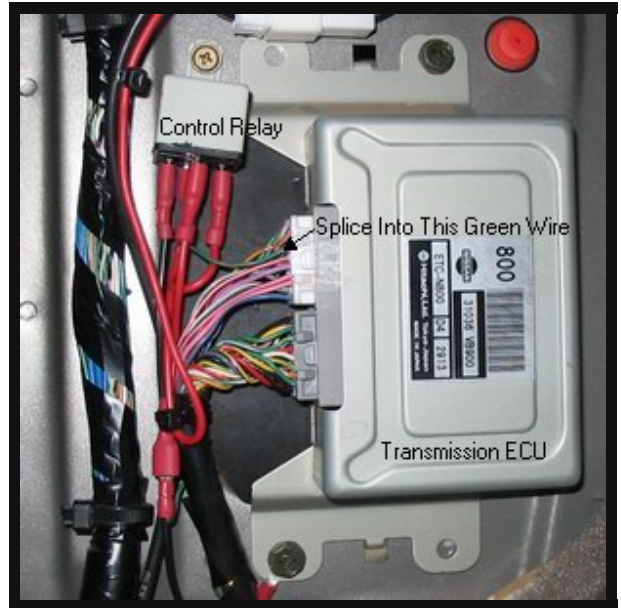


My Manual Converter Lock Switch Circuit

This circuit was designed for the GU Nissan Patrol 3.0Di using the Jatco RE4R03A Transmission. It could also be used on the GQ petrol & diesel models using the same transmission.

The TCU is located behind the passenger side kick panel. The wire that needs to be cut is the green one with the orange stripe on terminal 3. (Top plug, 3rd wire down)

The circuit below connects into this wire that runs between the TCU and the converter clutch solenoid.

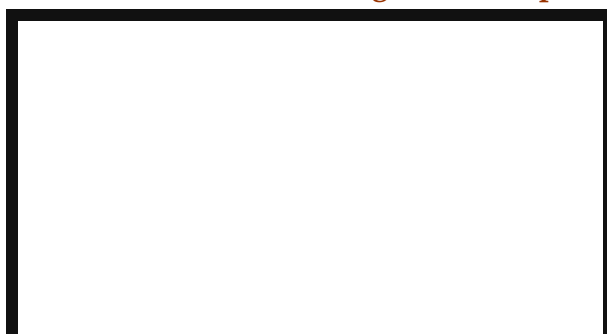


The relays are Narva 30Amp with suppression resistors on the coils, and the dash switch is also a Narva unit.

I used a momentary foot switch from Jaycar and mounted it onto the left foot rest, as close to the bottom so as not to accidentally depress it.

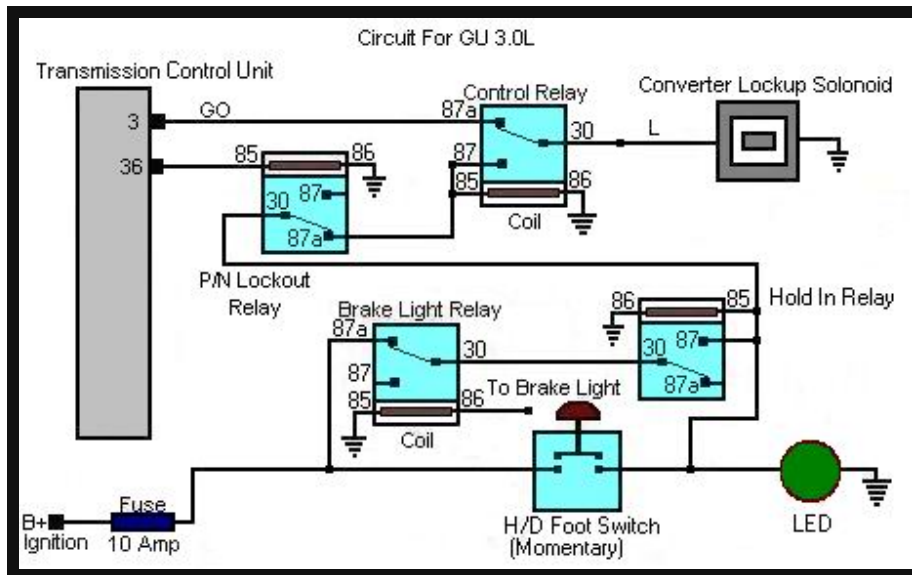


A red LED is mounted on the right hand side of the dash so that it is clearly visible, but not annoying. When the LED is on, the converter is locked, and the vehicle will stall if it's speed is decreased too much. Touching the brake pedal will unlock it.

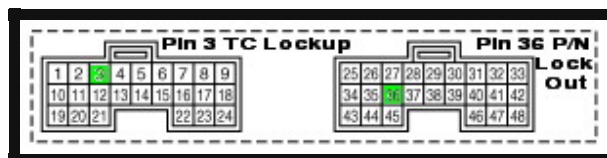




The brake light relay is connected to the green wire on the brake light switch that goes directly to the brake lights. The ignition feed to supply the converter solenoid comes from the cigarette lighter socket because, in my case there is nothing else on that circuit.



TCM Plugs



It's important NOT to lock the converter when the vehicle is stationary and in Neutral or Park. The vehicle needs to be moving eg. forward clutch engaged, because this will load the converter sprag and engine. With the help of a Patrol4X4 Forum member (JFF45), I have included another relay (P/N Lockout Relay) to eliminate the chance of this happening.

I have never tried, or needed to lock the converter in reverse, but see no reason why it wouldn't work. I normally lock the converter in 3rd gear and when driving up long hills, especially when towing, and I use it to improve engine braking. Engine braking and foot braking can happen simultaneously by holding down the momentary foot switch and braking. This system does improve engine braking, particularly in low range and can also improve acceleration and fuel economy while helping the transmission to run cooler. It also enables engine braking in O/D when the converter is locked manually. It does however, require the driver to pay a bit more attention to

his driving method because the vehicle is no longer fully automatic and one can easily find themselves in an embarrassing situation if the vehicle slows too much, eg. how to stall an automatic! It can quickly be switched off by braking or tapping the brake pedal.



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