REMOVAL

1. Place a scissor jack under jacking point and raise front wheel off ground. For location of jacking point see 2.32 EXHAUST SYSTEM.
2. Remove handlebars. See 2.30 HANDLEBARS.
3. Remove front modules. See 2.29 FRONT MODULES.
4. Remove front fork assemblies. See 2.16 FRONT FORK.
5. See Figure 2-77. Remove steering stem pinch fastener (2).
6. See Figure 2-77. Hold or brace the lower fork clamp and remove steering stem capnut (1).
7. Remove the upper fork clamp (4).
8. Remove the lower fork clamp (6).
9. If steering head bearings need replacing, see 2.18 STEERING HEAD BEARINGS.

Figure 2-77. Steering Stem Assembly
INSTALLATION

1. See Figure 2-77. Install the lower fork clamp (6) into the steering stem bore and install the upper fork clamp (4).
2. Install steering stem capnut (1). Tighten but do not torque.

**WARNING**

Carefully install the fork into the upper fork clamp. Forcing the fork into the upper fork clamp could move the stopper ring out of the groove which will not allow the correct clamp load causing a possible loss of control of the motorcycle which could result in death or serious injury.

3. Install one front fork assembly into lower fork clamp (6).
4. See Figure 2-71. Slide the stopper ring (19) over top of fork assembly and into groove.
5. Install fork assembly into upper fork clamp. Tighten but do not torque lower fork clamp pinch fasteners.
6. Repeat previous two steps on second fork assembly.
7. Tighten steering stem capnut to 38-42 ft-lbs (52-57 Nm).
8. Install steering stem pinch bolt applying LOCTITE 271 (red) and tightening to 20-22 ft-lbs (27.1-29.8 Nm).

9. See Figure 2-76. Position both forks with same number alignment lines (4) visible and reflectors facing to the sides. Do not tighten.
10. Use LOCTITE 271 (red) on upper fork clamp fasteners and tighten to 23-25 ft-lbs (31-34 Nm).
11. Use LOCTITE 271 (red) on lower fork clamp fasteners and tighten to 20-22 ft-lbs (27.1-29.8 Nm).
12. Repeat torque sequence in steps 10 and 11 to verify proper clamp load.
13. Install front modules. See 2.29 FRONT MODULES.
14. Install handlebars. See 2.30 HANDLEBARS.

**NOTE**

For additional information, see 2.16 FRONT FORK.
REMOVAL

1. Place a scissor jack under jacking point and raise front wheel off ground. For location of jacking point see 2.32 EXHAUST SYSTEM.
2. Remove brake lever housing. See 2.10 FRONT BRAKE MASTER CYLINDER AND HAND LEVER.
3. Remove headlight assembly and support bracket. See 2.28 HEADLIGHTS AND SUPPORT BRACKET.
4. Remove front modules. See 2.29 FRONT MODULES.
5. Remove front forks, lower fork clamp, brake and wheel as front-end assembly.
   a. See Figure 2-77. Loosen steering stem pinch fastener (2) and upper and lower fork clamp pinch fasteners (3, 7).
   b. Brace wheel while removing steering stem cap nut fastener (1).
   c. Remove upper fork clamp (4) and front-end assembly which includes front wheel, steering stem/lower fork clamp.
6. Remove upper and lower steering head bearings (5).
   a. See Figure 2-78. Locate notches inside steering head stem bore (upper bearing removed for clarity).
   b. Place a suitable tool in the notches of the steering stem bore and remove upper and lower steering head bearings.

INSTALLATION

- Steering head bearings should be installed one at a time in order to ensure proper alignment of bearing in bore.
- Use the new backing plate for wheel bearing installation (B-43993-12) on the opposite side of the frame neck. By placing the large diameter of the backing plate against the frame neck it will prevent damage to the frame.
- For easier installation of bearing, lubricate the outer bearing with engine oil prior to installing into steering stem bore.

Figure 2-78. Lower Steering Head Bearing Notches (upper bearing removed for clarity)

NOTE
Discard steering head bearings and replace with new. Steering head bearings are not reusable.
1. See Figure 2-79. Install new upper steering head bearing into the frame neck using STEERING HEAD BEARING RACE INSTALLER (Part No. HD-39302), the STEERING HEAD BEARING INSTALLER (Part No. B-45521) and backing plate (B-43993-12) from the wheel bearing installation kit.
   a. See Figure 2-80. Place the upper bearing squarely in the steering stem bore with the inner race lip pointing away from the steering head.
   b. See Figure 2-79. Insert the steering head bearing installation tool into the upper bearing, with the shoulder into the bearing bore.
   c. Insert the forcing screw from the steering head bearing race installer through the steering head bearing installation tool.

   **NOTE**
   For ease of steering head bearing installation, lubricate the outside of the steering head bearings.

2. See Figure 2-81. Sparingly apply EXTREME PRESSURE LUBRICANT (Part No. J-23444-A) to the threads of the forcing screw (1) from the STEERING HEAD BEARING RACE INSTALLER (Part No. HD-39302), to prolong service life and ensure smooth operation. Insert the forcing screw (1) through the STEERING HEAD BEARING INSTALLATION TOOL (Part No. B-45521) (2).

3. Place the WHEEL BEARING BACKING PLATE with the large diameter facing the frame over the forcing screw.

4. Install the bearing (4), washer (5) and nut (6) from the STEERING HEAD BEARING RACE INSTALLER (Part No. HD-39302) onto the forcing screw (1).

5. Tighten the nut (6) by hand, until the bearing is started into the bore in the steering head.
6. See Figure 2-82. Hold the forcing screw while tightening the nut to draw the bearing into the steering head. Continue tightening until the bearing is fully seated.

