

REVISED PRODUCT PROGRAM BP5 - ISOLATOR KIT

GENERAL

The purpose of this service bulletin is to inform you of a revised isolator kit (Part No. Z0010.CB) and provide installation instructions. The original isolator kit has been revised to include newly designed, improved rear isolators. In addition, a revised tool was developed to assist in installing the new rear isolators.

NOTE

The existing isolator replacement aid (Part No. 91430-96Y) may be used until the new isolator tool (Part No. B44623) becomes available.

VEHICLES INVOLVED

The revised isolator kit (Part No. Z0010.CB) has been developed for replacement of damaged isolators on all 1996-2000 model year Buell motorcycles (except S2 and S2T models).

DEALER ACTION

If a motorcycle is to be serviced for damaged isolators, and it still has the old steel swingarm that was recalled, the steel swingarm recall service (campaign #0816) should be performed in conjunction with this procedure. Discard isolators provided in the swingarm recall kit and use the new isolators provided in this kit (with new fasteners and new sprocket cover provided) instead.

NOTE:

To guard against corrosion of its metal plates, each isolator is painted after molding. It is normal for the paint that ends up on the rubber portion of the isolator to crack. This may give the false impression that the isolator is damaged. In addition, it is normal for the rubber in the rear, upper corner of the isolator's internal diameter to develop a small cut. When the motorcycle is loaded, the isolator bolt head will cause this small cut, which does not affect isolator performance. Inspect each isolator carefully and order an isolator kit (Part No. Z0010.CB) only for vehicles with damaged isolators.

If the motorcycle has either the new steel swingarm or the aluminum swingarm and is suspected of having damaged isolators, inspect isolators prior to disassembly to verify that the isolators are actually damaged. If either isolator is indeed damaged, this isolator kit should be used for replacement under warranty. Vehicles beyond the warranty period will not require a prior authorization. See CREDIT PROCEDURES.

This revised isolator kit (Part No. Z0010.CB) includes new isolators, TORX bolts and sprocket cover. Do not use the old isolators, Part Nos. 47680-94Y or 47564-86, for replacement purposes.

The complete revised isolator kit (Part No. Z0010.CB) consists of:

- (2) New Rear Isolators
- (2) Bolts (low profile TORX)
- Sprocket Cover
- Lockwasher (for rear tie bar)
- Cable Tie, Thin (for fuel tank vent)
- Clamp (for fuel hose)
- Locknut, metric (for X1 rear brake pedal)
- (5) Locknuts (for X1 side plate and passenger footrest mounting bracket)

Kits will be available beginning on or before December 1, 2000. Kits must be ordered as required and purchase price will be reimbursed by warranty. See CREDIT PROCEDURES.

The isolator tool will be shipped to your dealership when available.

The life expectancy of this product program is one year from the date of issue of this bulletin.

KIT INSTALLATION

Rear Isolator Removal (S1, S1W, M2, S3/S3T Models)

NOTE

- Perform the following procedures according to the guidelines given in the service manual for the model being serviced.
 - Mark all hardware as it is removed so that it may be returned to its original location.
1. Position motorcycle on a suitable lift and secure front wheel to lift.

⚠ WARNING

To avoid accidental start-up of vehicle and possible personal injury, disconnect the battery cables before proceeding. Always disconnect the negative battery cable first. If the positive cable should contact ground with the negative cable installed, the resulting sparks may cause a battery explosion, which could result in death or serious injury.

2. Disconnect **both** battery cables from battery, negative cable first.

ROUTING	SERVICE MANAGER	SALES MANAGER	PARTS MANAGER	LEAD TECHNICIAN	TECHNICIAN NO. 1	TECHNICIAN NO. 2	TECHNICIAN NO. 3	TECHNICIAN NO. 4	RETURN THIS TO:
INITIAL HERE									

3. **S1/S1W, M2, S3/S3T:** Remove seat and fuel tank.
S1/S1W models only: Remove tail section. See appropriate service manual, Sections 2 and 4 for procedures.
4. Remove the left side rider footpeg mounting bolt and footpeg. Allow footpeg and shift linkage to hang being careful not to scratch primary cover.
5. See Figure 1. On the right side of the motorcycle, remove the front sprocket cover assembly (and remove fairing lower hardware on S3T models). See appropriate service manual, Section 2 for procedure.
6. See Figure 1. Remove two screws that attach sprocket cover to the backside of the swingarm/drive support. Retain screws. Discard sprocket cover.

