

# CLT JL CCK Drive Clutch Tuning Kit for 1992 ~ 2006 DS & Precedent, FE 290 & FE 350 Engines

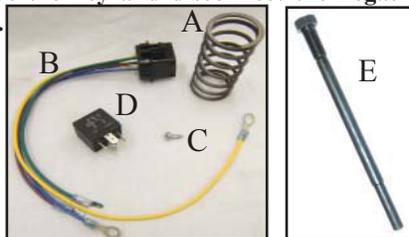
**WARNING: THIS KIT DOES NOT ALLOW SHIFTING OF GEARS WITH ENGINE RUNNING.**

## INSTALLATION INSTRUCTIONS

**⚠ CAUTION:** Remember to wear appropriate eye protection while performing the tasks in this instruction. Be sure to remove the key and disconnect the negative battery cable to prevent accidental start-up.

### Parts List

- A. Clutch Tuning Spring
- B. Relay Harness
- C. Screw
- D. Relay
- E. Clutch Removal Tool (Not included)



### Drive Clutch Tuning Spring Installation

1. Use the clutch puller tool (BU Part # TLSCC25707, not included) to remove the drive clutch. Depending on what previous modifications have been performed to your cart you may have to raise and support the rear of the car and remove the rear passenger side wheel for access to the drive clutch. **Once removed, draw a line down the outside of the drive clutch sheave and cover for correct alignment of the parts when assembling later.** See figure 1.

**NOTE: Clutch Center Bolt - 1992 ~97 = RH Thread and 1997 ~ Newer = LH Thread**

2. Remove the plastic hole plugs protecting the threaded holes on the outside cover of the clutch. Then using an appropriate puller as shown in figure 1, separate the outer clutch cover from the inner sheave by tightening the puller center bolt until the clutch cover pulls free.
3. With the clutch apart, have a friend assist by pressing down the inner sheave evenly with both hands, so the snap ring can be removed. See figure 2.

**⚠ CAUTION:** Once the snap ring is removed, be careful when releasing the sheave because it can spring upward unexpectedly.

4. Lift off the inner clutch sheave along with the existing spring, nylon spring retainer, steel spring seat washer and idle bearing assembly. See figure 3.
5. Pry the steel spring seat washer off the bottom of the stock spring using a flat blade screwdriver. See figure 4. You will need to bend the tabs of the spring seat washer inward as shown in Figure 5, just until the washer will seat into the bottom of the new Tuning Spring (A).
6. Reassemble the clutch pieces in reverse order: Idle bearing assembly first, then the spring with spring seat washer against the bearing, next slide the nylon spring retainer down inside the spring, and lastly, install the inner sheave. See figure 6.
7. With an assistant holding the sheave down against the spring tension, install the snap ring to secure the clutch sheave onto the clutch main shaft. See figure 2.

**⚠ CAUTION:** Until the snap ring is locked into its groove, be careful compressing the sheave because it can spring upward unexpectedly. Don't try this without assistance

8. Align the nylon slides in the outer clutch cover with the bosses on the inner sheave along with the woodruff key slot on the inside of the outer cover and slip the cover into place.

### Tech Tip -

Your clutch will operate smoother with reduced wear, when a dry moly or dry graphite lubricant is added to the nylon slides and to the area of the sheave where the slide contacts. **NEVER use grease or anything that remains tacky, as this will attract dirt and cause problems.**

9. Install the clutch and torque the clutch retaining bolt to 23 to 28 ft. lb..

**DO NOT use an impact gun or you will risk permanently seizing the drive clutch to the crankshaft.**



Figure 1 - Clutch Cover Removal



Figure 2 - Snap Ring Removal



Figure 3 - Spring Removal



Figure 4 - Spring & Spring Seat Washer

## Key Switch Ignition Install

1. Remove the solenoid compartment cover under the seat. Figure 7.
2. Locate small terminal of the starting solenoid with a blue wire and add the blue wire from the Relay Harness (B) to this terminal. See figure 8.
3. Disconnect the white wire with black stripe from the lower micro switch next to the throttle rotor and connect it to the purple Relay Harness wire. See Figure 9.
4. Disconnect the orange wire from the upper micro switch next to the throttle rotor and connect it to the green Relay Harness wire. Figure 9.
5. Install the solenoid box cover and **be careful not to pinch any wires**.
6. Secure the Relay Harness to the solenoid box cover using the supplied Screw (C)
7. Plug the Relay (D) into the Relay Harness. Figure 11.
8. Connect the yellow wire from the Relay Harness to a suitable ground.

### NOTE:

This product modifies the pedal start ignition. The car will now start and run with either forward or reverse selected and the key switch 'on'. The car WILL NOT idle in neutral. It will merely crank over until the battery is dead. If you would like to have the car idle in neutral you will need to bypass the micro switch on the forward / reverse handle. To do this, remove the green & black wires running to the outer micro switch on the back of the handle (under the seat) and add a jumper between them. Figure 13.

