



# UPDATED SHIFT KIT FOR NISSAN MLS-61B TRANSMISSION

PTO-TEC-96

TECHNICAL

DATE: June 30, 1999

TO: All Chelsea® Power Take-Off Customers

**Nissan** has **recommended** that only P.T.O.'s that are air activated and electronically controlled be installed on their MLS-61B transmission. We have worked together in the past to meet their requirements using the MLS-61B transmission. We developed an electronically controlled air shift that cannot be engaged unless the clutch pedal is depressed. A new relay is required for 1999 and later MLS-61B transmissions. This new relay is not interchangeable with previous models. The "G" designation in the **shift option** position of the model number; i.e. 446AUFYX-G6XD, will provide you with the air shift option and the new air shift kit (new air shift installation kit number **328388-69X**).

PTO INFO

<u>Model Year</u>	<u>Shift Option</u>	<u>Air shift Installation Kit</u>
1995-1998	"E"	328388-63X
1999 & Later	"G"	328388-69X

Included with this bulletin is a copy of the instructions that will come with the new installation kit. Please have a copy of this bulletin available to all the personnel that may have to assist or answer questions for the customer.

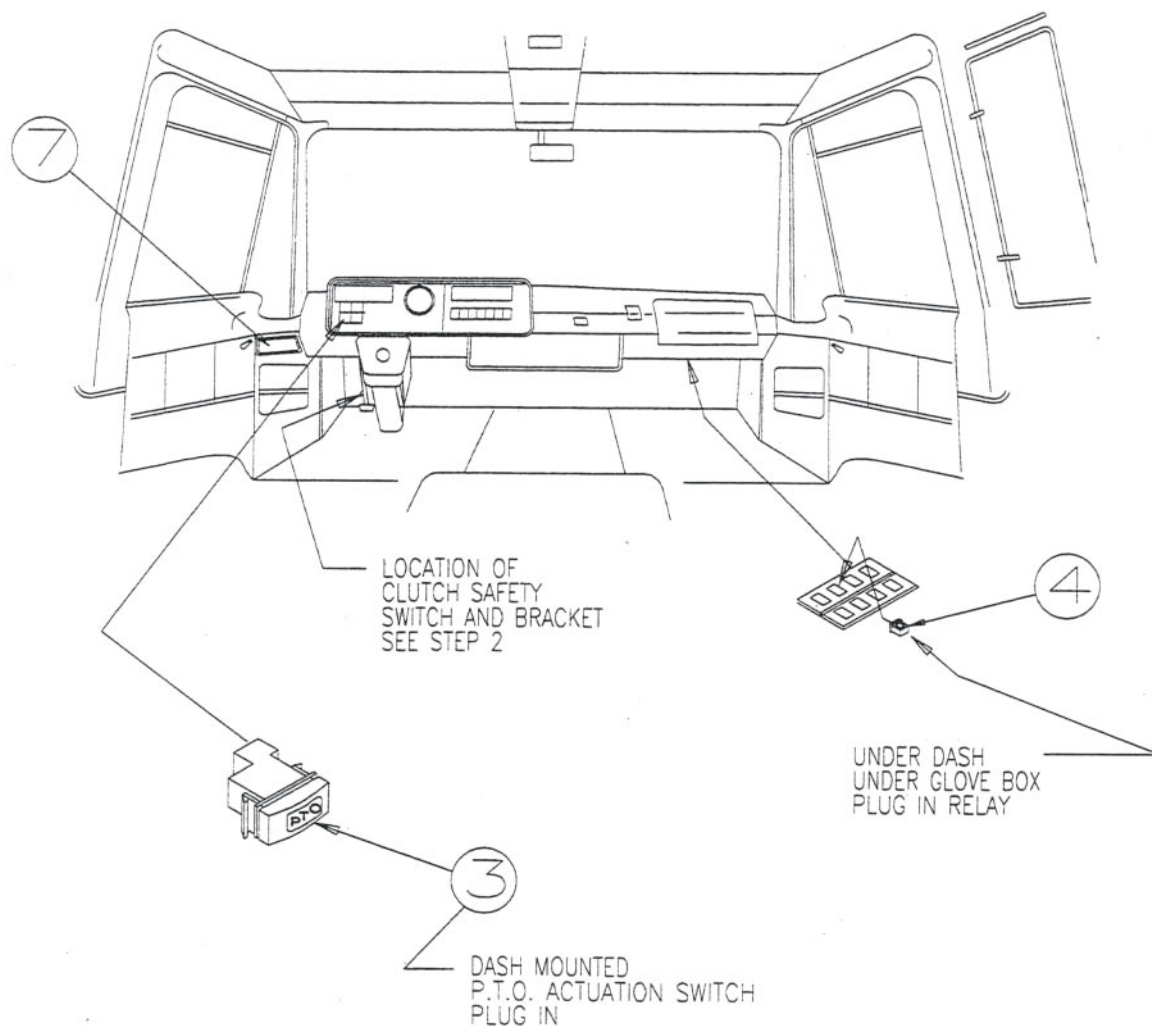
The application page for the MLS-61B transmission is NSD-6 and will be updated in the near future to reflect these changes.