NOTE

See Figure 2. For M2 and S3/S3T models route strap under frame rails with tail section installed. Make sure strap is in "V" formed by frame rails to prevent rearward movement and that it does not pinch wiring harness, vent lines or cables.

7. See Figures 2 and 7. Strap tail section of frame to overhead beam or hoist and put slight tension on strap to secure frame assembly.
8. See Figure 8 (typical). Remove frame side tie bar mounting hardware from front lower and center tie bars. If present, leave fourth tie bar (front upper) attached to both frame and engine.
9. See Figure 3. Remove rear tie bar bolt, lockwasher and washers from mount block. Discard lockwasher.
10. See Figure 3. Loosen left side isolator bolt from swing arm bearing adjusting bolt. Do not remove.
11. See Figure 3. Remove right side isolator bolt and washer from swingarm bearing adjustment bolt. Discard isolator bolt, but retain washer.
12. See Figure 4. Working on the right side first, insert the rear isolator replacement tool between mount block and frame. NOTE: Ledge on tool should engage top of mount block.

CAUTION

Do not alter tool or shim in an attempt to spread frame further than tool will allow. Failure to comply may result in frame distortion or damage.

13. Turn nut on rear isolator replacement tool clockwise to expand frame from swingarm mount block until isolator can be removed. Nut will stop when limit of travel is reached.
14. Disengage right side rear isolator from roll pin in frame by pulling inboard. Remove isolator by pulling out from 5:00 or 6:00 position. Discard rear isolator.
15. Remove rear isolator replacement tool by turning nut counterclockwise.
16. Remove left side isolator bolt and washer from bearing adjusting bolt. Discard isolator bolt, but retain washer.
17. Remove nut and back out bolt (until flush with the mount block) from upper rear of muffler Z bracket attachment to swingarm mount block.
18. Pull frame to left and remove left side isolator from 6:00 or 7:00 position. Discard isolator.

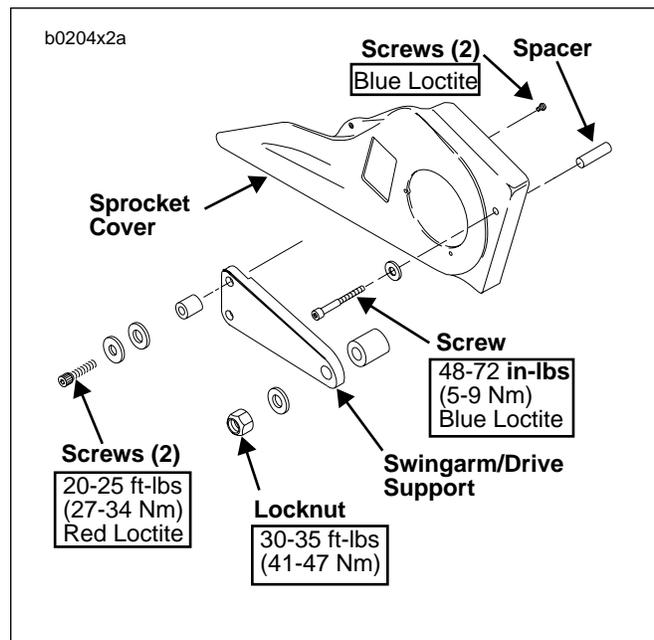


Figure 1. Sprocket Cover

Rear Isolator Installation (S1, S1W, M2, S3/S3T Models)

NOTE

If roll pin protrudes beyond specification, check to make sure it is fully seated. A channel lock pliers may be used to squeeze/push roll pin in. Protect frame with a shop rag when using pliers.