## Idle Speed Adjustment

It is necessary to ensure that the idle speed is set high enough to allow the starter / generator to charge the vehicle battery at idle.

1. Raise the rear of the vehicle and support with jack stands
2. Place the vehicle in neutral and start the engine. If you have not bypassed the F/R micro switch, place the vehicle in diagnostic mode by pulling the neutral lockout cam outward, then rotating 90 degrees. Figure 13.
3. Remove the throttle cable cover on the engine to expose the idle set screw. Figure 12.
4. Adjust this screw in to raise the idle speed to about 1000 RPM or until the drive clutch engages the drive belt. Then back the idle down below the clutch engagement RPM.
5. Verify with a voltmeter that the battery shows around 13 volts while idling. This verifies the starter / generator is charging.
6. Reinstall the throttle cable cover and restore the vehicle's F/R switch to normal operating



Figure 5 - Steel Spring Seat

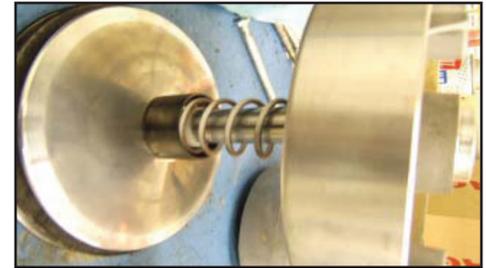


Figure 6 - Order of Assembly



Figure 7 - Remove Solenoid Compartment Cover



Figure 8 - Solenoid Connections



