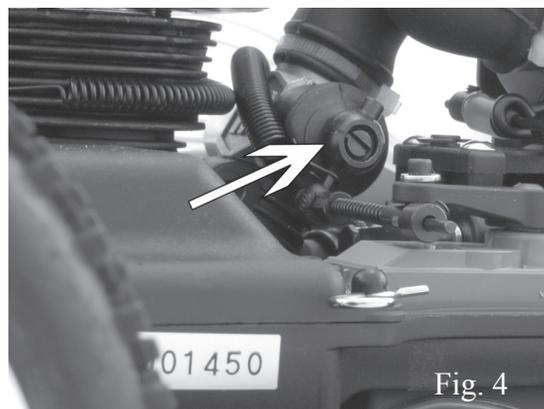
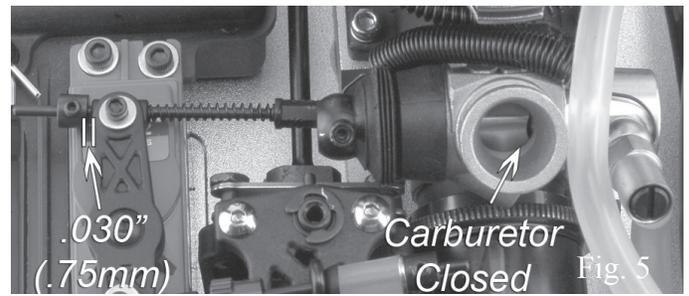


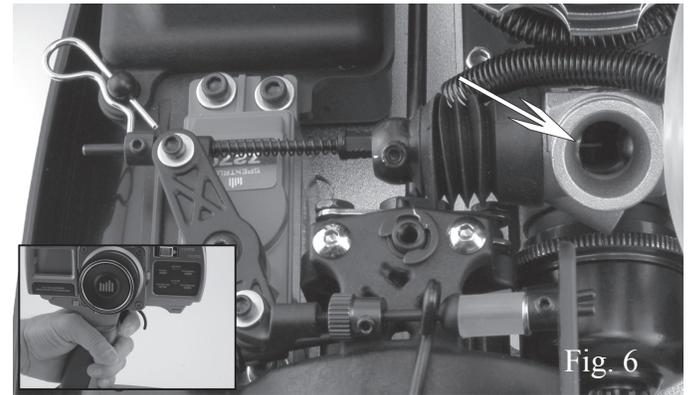
Fig. 4

6. With the air filter assembly removed from the carburetor, adjust the collar so that there is .030" (about the thickness of a #4 washer) space between the throttle actuator and adjustment collar (Fig. 5).

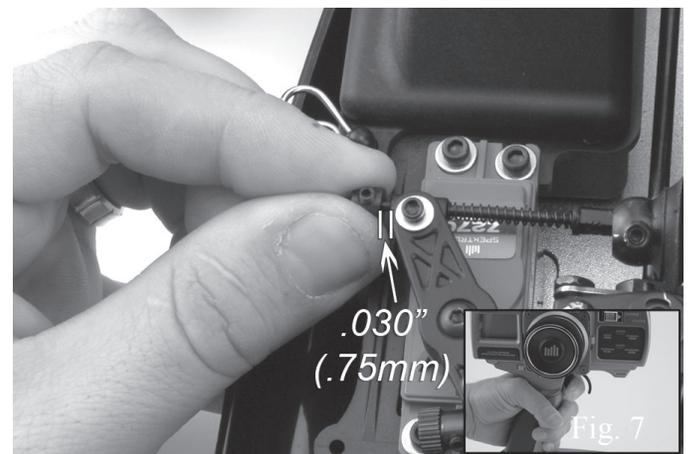


7. Watch the throttle linkage as the transmitter trigger is slowly moved to the full throttle position. Adjust the throttle EPA on the transmitter so that the carburetor only opens 90-95% of its total travel (Fig. 6).