Walt Harris  
Product Manager  
Chelsea Auxiliary Power Products



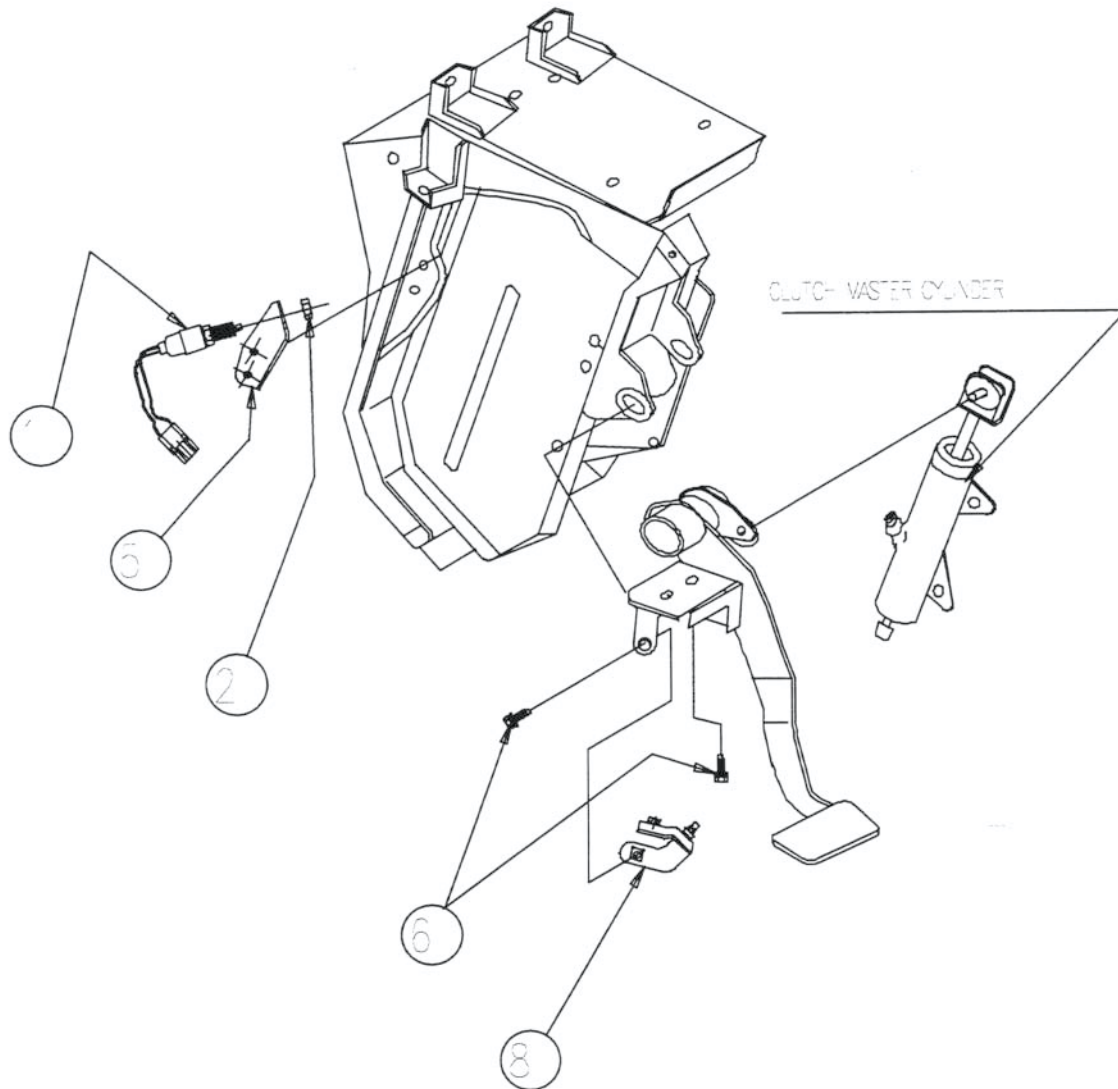
**STEP 1.** Below is a diagram of the cab showing the locations of the dash-mounted plug in the components. Item #3 is the P.T.O. actuation switch (379653) that plugs in the dash and the existing wiring harness. Under the dash beneath the glove box is where Item #4, the relay (379791) for the clutch pedal interlock is installed. Last is the dash-mounted caution label (379591) Item #7. Please do not forget to install it on the dash in this position.

