



# INSTRUCTIONS

J01653

2002-10-15



## BUELL X1 SHIFTER KIT

### GENERAL

#### Kit Number

49092-01Y

#### Models

This kit is designed for upgrading the footrest mounted shifter and linkage on 2000 and earlier X1 (Lightning) models to a 2001 style crankcase mounted shifter and linkage.

#### Kit Contents

Table 1. Kit Contents

Description (Quantity)	Part Number
Shift lever, engine	T0225.02A8
Assembly, shift lever	N0621.01A1
Bushing, shift lever (inside)	N0614.01A1
Bushing, shift lever (outside)	N0616.01A1
Bearing, pedal plastic	N0513.T
Shift lever tie bar assembly	N0617.01A1A
Cover, shaft tube, rubber	HS0002.01A1
Spacer, shift shaft	C0208.01A1
Screw, hex socket 10-24 x 1.25 inch	AN1009.2CXZB
Screw, hex socket 10-24 x 5/8 inch	AN1005.2CZ
Bolt, hex head 5/16-18 x 4-3/4 inch	AA0538.1CZ
Washer, spacer 5/16 inch	BA0511.2Z
Screw, 10-24 x 3/4 inch, SHC with scotchgrip	AN1006.2CXZB

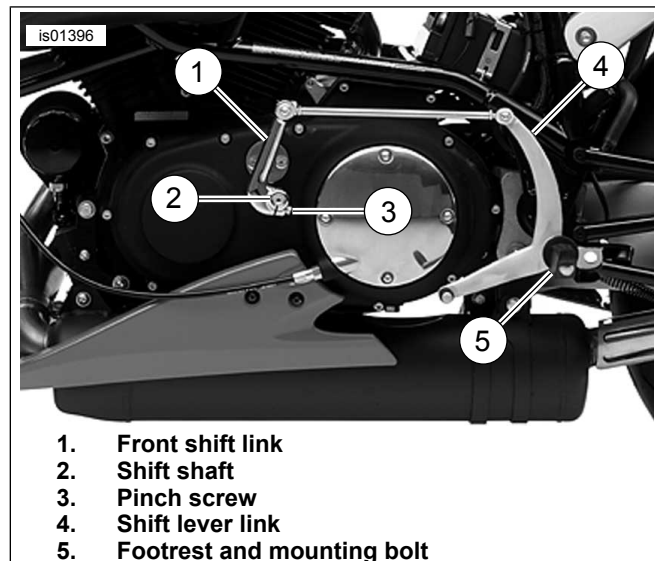


Figure 1. Remove Existing Shifting Linkage

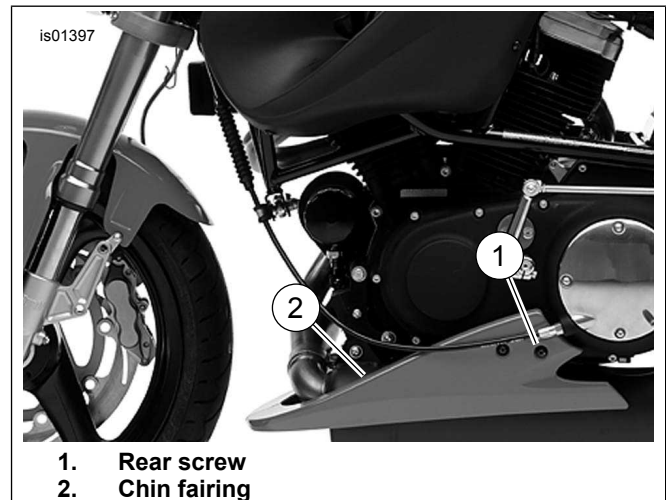


Figure 2. Remove Chin Fairing to Crankcase Screw

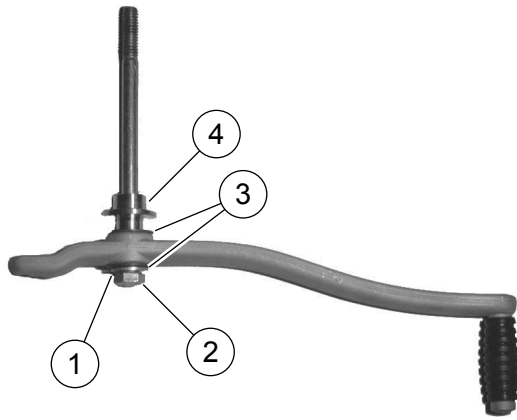
### REMOVAL

#### NOTE

The shift linkage can be removed as an assembly. It is not necessary to remove the shift linkage components separately.

1. See Figure 1. Remove the pinch screw (3) securing front shift link (1) to the shifter shaft (2).
2. Remove bolt (from backside of frame) securing footrest to frame (5) and remove footrest and shift lever link (4). Save footrest and mounting bolt. Discard shift lever link.
3. Slide front shift link (1) off of shifter shaft (2) and remove entire linkage as an assembly. Discard linkage assembly.
4. Remove rubber (spacer) washer from shifter shaft near crankcase and discard.
5. Reinstall footrest to frame using rubber shaft tube cover (part number HS0002.01A1) from kit and bolt saved in Step 2. Tighten bolt to 10-15 ft-lbs (13.6-20.3 Nm).
6. See Figure 2. Remove and discard rear screw (1) securing chin fairing (2) to crankcase housing. Remove metal bushing, but leave rubber bushing in place. Discard metal bushing.