1. See Figure 5. Measure isolator roll pin protrusion on both left and right isolator mounts with calipers or metal rule. Roll pin should not protrude more than 0.120 in. (3 mm). If roll pin protrudes more than 0.120 in. (3 mm) file or grind until within specification; 0.080-0.120 in. (2.032-3.048 mm). Use care when filing to avoid creating sharp edges.
2. See Figure 3. On left side of motorcycle, align locator hole with roll pin and install **new** left rear isolator provided in kit. The left isolator backing plate has an "L" stamped on it.
3. Move to right side of motorcycle. Lower the frame approximately one inch with the hoist to allow clearance between isolator replacement tool and the **new** larger isolator.
4. See Figure 4. On right side of motorcycle, insert rear isolator replacement tool between mount block and frame.

CAUTION

Do not alter tool or shim in an attempt to spread frame further than tool will allow. Failure to comply may result in frame distortion or damage.

5. Turn nut on tool clockwise to expand frame from mount block. Nut will stop when limit of travel is reached.
6. See Figure 3. On right side of motorcycle, align locator hole with roll pin and install **new** right rear isolator provided in kit. The right isolator backing plate has an "R" stamped on it.
7. Turn nut on tool counterclockwise to allow frame to return to position. Remove tool from between frame and mount block.
8. Raise frame with hoist to align isolator bolt holes with threaded holes in bearing adjusting bolts.
9. See Figure 6. Mark a horizontal line across the front of each isolator with a light colored grease pencil or by other non-permanent means.
10. Apply anti-seize to underside of **new** isolator bolt heads.

CAUTION

Use caution when installing isolator bolts. Make sure isolator bolt hole is aligned with threaded hole in bearing adjusting bolt to avoid cross-threading bolt.

11. See Figure 3. Install **new** isolator TORX bolts and washers through both rubber isolators into bearing adjustment bolts on each side.

CAUTION

See Figure 6. Observe marked line on both rubber isolators after isolator bolts are tightened. If line twists, apply more LOCTITE ANTI-SEIZE to underside of isolator bolt heads. Failure to comply will result in damage to rubber isolators.