**DIAGRAM SHOWING THE LOCATION OF DASH MOUNTED- PLUG IN COMPONENTS**

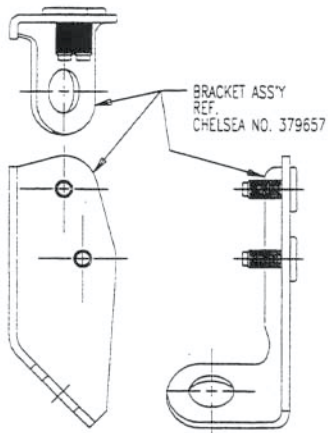
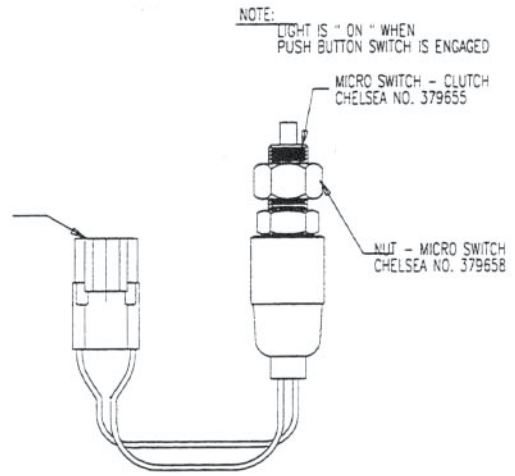
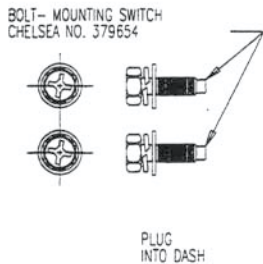
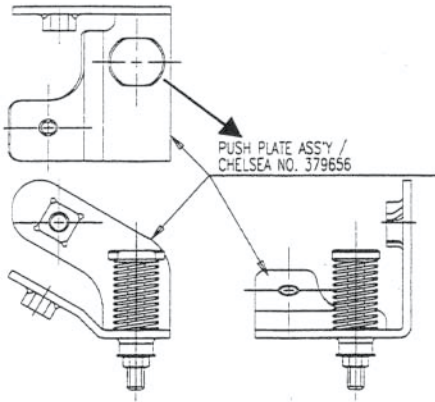
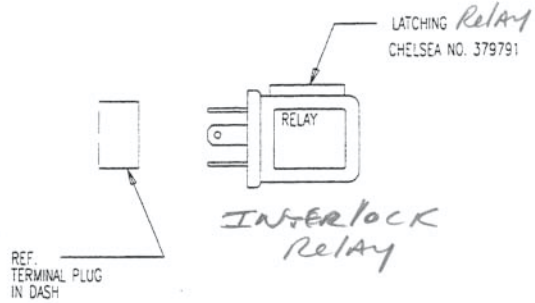
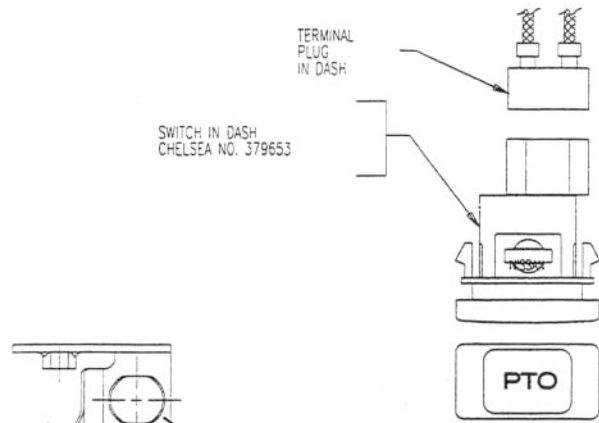