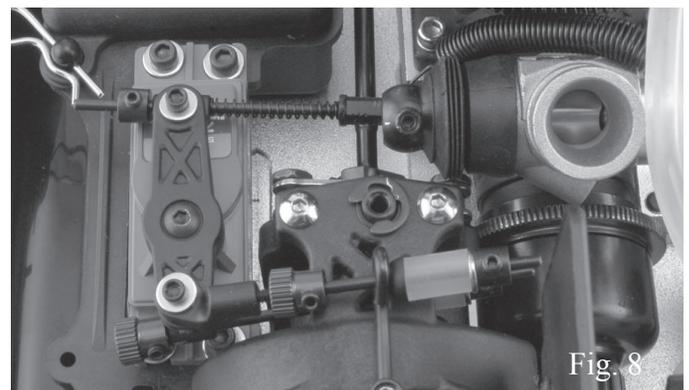
NOTE: Never set the carburetor to open 100% of its travel, some play must be left to allow for chassis flex. This adjustment will not affect the overall performance of the vehicle.



8. To ensure that the EPA or Travel Adjustment is set correctly, apply full throttle on the radio and gently pull on the throttle linkage rod. There should be at least 0.030" (0.75mm) of additional travel (Fig. 7).



9. Return the throttle to the neutral position and check the linkage. Repeat a couple times to make sure all linkage is free and not binding. If correctly adjusted, the linkage will return the same position every time. (Fig. 8)



The throttle portion of the linkage adjustment is now complete. Do NOT proceed if the above test does not work, repeat the procedure if necessary.

Adjusting the Brake Linkage

1. With the throttle in the neutral position, adjust the brake linkage rods as shown. Note the amount of thread showing on each brake rod.(Fig. 9)

2. Slide the collar (black) along the front brake rod (upper) towards the fuel tubing, until there is no play left in the linkage. The fuel tubing should NOT be compressed. Repeat this process for the rear brake rod (lower).

NOTE: The upper adjustment rod is for the front brake and the lower for the rear brake (Fig. 10).

3. At the end of this adjustment process, the brakes should NOT apply any resistance at the neutral throttle position.

From adjustment in step 2, the brakes may be applying some resistance which can be felt by rotating the spur gear by hand through the bottom of the chassis. To ensure there is no resistance, rotate each of the adjustment knobs (blue) one turn in the clockwise direction (Fig. 11)

4. Check the adjustment, apply full throttle and return to neutral and check the brakes for resistance. Repeat a couple times and check for consistent operation.

5. Watch the brake linkage as the transmitter trigger is slowly moved to the full brake position. Adjust the brake EPA of the transmitter so that when full brake is applied the spur gear is difficult to turn by hand. The brake EPA can be adjusted later to get the desired amount of brake for various driving conditions.

8. Before proceeding, move the trigger to the full brake position and check the throttle return spring to ensure that it is not compressed completely.

NOTE: If the throttle return spring is fully compressed, the most probably cause is either the throttle servo arm is installed improperly or the EPA is set too high. Proper adjustment should allow for at least .250" (6.5mm) of additional movement in the full brake position.

