BEFORE YOU RUN THE CAR

About the glow fuel:

The engines used for the ACME TECH nitro CONDOR require glow fuel. To get the proper fuel is very important for long engine life. Improper fuel can cause starting problems, poor performance, and excessive wear on the engines. There are many brands of glow fuels, however they must meet the following requirements:

1.Use a popular name brand of glow fuel.
2.Try to keep the nitro (nitro methane) between 10%-30%!
3.Do not use any type of airplane or helicopter fuels. The fuels for airplanes or helicopters may not have the necessary oil types and ratios needed for R/C cars.
4.Be careful not to purchase gasoline or kerosene by mistake. Both cannot be used! Also, be very careful when handling glow fuel. It is highly flammable and explosive.

About radio system (Refer to radio manual)

Read the instructions that come with your radio. You should understand the operation of your transmitter. Place eight AA batteries in the transmitter, and insert another 4 AA batteries into the battery case. It is important that all the batteries are fresh.
Always check the path and the condition of the battery case wires as well as the switch wires. A broken wire can cause a short circuit and lead to a loss of control.
Always turn your transmitter on first and off last. If you start your car before turning on your transmitter, you will lose control of the car and cause damage to property and your car.
Test the following radio functions without the engine running:

1.Turn on the transmitter.
2.Turn on the car receiver battery pack switch. Both the steering and throttle servos should move to their respective neutral settings.
3.Turn the steering wheel on the transmitter left and right. The front wheels should turn left and right (when viewed from behind). Use the steering trim adjustment to set the neutral (wheels pointing straight ahead) setting on your car. If your servos are slow, check your batteries.
4.Pull the throttle trigger. The carburetor should open on the engine.
5.Push the throttle trigger open and forward. This will activate the brakes.
6.Use the throttle trim adjustment to set the neutral (carburetor closed, brakes starting to engage) setting on your car.
7.Hold the throttle open and roll the car on the ground. The car should roll freely. While it is still rolling, push on the brakes. The car should come to an immediate stop. If these steps do not produce these results refer to the linkage assembly setup in this manual.

Refer to your radio instruction manual.

About the carburetor:

Let's check the carburetor linkage before you fire up the engine for the first time.
Pull off the air filter. Turn the transmitter on first, followed by the car.
With your finger off the throttle, which is the neutral position, the throttle should be almost closed, with an opening about 0.7~1mm.
Pull the throttle wide open and look into the carburetor and see if it's opening all the way up. If you don't see the gap, adjust the Throttle End Point Adjustment on your transmitter according to the radio manual, or adjust the linkage shown earlier in this manual to achieve full throttle. When everything is adjusted OK, remember to turn the switch off in your car first, followed by your transmitter. Now, place the air filter back on your carburetor and fasten it with a tie wrap.

Checklist before running

Ensure all screws are securely tightened.
Ensure all moving parts move without binding.
Install an oiled air filter. Ensure it is clean and not clogged.
Ensure the fuel line is leak proof, with no cracks. Ensure it is not clogged.
Ensure the muffler and exhaust are damage-free.
Ensure the radio batteries are fresh. Ensure they are securely installed.
Ensure servos and linkages move without binding.
Ensure the area of operation is safe.
Ensure no one is on your frequency.

Break-in the engine

The break-in step is required for brand new engines. If you fail to properly break-in an engine, you will cause permanent and premature damage to your engine. Engine operation and tuning will become difficult and engine life will be shortened. During the break-in period, do not operate the engine at high rpm's!

1. Start the engine using either a Starter Box or Hand starter.
2. Place the car on top of a stand with the wheels off the ground.
3. Slowly raise the throttle and check to make sure the tires spin and the brakes work.
4. Break-in the engine. Allow the engine to idle for 5 minutes, then shut down and allow it to cool. Repeat this procedure for an entire tank of fuel. After the first tank, begin to run the car at low speeds. After each tank of fuel is consumed, tighten the main needle valve 10° ~20° . Monitor engine temperature during this process. You want to slowly bring the temperature of the motor up to around 200F. Make sure there is plenty of smoke coming out of the exhaust. During this time you may need to adjust the idle and bottom end needle valves setting as well. Bottom end setting should be set so that the engine blubbers on take off. Idle should be just high enough to prevent the engine from shutting off.
5. Run the engine a total of 5 tanks of fuel to complete the brake-in.