**STEP 2.** The diagram below shows the locations for mounting the clutch switch components and brackets. Attach the **Push Plate** bracket, Item **#8** (379656), to the clutch pedal bracket using the two mounting bolts item **#6** (379654) shown in Step 2. Insert the **Micro Switch**, Item **#1** (379655), into the **Switch Bracket** item #5 (379657) and use the Nut for the micro switch, Item **#2** (379658), to fasten it in position. Fasten the bracket using two mounting fasteners that are part of the bracket to the brace as shown below in Step 2. Now connect the wires with the female connector from the micro switch into the Nissan wiring harness. Above the steering column you will see the wires with the mating male connector hanging down. The male and female connector on these wires eliminate the possibility of a mismatched or wrong connection. On the back of this page is a larger drawing of the parts mentioned above.

### DIAGRAM SHOWING THE LOCATION OF THE CLUTCH SWITCH INSTALLATION



# PARTS TO BE INSTALLED IN THE DASH OF THE NISSAN TRUCK

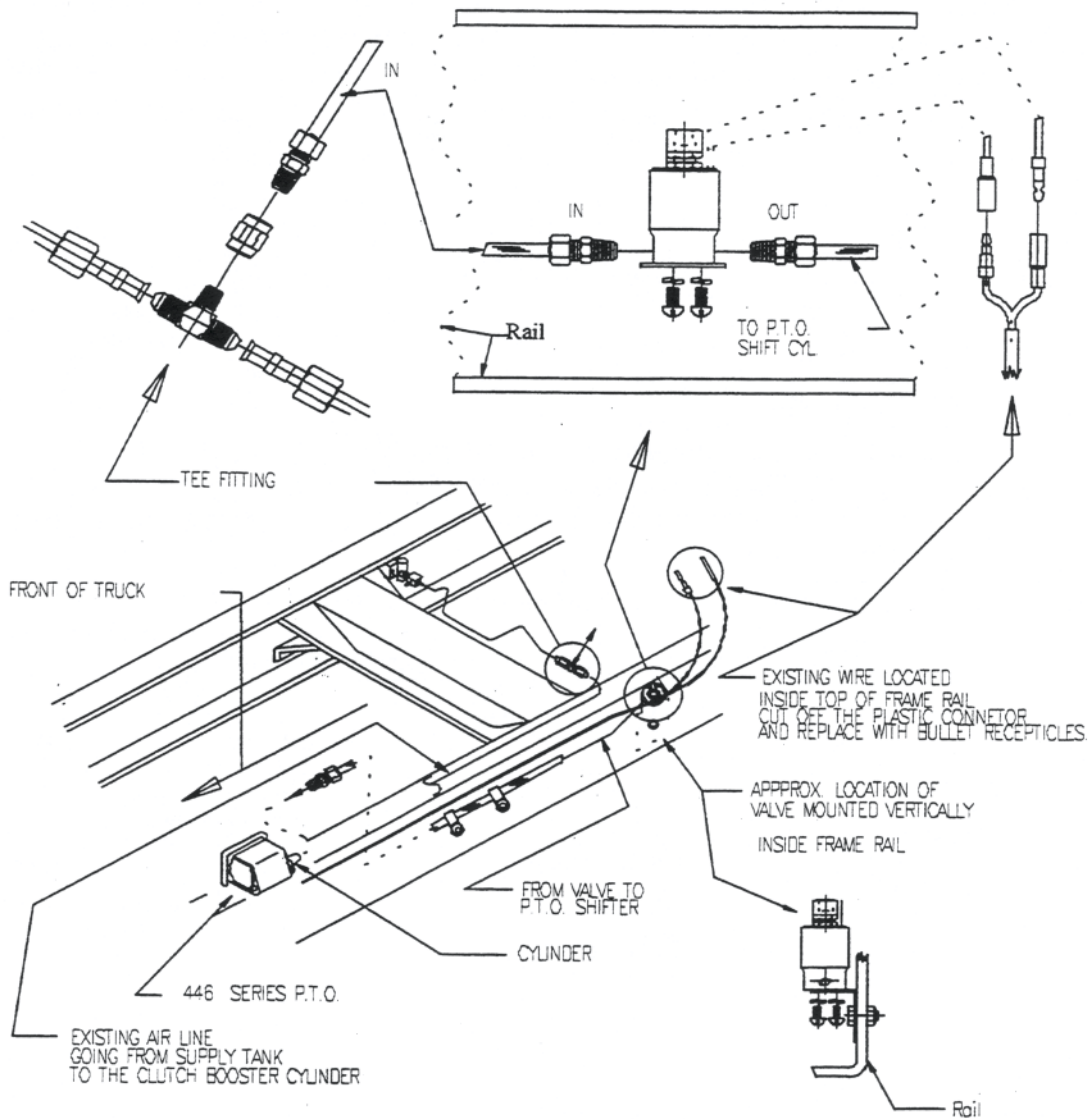


NOTE: P.T.O. WILL DISENGAGE WHEN THE PUSH BUTTON SWITCH IS DEACTUATED OR SWITCHED OFF.

NOTE: P.T.O. WILL ENGAGE WHEN THE PUSH BUTTON SWITCH IS AND THE CLUTCH PEDEL IS DEPRESSED. THE P.T.O. REMAIN ENGAGED WHEN THE CLUTCH PEDEL IS RELEASED