B-016B

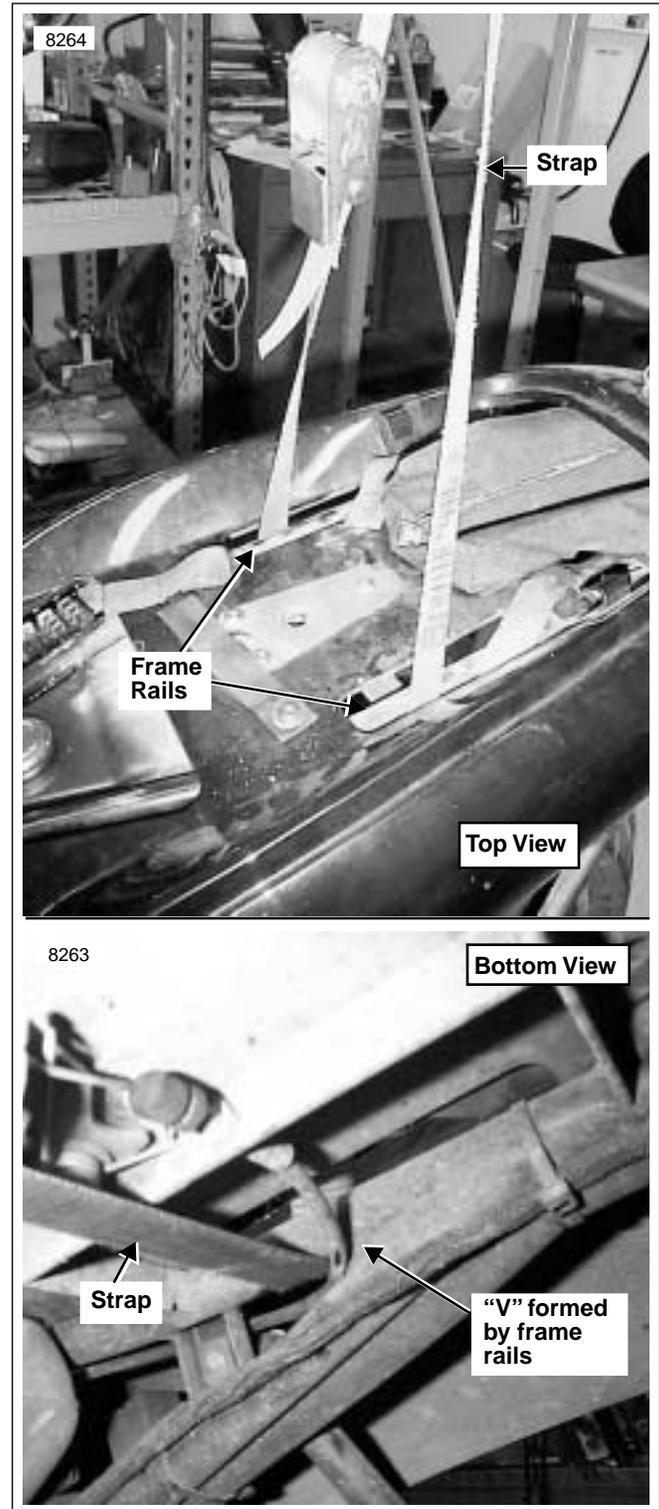


Figure 2. Floor Hoist - M2, S3/S3T Models

12. Tighten right and left isolator bolts to 63-70 ft-lbs (85-95 Nm).
13. Push rear upper Z bracket bolt until it protrudes from mount block and install nut. Tighten rear upper Z-bracket bolt to 17-19 ft-lbs (23-26 Nm).
14. Erase grease pencil marked lines from both isolators.
15. Install front lower and center tie bars to frame with original locknuts. Tighten bolts to 30-33 ft-lbs (41-45 Nm). Install rear tie bar to mount block with **new** lockwasher. Tighten bolt to 30-33 ft-lbs. (41-45 Nm).

16. Remove hoist from tail section.
17. Install left side rider footpeg. Tighten bolt to 25-30 ft-lbs (34-41 Nm).
18. See Figure 1. Apply LOCTITE THREADLOCKER 243 (Blue) to threads of two sprocket cover to swingarm/drive support screws and install new sprocket cover to swingarm/drive support.
19. See Figure 1. Install **new** sprocket cover assembly with original hardware.
 - a. Apply LOCTITE THREADLOCKER 243 (blue) to screw. Install sprocket cover assembly with screw, washer and spacer. Tighten to 48-72 **in-lbs** (5.4-8.6 Nm).
 - b. Apply LOCTITE THREADLOCKER 272 (red) to swingarm/drive support mounting screws and install. Tighten screws to 20-25 ft-lbs (27.1-33.9 Nm).
 - c. Install locknut and washer. Tighten to 30-35 ft-lbs (40.7-47.4 Nm).

⚠ WARNING

After installing seat, pull upward on front of seat to be sure it is locked in position. If seat is loose, it could shift during vehicle operation resulting in loss of control of vehicle and death or serious injury.

20. Install fuel tank and seat (and tail section on S1/S1W models). See appropriate service manual, Sections 2 and 4 for procedures. NOTE: Use **new** thin cable tie and hose clamp provided in kit on fuel tank.

⚠ WARNING

Always connect the positive battery cable first. If the positive cable should contact ground with the negative cable installed, the resulting sparks may cause a battery explosion, which could result in death or serious injury.

21. Connect battery cables, positive cable first, to battery terminals.
22. Test ride motorcycle at low speed and check for proper operation.