Engine adjustment

Adjust in the order 1, 2 and 3 after completing the break-in.

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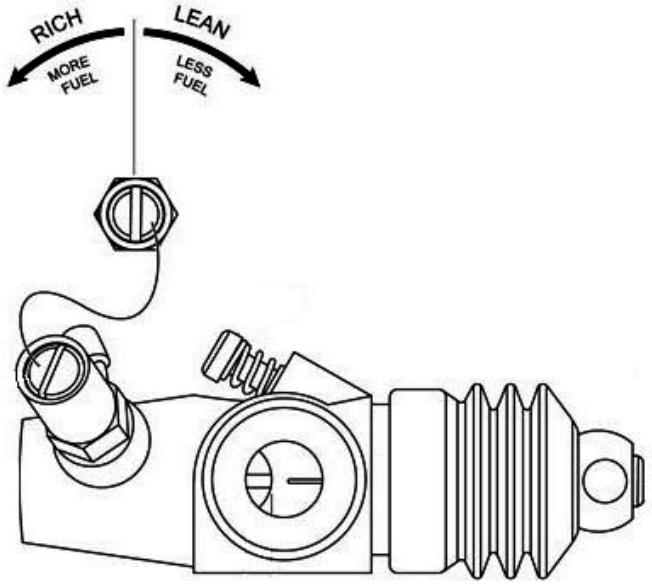
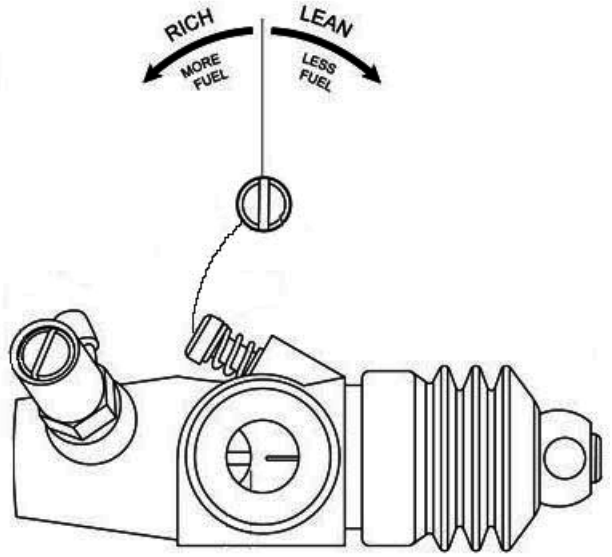
1. High-speed needle adjustment

Start the engine and run your car until motor reaches operating temperature.
NEVER MAKE HIGH-SPEED NEEDLE ADJUSTMENT UNTIL MOTOR REACHES OPERATING TEMPERATURE!

Monitor the top speed of your car at full throttle. When tightening (leaning) the high-speed needle 10° ~20° degrees, speed increases. As your car reaches top speed, the needle valve setting is optimal. Tightening the high-speed needle further will cause a decrease in both engine rpm and exhaust emissions.
Running the engine with this setting (too lean) will cause engine damage. Unscrew (richen) the high-speed needle at once.
Note that for normal operation, unscrew the main needle valve 10° ~20° from the optimal setting position! Normal operating temperature for most motors is between 200F to 250F.



