PCS SFT-5000 User Guide

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 part 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 connector. If you are not using the PCS harness that has the mating connector already installed, the SFT-4000 harness is required for installations. Reference Figure 1.

Shift Power Connection:
The SFT-5000 is operated on 12 volts switched power.

<table>
<thead>
<tr>
<th>Wire Color</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow</td>
<td>12V Switched Power</td>
</tr>
<tr>
<td>Black</td>
<td>Ground</td>
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</tbody>
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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.

<table>
<thead>
<tr>
<th>Wire Color</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow/Black</td>
<td>Brake Switch 12V</td>
</tr>
</tbody>
</table>

Tap Shift Wiring:

<table>
<thead>
<tr>
<th>Wire Color</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Violet/Black</td>
<td>Tap Shift (Pin 3 on Shifter and Pin 7 on GM 6L Transmission Controller)</td>
</tr>
</tbody>
</table>
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.

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

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

2. Install shift arm nut and tighten. Reference Figure 2.
3. Align the two brackets in this orientation. *Reference Figure 3.*

4. 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.

5. 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.
6. 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.

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

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

SFT-5000 Dimensions*

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*Smeasurements are approximate.
THIS VERSION IS FOR THE FIRST TWO GEAR SHIFTERS. A 4 PIN CONNECTOR WILL REPLACE THE TWO SHOWN IN NEXT PRODUCTION.

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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 TERMINATED 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

SIZE: C
CUSTOMER DRAWING NO.
PROTO
PCS PART NUMBER
REV.

Print Date
2/6/2017
1500

DRAWN BY: FRED D.
DATE: XXXXX

APPROVED BY:
XXXXX
DATE: XXXXX

SHEET 3 OF 4