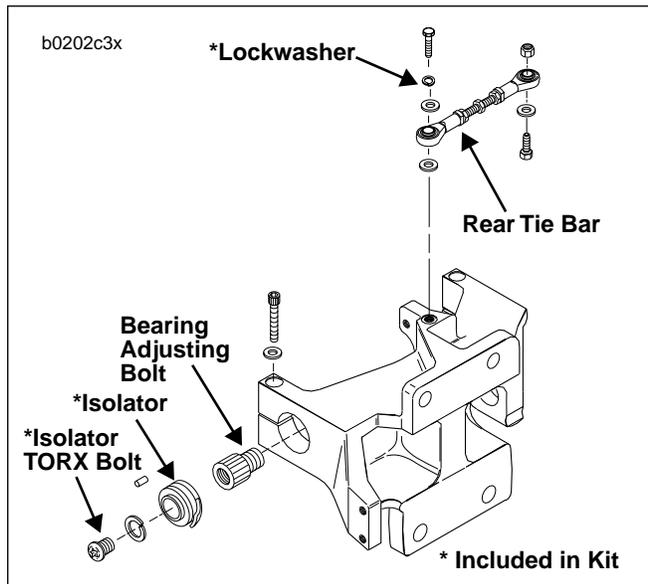


Figure 3. Mount Block

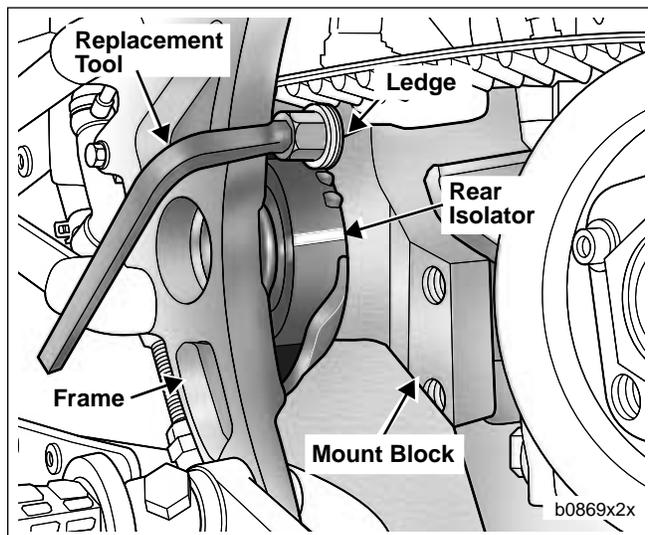


Figure 4. Rear Isolator Replacement Tool In Use

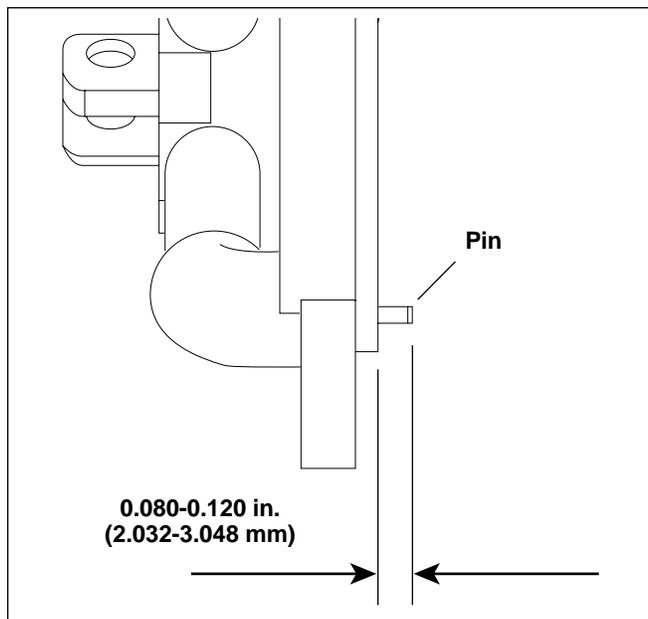


Figure 5. Measuring Roll Pin Protrusion

Rear Isolator Removal (X1 Models)

NOTE

- Perform the following procedures according to the guidelines given in the service manual for the model being serviced.
 - Mark all hardware as it is removed so that it may be returned to its original location.
1. Position motorcycle on a suitable lift and secure front wheel to lift.