**STEP 3.** This diagram shows the components that are mounted under the truck between the frame rails. First locate the wires provided by Nissan. These wires are located on the inside top of the frame rail as shown in the drawing below. Once again, the wires are color coded brown with a yellow stripe and the other is black. Cut off the plastic connector found on the wires. Install one Male connector (379254-12) and one Female connector (378307) on the end of these wires. Do the same on the end of the wires that extend from the solenoid valve (379303-1). Mount the solenoid valve to the frame rail and close to the existing wires to complete the connections. Use the male branch tee fitting (379568) provided in the installation kit to tap into the truck air supply. An ideal location for its placement is in front of the crossmember as demonstrated in the diagram below. As in any installation of air lines, make sure there are no leaks. Please check the back of this page for a larger diagram of the components we have mentioned above.

### 446 SERIES AND LOCATION OF COMPONENTS BETWEEN THE FRAME RAILS



# PARTS TO BE INSTALLED INSIDE THE FRAME RAIL ON DRIVERS SIDE

NOTE: CUT APPROX. 1.750 LENGTH OF AIR LINE FROM SUPPLY TANK TO AIR ASSISTED CLUTCH ON DRIVERS SIDE OF TRANS.

DETAIL SHOWING VERTICALLY MOUNTED INSIDE OF FRAME

