



POWERTRAIN CONTROL SOLUTIONS
Engineering the future of driveline control.

PCS SFT-5000 Installation Instructions



SFT-5000 Installation Instructions

SFT-5000 Introduction & Theory of Operation

The PCS SFT-5000 is a floor shifter with Tap up Tap Down for GM 6L transmissions. It is a 5 position shifter, Park, Reverse, Neutral, Drive and Sport Mode. The button for Tap control is on the top of the shifter, making it easy to use in both left and right hand drive vehicles. The Tap Up Tap Down is configured for the hardwire input in Pin 7 of the transmission. The SFT-5000 also has the transmission brake interlock feature. The brake interlock prevents the driver from moving the shifter out of park unless the brake is depressed. There is a button to release the shifter from park manually in case the vehicle loses power. The shifter assembly comes complete with the cable and mounting brackets for GM 6L transmissions. Customers that are not using a PCS harness will need to purchase the SFT-4000 connector kit.

Section 1: Shifter Installation

The SFT-5000 requires 12V Switched Power, Ground, 12V from the Brake Switch and a Tap shift wire to Pin 7 on the transmission connectors if you are not using the PCS harness that has the mating connector already installed. The SFT-4000 harness is required for installations that do not have the mating connector already installed. For applications that do not have an option connector, customers will need to order the mating connectors with unterminated wires. **Reference Figure 1.**

Wire Color	Function
Yellow	12V Switched Power
Black	Ground

Park Switch Connection:

The Park Switch wire should be spliced into the brake switch. It should have no voltage until the brake is depressed. The solenoid will release the interlock when it receives 12V.

Wire Color	Function
Yellow/Black	Brake Switch 12V

Tap Shift Wiring:

The Park Switch wire should be spliced into the brake switch. It should have no voltage until the brake is depressed. The solenoid will release the interlock when it receives 12V.

Wire Color	Function
Violet/Black	Tap Shift (Pin 7 on GM 6L Transmission Controller)

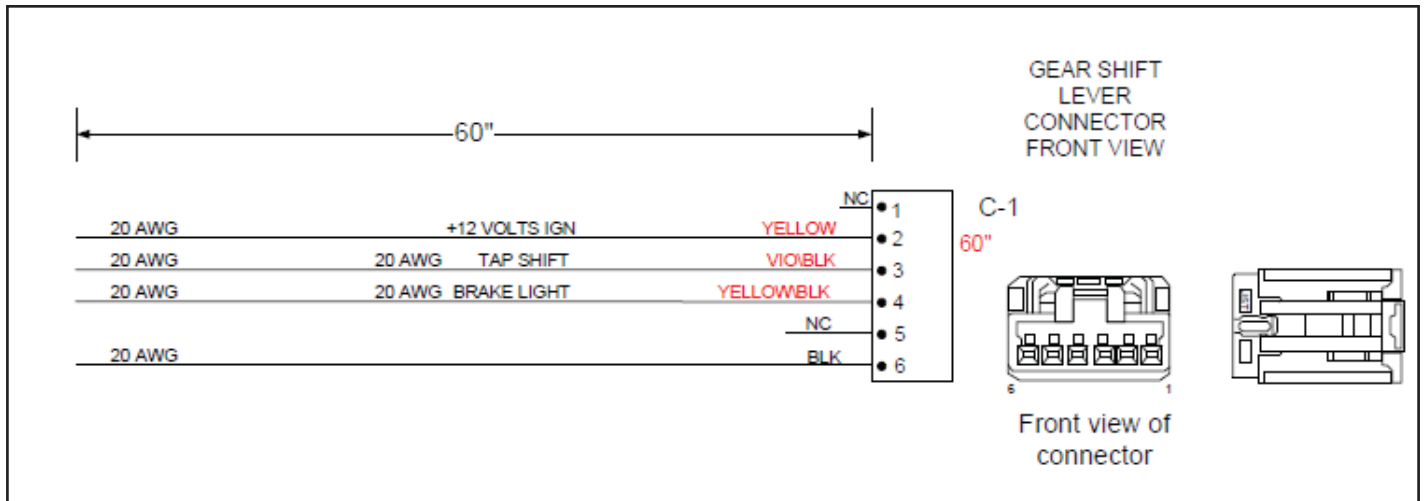


Figure 1: SFT-5000 Shifter Wiring Schematic

Section 2: Shifter Knob Installation

1. The shifter knob is held in place with a self retaining clip. To install, push down on the knob until it locks into place.
2. Prior to securing the shifter boot, locate and plug in the shifter connector. **Reference Figure 1.**