⚠ WARNING

To avoid accidental start-up of vehicle and possible personal injury, disconnect the negative battery cable before proceeding. If the positive cable should contact ground with the negative cable installed, the resulting sparks may cause a battery explosion, which could result in death or serious injury.

2. Disconnect **negative** battery cable from battery terminal.
3. Remove seat, fuel tank cover and fuel tank. See appropriate service manual sections 2 and 4 for complete procedure.
4. See Figure 8. Strap frame, just forward of tail section, to overhead beam or hoist and put slight tension on strap to secure frame assembly.
5. See Figure 8. Remove frame side tie bar mounting hardware from front lower and center tie bars. Leave fourth tie bar (front upper) attached to both frame and engine. Discard locknuts.
6. See Figure 3 (Typical). Remove rear tie bar bolt, lockwasher and washers from mount block. Discard lockwasher.
7. See Figure 3. Loosen left and right isolator bolts. Do not remove.
8. See Figure 8. Remove two screws, locknuts and right side passenger footrest mounting bracket from frame. Discard locknuts.
9. Remove screw and locknut from rear brake pedal that attaches actuator rod to rear brake master cylinder. Discard locknut.
10. Remove two screws that attach rear brake master cylinder to right side plate.
11. See Figure 8. Remove three screws, locknuts and right side plate from frame. Discard locknuts.
12. Remove nut and back out bolt (until flush with the mount block) from upper rear of muffler Z bracket attachment to swingarm mount block.
13. Remove right side isolator bolt, washer and isolator. Discard bolt. Retain washer.
14. Remove left side isolator bolt and washer. Discard bolt. Retain washer.
15. Pull frame to left and remove isolator from 6 or 7 o'clock position.
16. Discard original isolators.
17. See Figure 1. On the right side of the motorcycle, remove the front sprocket cover assembly. See appropriate service manual, Section 2 for procedure.