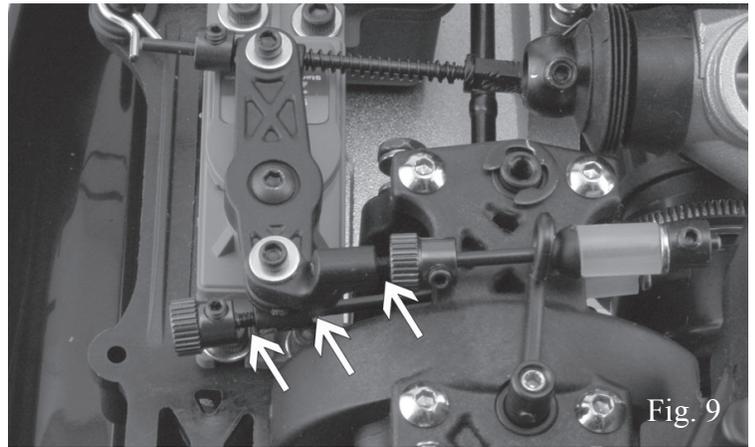


Fig. 9

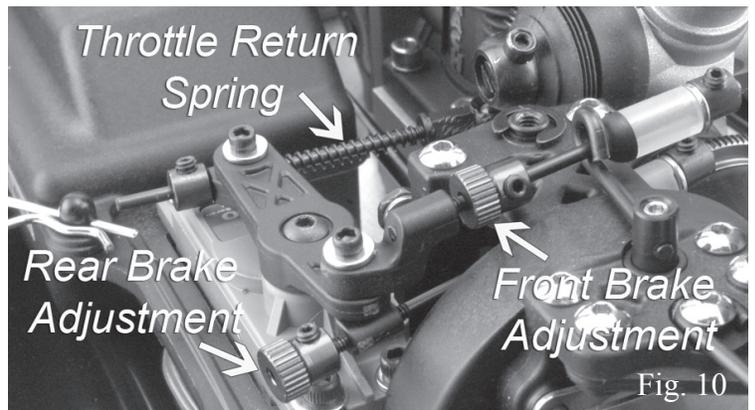


Fig. 10

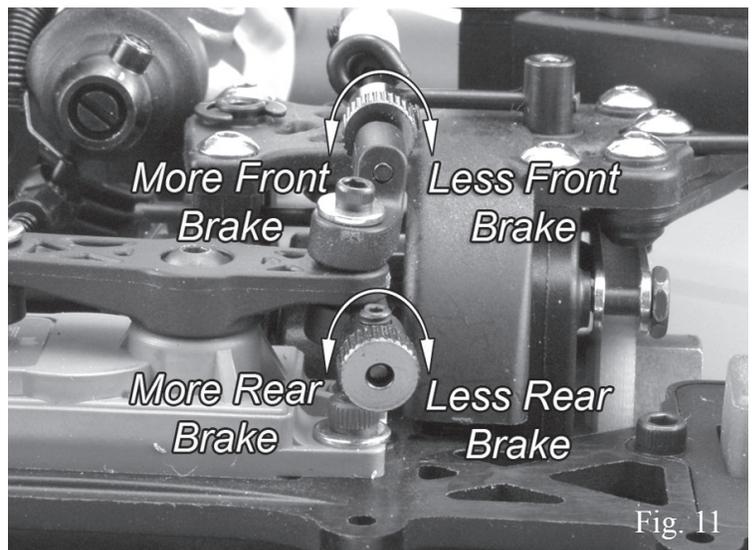


Fig. 11

The brake portion of the linkage adjustment is now complete. Do NOT proceed if the above test does not work, repeat the procedure if necessary.

Checking the Brake Bias

Brake bias is the difference between the amount of rear and front braking pressure.

1. To check the amount of rear brake bias, place the vehicle on a table, move the trigger to the full brake position and press down on both front and only one rear wheel to keep them from rotating.
2. Lift the remaining rear wheel off the table and rotate it in the forward direction. The resistance required to rotate the wheel, is the amount of rear brake being applied. This may vary from little resistance to full lock up.
3. Take note of how much resistance is required to turn the wheel.
4. Repeat for the front brake by holding both rear and only one front wheel. Again moving the trigger to the full brake position and rotating the other front wheel, noting the resistance required.
5. Do this several times for both the front and rear brakes to establish a "feel" for the applied braking resistance. Often the resistance will be different from front to rear.

Adjusting the Brake Bias

1. For most applications, begin by setting the braking bias to 40% front, 60% rear.
2. Brake bias is adjusted by adding or removing either front or rear brake. It is best to add to the under-powered brake to obtain the desired bias.

For example: if there is too much front brake bias, add rear brake by rotating the upper adjustment knob counter-clockwise. If there is too much rear brake, add front brake by rotating the upper brake knob counter-clockwise to obtain the desired bias.

3. Adjust only ONE brake rod at a time, a maximum of a $\frac{1}{4}$ turn, and re-check the bias with the method used above. Repeat until the desired brake bias is achieved.
4. Return the throttle to neutral and turn the spur gear by hand. No resistance should be felt while turning the spur gear at neutral throttle.
5. If the brakes are dragging, turn BOTH adjustment knobs clockwise the exact same amount ($\frac{1}{4}$ turn at a time) until the spur gear turns freely.
6. Always go back and check the bias after making any adjustment.
7. The brake system requires very little pressure to operate, and should engage quickly with only a small amount of servo arm movement (0.050")(1.3mm).
8. The brake bias has now been set, and linkage adjusted, final braking power will be set later for various driving conditions.

Linkage Adjustment Checklist

- 1. The linkage must be free for movement and not bind.
- 2. The linkage should not hit anything, servo, body etc.
- 3. The servo should not move more than 0.050" (1.3mm) before the brakes start to engage.
- 4. At least 0.250" (6.5mm) of travel should be allowed for the throttle return spring.
- 5. The brakes should not drag at neutral throttle.

If any of these conditions exist, the linkage has not been properly adjusted, repeat this procedure until the linkage has been properly adjusted