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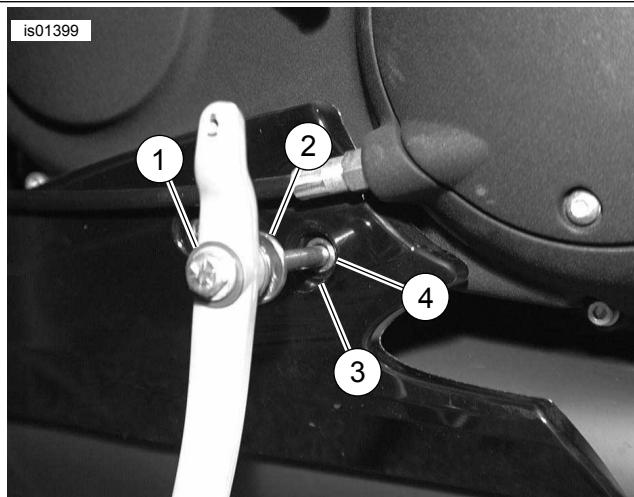
1. Flat spacer (washer)
2. 4-3/4 inch bolt
3. Plastic bearing (2)
4. Shift lever outer mounting bushing (orient as shown)

Figure 3. Shift Lever Assembly

## INSTALLATION

1. Obtain shift shaft spacer (part number C0208.01A1) from kit and install to shifter shaft.
2. Obtain engine shift lever (part number T0225.02A8). Apply Loctite 243 (blue) to 1.25 inch screw (part number AN1009.2CXZB) and install engine shift lever to shifter shaft. Refer to Figure 5 for shift lever orientation. Tighten screw to 39-60 **in-lbs** (4.4-6.7 Nm).
3. See Figure 3. Obtain shift lever (part number N0621.01A1) and install plastic bearings (3) (part number N0513.T). Install 4-3/4 inch hex bolt (2) (part number AA0538.1CZ) using flat (washer) spacer (1) (part number BA0511.2Z) through shift lever and outer mounting bushing (4) (part number N0616.01A1) with bushing oriented as shown.

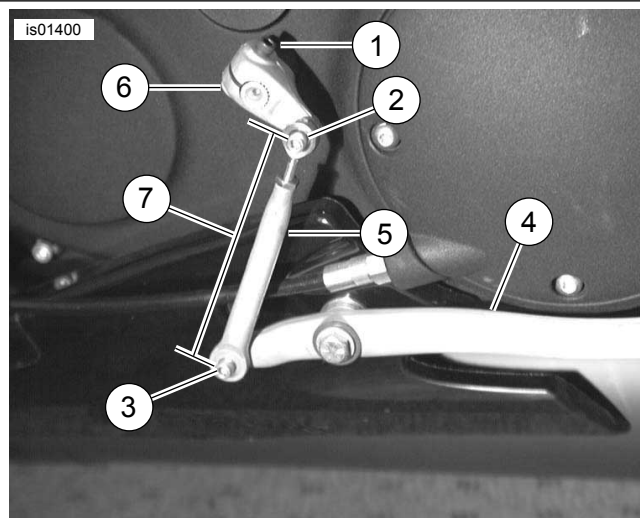
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1. 5/16 inch flat spacer (washer)
2. Outer bushing
3. Rubber bushing
4. Inner mounting bushing

Figure 4. Install Shift Lever Assembly

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1. 1.0 inch hex screw
2. Upper eye screw (apply Loctite)
3. Lower eye screw (apply Loctite)
4. Shift lever assembly
5. Lever tie bar assembly
6. Engine shift lever
7. Shift lever linkage length

Figure 5. Shifter Kit (Assembled)

4. See Figure 4. Insert (from back of chin fairing) inner mounting bushing (4) (part number N0614.01A1) into rubber bushing (3). Install assembled shift lever bolt as shown through chin fairing and inner bushing (4) (outer bushing should seat against inner bushing). Thread bolt into lower crankcase and tighten to 27-29 ft-lbs (36.6-39.3 Nm).
5. See Figure 5. Obtain shift lever tie bar assembly (part number N0617.01A1A) (4) and orient "bowed" toward crankcase as shown. Apply LOCTITE THREADLOCKER 243 (Blue) (Harley-Davidson part number 99642-97) to threads of upper eye screw (2) (part number AN1006.2CXZB) and install upper eye of lever tie bar (5) to engine shift lever (6). Tighten screw to 59-66 **in-lbs** (6.6-7.4 Nm).
6. Apply LOCTITE THREADLOCKER 243 (Blue) to threads of lower eye screw (3) (part number AN1005.2CZ). Install lower eye of shift lever tie bar to shift lever assembly (4). Tighten screw to 36-60 **in-lbs** (4.0-6.7 Nm).
7. Check for proper shift lever/clutch operation.

### NOTE

See Table 2. Factory setting for shift lever linkage length (7) (Center of upper eye to center of lower eye).

Table 2. Shift Lever Linkage Length

MOD-EL	FACTORY SETTING	MAXIMUM
All	4.6 inch (116.8 mm)	4.7 inch (119.4 mm)