B-016B

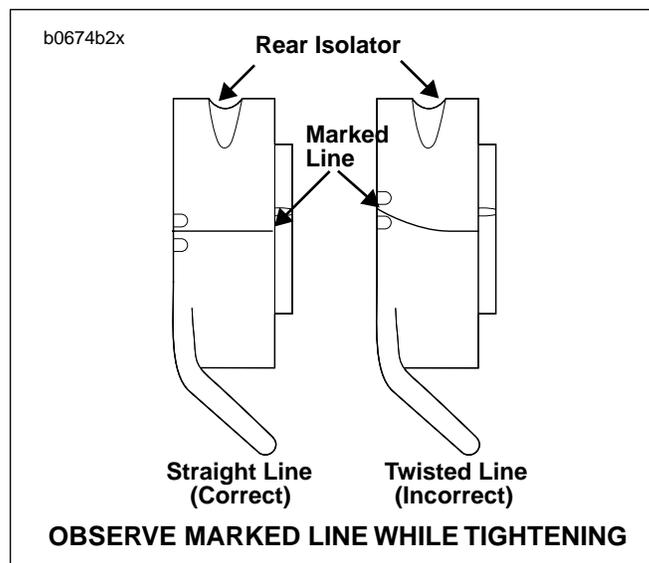


Figure 6. Checking Isolator Alignment

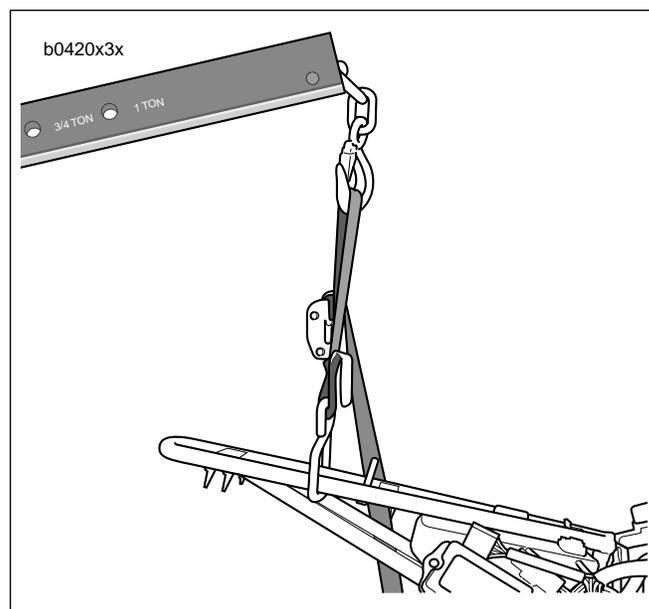


Figure 7. Floor Hoist -S1/S1W Models

18. See Figure 1. Remove two screws that attach sprocket cover to the backside of the swingarm/drive support. Retain screws. Discard sprocket cover.

Rear Isolator Installation (X1 Models)

1. See Figure 1. Apply LOCTITE THREADLOCKER 243 (Blue) to threads of two sprocket cover to swingarm/drive support screws and install new sprocket cover to swingarm/drive support.
2. See Figure 1. Install **new** sprocket cover assembly with original hardware.
 - a. Apply LOCTITE THREADLOCKER 243 (blue) to screw. Install sprocket cover assembly with screw, washer and spacer. Tighten to 48-72 **in-lbs** (5.4-8.6 Nm).
 - b. Apply LOCTITE THREADLOCKER 272 (red) to swingarm/drive support mounting screws and install. Tighten screws to 20-25 **ft-lbs** (27.1-33.9 Nm).
 - c. Install locknut and washer. Tighten to 30-35 **ft-lbs** (40.7-47.4 Nm).

NOTE

If roll pin protrudes beyond specification, check to make sure it is fully seated. A channel lock pliers may be used to squeeze/push roll pin in. Protect sideplate with a shop rag when using pliers.

3. See Figure 5. Measure isolator roll pin protrusion on both left and right isolator mounts with calipers or metal rule. Roll pin should not protrude more than 0.120 in. (3 mm). If roll pin protrudes more than 0.120 in. (3 mm) file or grind until within specification; 0.080-0.120 in. (2.032-3.048 mm). Use care when filing to avoid creating sharp edges.
4. See Figure 3. On left side of motorcycle, align locator hole with roll pin and install **new** rear isolator provided in kit.

CAUTION

Use caution when installing isolator bolts. Make sure isolator bolt hole is aligned with threaded hole in bearing adjusting bolt to avoid cross-threading bolt.

5. See Figure 3. Loosely install **new** isolator TORX bolt and washer through rubber isolator into bearing adjusting bolt. Do not tighten.
6. On right side plate, align locator hole with roll pin and install **new** rear isolator provided in kit.
7. See Figure 6. Mark a horizontal line across the front of each isolator with a light colored grease pencil or by other non-permanent means.
8. Apply anti-seize to underside of isolator bolt head.

CAUTION

Use caution when installing isolator bolts. Make sure isolator bolt hole is aligned with threaded hole in bearing adjusting bolt to avoid cross-threading bolt.

9. Install **new** isolator TORX bolt and washer through rubber isolator into bearing adjustment bolt. Do not tighten.
10. See Figure 8. Install right side plate with three screws and **new** locknuts. Tighten side plate mount screws to 16-19 **ft-lbs** (21.7 -25.8Nm).