Figure 1: SFT-5000 Shifter Connector

Section 3: SFT-5000 Bracket and Shift Lever Installation Instructions

1. Install shift arm onto shifter shaft. *Reference Figure 1.*



Figure 1: Install Shift Arm

2. Install shift arm nut and tighten. *Reference Figure 2.*



Figure 2: Install Shift Arm Nut

3. Align the two brackets in this orientation. *Reference Figure 3.*



Figure 3: Align Brackets

- Use the provided (2) M8 bolts and nuts to assemble the two brackets together. **Reference Figure 4.**

Note: The bolt heads should be facing away from the transmission.



Figure 4: Assemble Brackets

- Mount the bracket assembly to the transmission using the provided (2) M8 bolts. **Reference Figure 5.**

Note: All bolts should be facing the same direction.

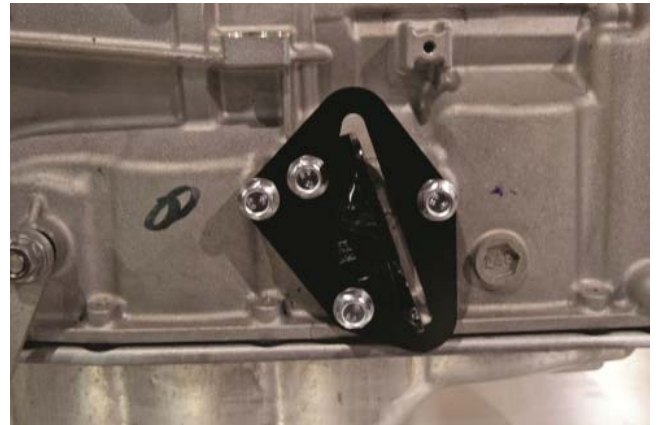


Figure 5: Mount Bracket

- Release the cable end adjustment by lifting up on the white clip to allow the cable end to move along the cable freely. **Reference Figure 6.**



Figure 6: Release Cable End Adjustment

7. Slide the cable mount groove into the cable bracket until the two clips click into place. **Reference Figure 7.**



Figure 7: Install Cable to Bracket

8. Snap the cable end onto the ball of the shift arm. **Reference Figure 8.**

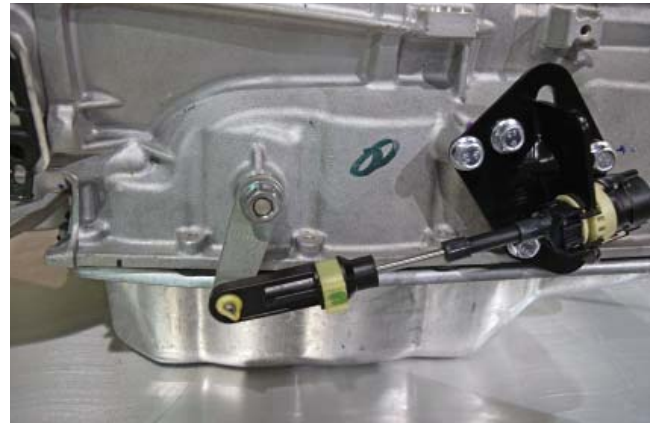


Figure 8: Install Cable End onto Shift Arm

9. While the transmission and the shifter are in park (All the way forward), snap the cable end adjustment clip back onto the cable end. This will lock the cable end to the cable in the proper position. **Reference Figure 9.**