Figure 9 - Relay Wire Connections



Figure 11 - Relay Mounting Position

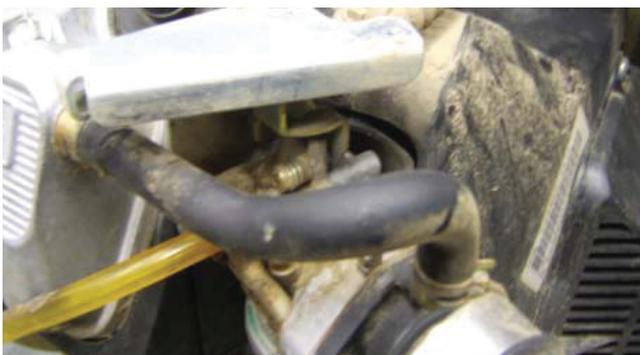
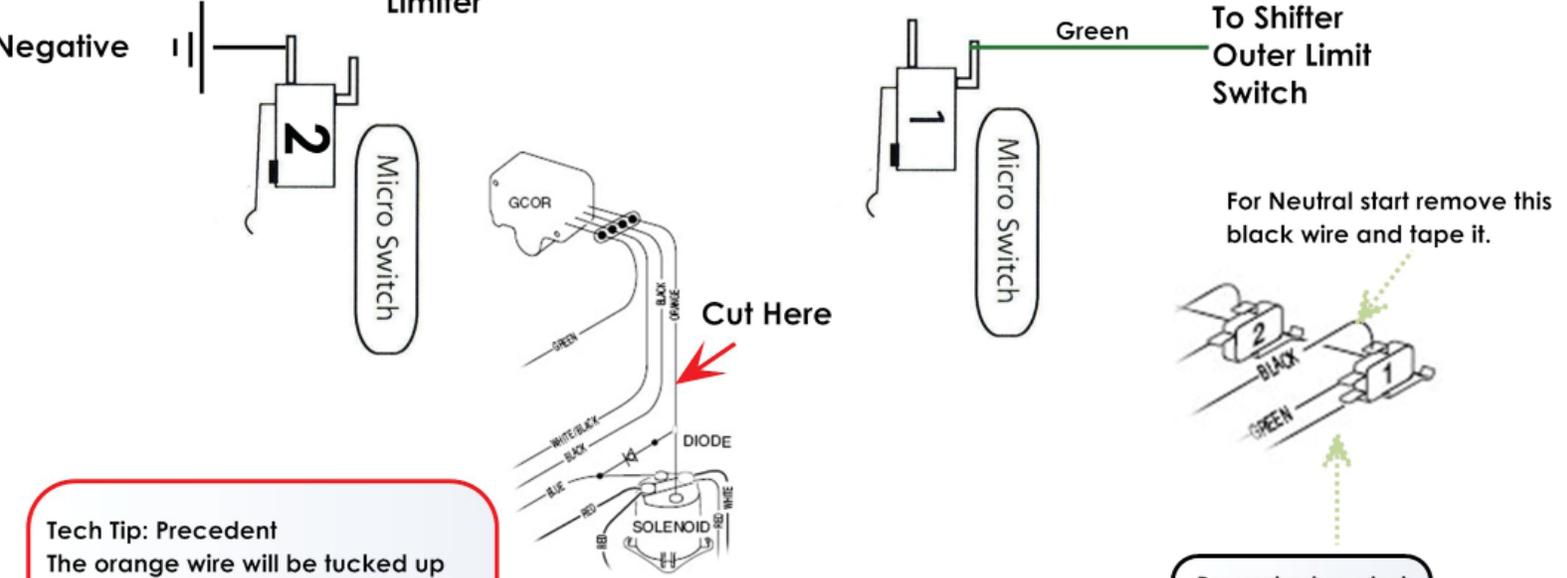
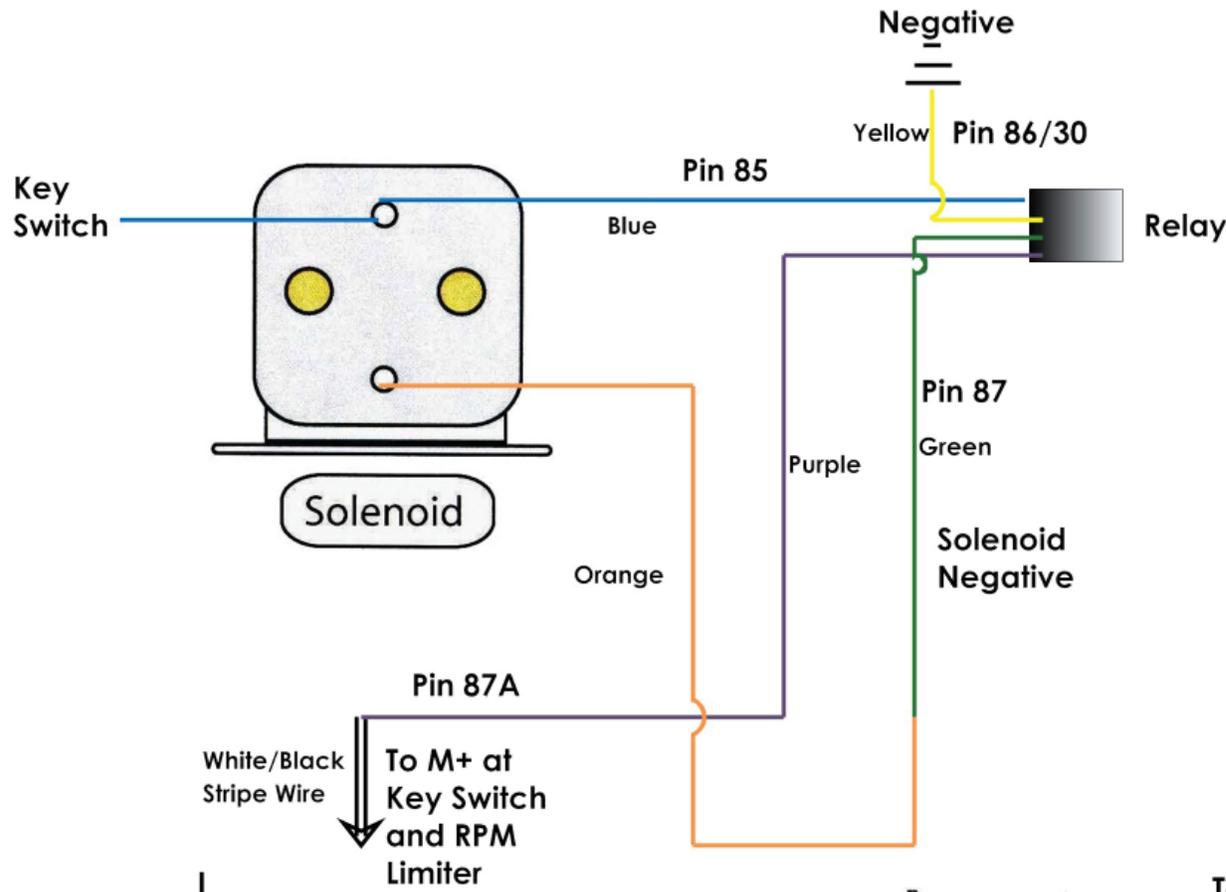


Figure 12 - Idle Set Screw



Figure 13 - Neutral Lockout Cam

# DS Models & Precedent Models



**Tech Tip: Precedent**  
The orange wire will be tucked up inside the black wire loom covering. Cut above the area where the two orange wires are crimped together.

The relay supply's battery negative to the solenoid at key switch on. At the same time the purple wire becomes an open circuit to the magneto kill circuit.

Precedent neutral start is the same procedure.

For Precedent Models connect the blue and yellow relay wires exactly the same. The orange wire will need to be cut above the diode tucked inside the gray wiring loom. Connect the green relay wire to the half with the diode going to the solenoid.

For the M+ and RPM limiter kill circuit cut the white and black stripe wire entering the GCOR. Connect the purple relay wire to the white and black stripe wire that is leading into the main harness (not the half going into the GCOR).