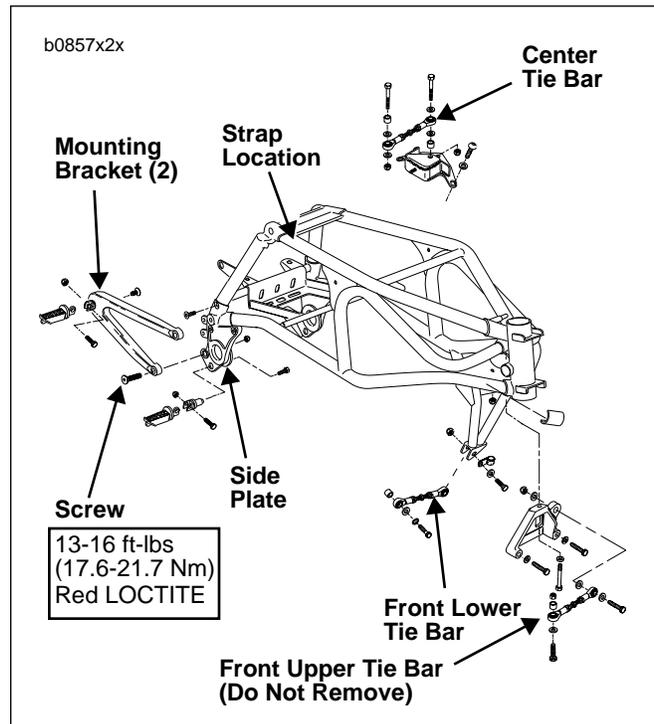


Figure 8. Frame Assembly (X1 Shown)

CAUTION

See Figure 6. Observe marked line on rubber isolator after isolator bolt is tightened. If marked line twists, apply more LOCTITE ANTI-SEIZE to underside of isolator bolt heads. Failure to comply will result in damage to rubber isolators.

11. Tighten right and left isolator TORX bolts to 63-70 ft-lbs (85-95 Nm).
12. Push rear upper Z bracket bolt until it protrudes from mount block and install nut. Tighten rear upper Z-bracket bolt to 8-10 ft-lbs (11-14 Nm).
13. Erase grease pencil marked lines from both isolators.
14. Apply LOCTITE 243 (Blue) to threads of two master cylinder mounting screws.
15. Install rear brake master cylinder to right side plate with two screws. Tighten screws to 8-10 ft-lbs (10.8-13.6 Nm).
16. Install actuator rod to rear brake pedal with **new** locknut (metric). Tighten locknut to 7-9 ft-lbs (9.5-12.2 Nm).
17. See Figure 8. Install right side passenger footrest mounting bracket with two screws and **new** locknuts. Tighten screws to 13-16 ft-lbs (17.6-21.7 Nm).
18. See Figures 3 and 8. Install front lower and center tie bars to frame with original locknuts. Tighten bolts to 30-33 ft-lbs (41-45 Nm). Install rear tie bar to mount block with **new** lockwasher. Tighten bolt to 30-33 ft-lbs. (41-45 Nm).
19. Remove hoist from tail section.

WARNING

After installing seat, pull upward on front of seat to be sure it is locked in position. If seat is loose, it could shift during vehicle operation resulting in loss of control of vehicle and death or serious injury.

20. Install fuel tank, fuel tank cover and seat. See appropriate service manual, sections 2 and 4 for complete procedures.
21. Connect negative battery cable to negative battery terminal.

WARNING

Check for proper brake lamp operation before riding motorcycle. Visibility is a major concern for motorcyclists. Failure to have proper brake lamp operation could result in death or serious injury.

22. Turn ignition key ON, depress rear brake pedal and check for proper brake light operation.
23. Test ride motorcycle at low speed and check for proper operation.

CREDIT PROCEDURES

After servicing each vehicle, file a warranty claim referencing Service Bulletin B-016B in the "Description of Repair" or "Comments" section of the claim. Fill in the rest of the claim as follows:

Claim Type*	BP5
Event 1, Qty & Problem Part No.	0-47564-86
Event 1, Additional (Replacement) Qty & Part No.	1- Z0010.CB
Part Description	Rear Isolator Kit
Primary Labor Code	2375
Time:	1.0 (All Models)
Customer Concern Code	9203
Condition Code	2101

NOTE

- If additional parts such as cable straps are required, list them under Event 1, Additional Parts.
- Use of incorrect claim type will cause claim to be rejected and credit delayed.