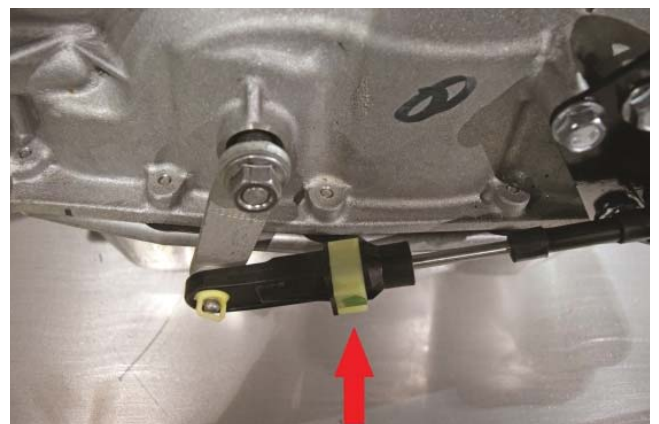
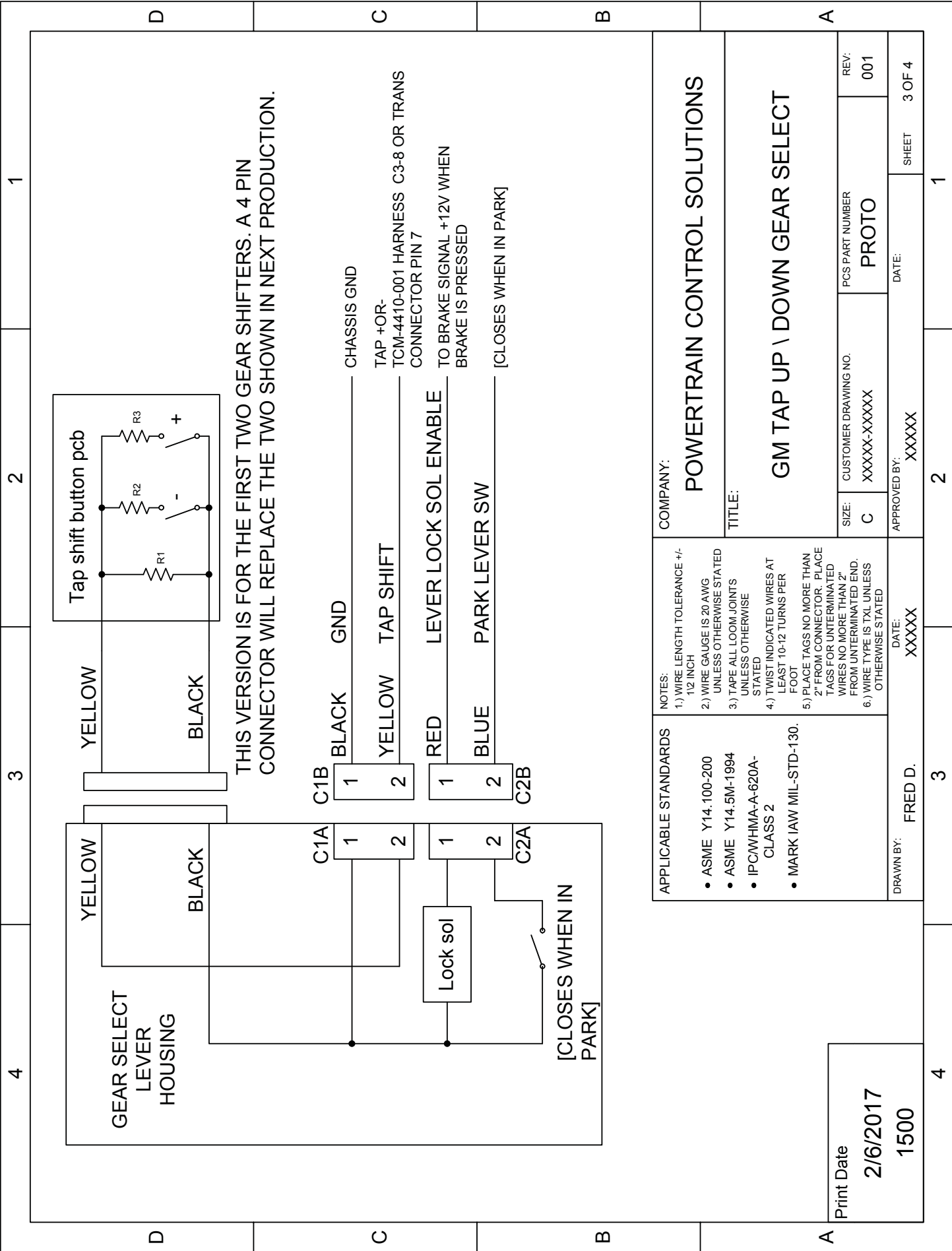
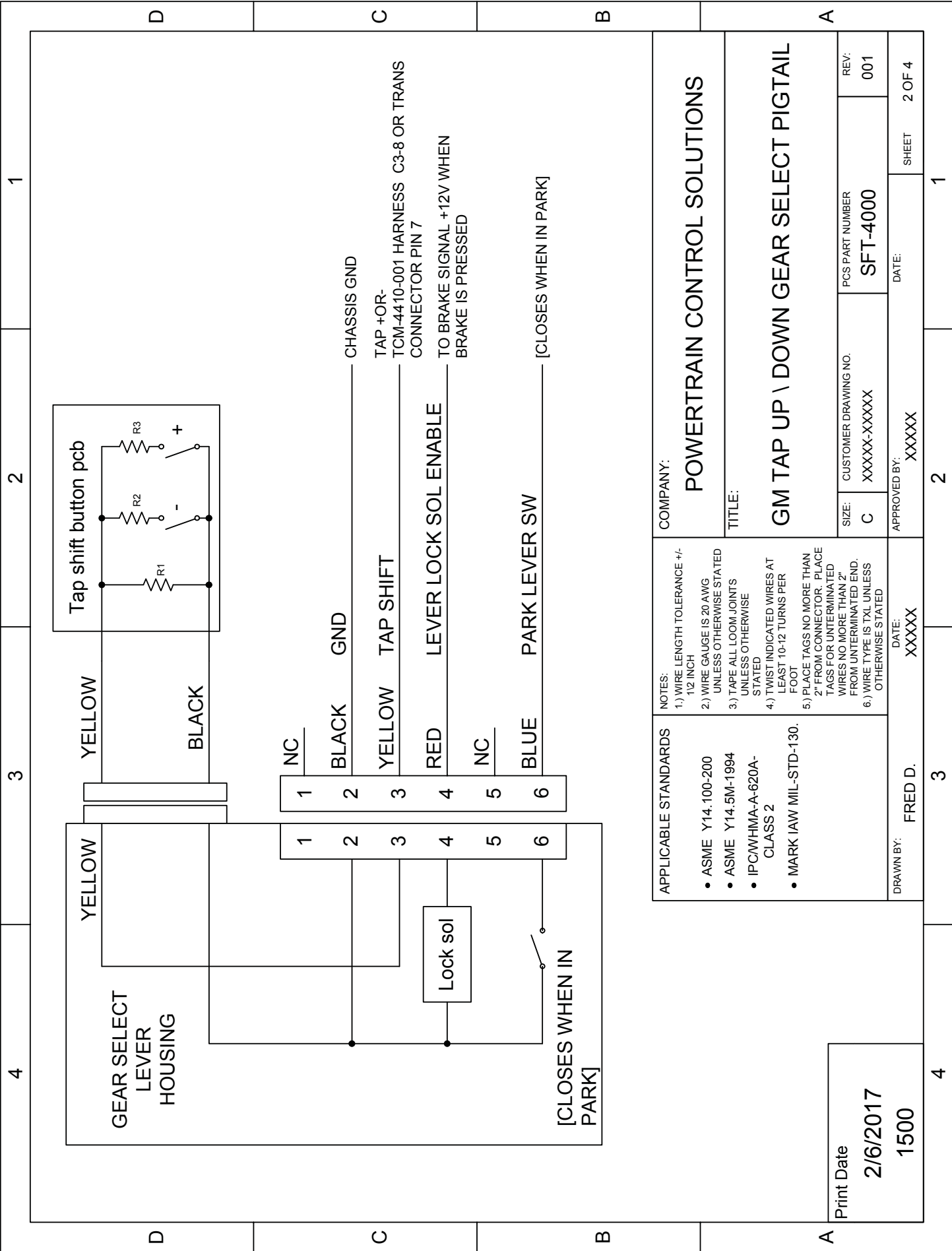