2.Idle adjustment screw

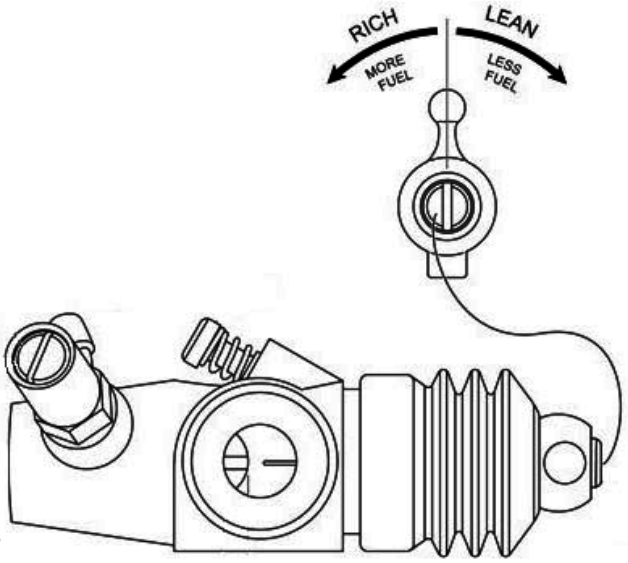


Set throttle position to neutral (carburetor in closed position.)

I.The engine stalls. --Tighten by 1/8~1/4 turns.
II.The car rolls forward or idle is too high.

--Unscrew by 1/8~1/4 turns.
Adjust the idle so the car will not speed off when the throttle is in neutral and the brakes are not applied.

3.Low-speed needle adjustment



Allow motor to reach maximum rev's for 1~2 seconds then set throttle position to neutral (carburetor in closed position.)

I.Idle stays high for 5~6 seconds, then drops to normal idle, then shuts off.
--Tighten by 1/8~1/4 turns (low-speed needle too rich.)

II.Idle drops to normal then rises.
--Loosen by 1/8~1/4 turns (low-speed needle too lean) Adjust bottom end so that engine idles smooth for at least 30 seconds. Upon applying throttle, the engine should emit a good amount of exhaust smoke. After applying full throttle and returning to the neutral position, engine should return to normal idle within 1~3 seconds.

IMPORTANT!

NEVER run your nitro powered R/C cars without an oiled air filter on. The air filter is essential for keeping dirt out of the engine. The air filter should be inspected carefully every time you refuel.

When the air filter starts to get dirty, do the following steps:
1.Clean the foam out with fuel or alcohol. Do this by pouring a small amount in a small can and kneading the filter in it. When the foam is clean, dispose of the fuel or alcohol properly.

2.Squeeze out the fuel with a paper towel until it's dry.
Apply the air filter oil around the filter, put the filter in a plastic bag and knead it until the filter is saturated, but not soaked.

MAINTENANCE

Before storing your car away, draw out any fuel from the fuel tank. Next, restart the engine to combust remaining fuel. Leaving fuel inside the engine will make engine starting difficult and may cause rust. Apply after-run oil to the engine. Wipe off dirt and oil. Check all parts for loose screws. Disconnect the receiver batteries.

OPERATING YOUR MODEL SAFELY

1.Operate the model in open areas with no people around! Do not operate it:
on public roads!
in places where children and people are present!
in residential districts and parks
indoors and in confined areas.
Non-observance may account for personal injury and property damage!

2.Always check the batteries in the transmitter and the battery pack for the receiver!
When the batteries get weak, the transmission and reception of the radio decrease. Youmay lose control of your model then operating it under such conditions. This may lead to accidents.

3.Keep in mind that people around you might also be operating a radio control model!
Never share the same frequency with somebody else at the same time! Signals will be mixed and you will lose control of your model. This may lead to accident!

4.Always use approved ground frequencies!

5.When the model is behaving strangely...
Immediately stop the model and check for the cause. As long as the problem is unclear, do not operate the car! This may lead to further trouble and unforeseen accident!

6.Handle fuel outdoors only!
Fuel vapors and exhausts are toxic!

7.Do not put fingers or any objects inside rotating and moving parts!
Parts rotate/move at high speeds, you may be seriously injured!

8.After using, do not touch equipment on the model such as the engine and muffler, because they generate high temperatures!
You may cause severe burns to yourself by touching them!

9.Use only glow fuel for this radio control model!

10.Fuel is highly flammable and explosive!
Never use fuel indoors or in places with open fires and sources of heat!
Store fuel in cool, dry and dark places. Keep out of children's reach! Shut the cap tightly!
Do not dispose of empty of fuel cans into fire! There is danger of explosion.

11.Do not swallow fuel. Do not allow for contact to eyes, nose, face and ears!
If fuel is swallowed, induce vomiting. If fuel gets into eyes, rinse them with water and seek medical help.