Figure 9: Snap Cable Adjustment in Place





APPLICABLE STANDARDS

- ASME Y14.100-200
- ASME Y14.5M-1994
- IPC/WHMA-A-620A-CLASS 2
- MARK IAW MIL-STD-130.

NOTES:

- 1.) WIRE LENGTH TOLERANCE +/- 1/2 INCH
- 2.) WIRE GAUGE IS 20 AWG UNLESS OTHERWISE STATED
- 3.) TAPE ALL LOOM JOINTS UNLESS OTHERWISE STATED
- 4.) TWIST INDICATED WIRES AT LEAST 10-12 TURNS PER FOOT
- 5.) PLACE TAGS NO MORE THAN 2" FROM CONNECTOR. PLACE TAGS FOR UNTERMINATED WIRES NO MORE THAN 2" FROM UNTERMINATED END.
- 6.) WIRE TYPE IS TXL UNLESS OTHERWISE STATED

COMPANY: POWERTRAIN CONTROL SOLUTIONS

TITLE: GM TAP UP \ DOWN GEAR SELECT PIGTAIL

SIZE: C	CUSTOMER DRAWING NO.: XXXXX-XXXXX	PCS PART NUMBER: SFT-4000	REV.: 001
APPROVED BY: XXXXX		DATE:	

DATE: 2/6/2017
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