7. Visually check to make sure the bearing is completely seated against the shoulder in the steering head.

8. Repeat this process for the lower bearing.

9. Install forks, front wheel, and lower fork clamp/steering stem as an assembly.

10. Install upper fork clamp.

11. Tighten steering stem capnut to 38-42 ft-lbs (52-57 Nm).

12. Use LOCTITE 271 (red) on steering stem pinch fastener and tighten to 20-22 ft-lbs (27-29.8 Nm).

13. Apply LOCTITE 271 (red) to upper triple clamp fasteners and tighten to 23-25 ft-lbs (31-33.8 Nm).

14. Install headlight assembly and support bracket. See 2.28 HEADLIGHTS AND SUPPORT BRACKET.

15. Install front brake lever housing. See 2.10 FRONT BRAKE MASTER CYLINDER AND HAND LEVER.

16. Install front modules. See 2.29 FRONT MODULES.

---

**Figure 2-82. Install Bearings**

- Forcing screw
- Nut
GENERAL

The swingarm also serves as the oil tank. For information on the swingarm function as the oil tank, see 3.14 OILING SYSTEM.

The swingarm features a removable brace on the right side to allow drive belt replacement.

REMOVAL

Brace

NOTE
Before removing swingarm brace, always relieve belt tension first. Removing swingarm brace without releasing tension will cause swingarm brace damage.

1. See Figure 2-83. Loosen rear axle pinch fastener (2).
2. Loosen rear axle (1) approximately 15 rotations to allow partial tension to be removed from rear drive system.
3. Remove right side rider/passenger footpeg heel guard and mount with the rider and passenger footpegs. See 2.34 HEEL GUARD AND FOOTPEG MOUNTS.
4. See Figure 2-85. Remove swingarm brace mounting fasteners (10).
5. Remove swingarm brace (11).

Figure 2-83. Rear Wheel Mounting, Right Side

Figure 2-84. Belt Guard Assembly
1. Swingarm
2. Dipstick
3. Swingarm bushings
4. Swingarm spacer
5. Swingarm bearing (2)
6. Engine crankcase
7. Pivot shaft pinch fastener w/nut
8. Oil drain plug
9. Pivot shaft
10. Brace fasteners (4)
11. Brace
12. Rear axle pinch fastener
13. Oil line fitting

**Figure 2-85. Swingarm Assembly**

**Swingarm**

1. Remove seat. See 2.45 SEAT.

**WARNING**

To prevent accidental vehicle start-up, which could cause death or serious injury, disconnect battery cables (negative (-) cable first) before proceeding. (00307a)

2. Disconnect battery by unthreading fasteners removing negative cable (black) from battery first. See 1.4 BATTERY MAINTENANCE.

3. See Figure 2-85. Remove oil drain plug (8) and drain oil from swingarm. See Drain Oil in 1.5 ENGINE LUBRICATION SYSTEM.

4. Remove rear fender. See 2.36 FENDERS.

5. Remove drive belt. See 6.6 DRIVE BELT SYSTEM.

6. Remove rear wheel. See 2.6 REAR WHEEL.

7. Remove p-clamp fasteners that secure oil lines to swingarm.

8. Disconnect the three oil lines from swingarm fittings. See 3.10 OIL LINE FITTINGS.

9. With vehicle supported remove lower shock absorber mounting fastener and spacer from shock absorber and swingarm.

10. See Figure 2-85. Loosen pivot shaft pinch fastener (7).

11. Remove pivot shaft (9) with the 7/8 in. hex tool from the tool kit.

12. Remove swingarm from vehicle.
DISASSEMBLY

Swingarm
1. See Figure 2-86. Remove oil line fittings from swingarm.

   **NOTE**

   See Figure 2-85. Remove swingarm bearings (5) only if replacement is required. The complete bearing assembly must be replaced as a unit when replacement is necessary. Do not intermix bearing components.

2. See Figure 2-85. Remove swingarm bearings (5) using slide hammer (SNAP-ON Part No. CJ1275 or equivalent) and 3/4 in. bearing remover and spacer.

3. Remove shock mount bushings (3) and sleeve.

4. Remove stone guard. See 2.37 BELT GUARDS.

CLEANING AND INSPECTION

**WARNING**

Compressed air can pierce the skin and flying debris from compressed air could cause serious eye injury. Wear safety glasses when working with compressed air. Never use your hand to check for air leaks or to determine air flow rates. (00061a)

1. Thoroughly clean all components in solvent. Blow dry with compressed air.

2. Carefully inspect all bearing components for wear and/or corrosion. Replace complete bearing assembly if any component is damaged.

3. Check that swingarm is not bent or twisted. Replace if damaged.

ASSEMBLY

Swingarm
1. See Figure 2-85. Install new shock mount bushings (3).

2. Install new bearings (5) and spacer (4) with BEARING INSTALLER (Part No. HD-44060) by lightly seating spacer.

   **NOTE**

   ● The left side bearing must be installed first and fully seated.

   ● Swingarm bearings should be replaced as a unit. Do not intermix components. Mark all components so they may be correctly installed.

3. See Figure 2-86. Install oil line fittings with new o-rings on swingarm. Tighten to 108-156 in-lbs (12-17.6 Nm). See 3.10 OIL LINE FITTINGS.

4. See Figure 2-85. Install drain plug (8). Tighten to 26-29 ft-lbs (35-36 Nm).

---

**Figure 2-86. Jiffy Tite, Quick Disconnect Oil Lines and Fittings**
INSTALLATION

Swingarm
1. See Figure 2-85. Align swingarm (1) in pivot of engine crankcase (6).
2. Install pivot shaft (9) with the 7/8 in. hex tool from the tool kit. Apply ANTI-SEIZE and tighten to 24-26 ft-lbs (32-35 Nm).
3. Apply LOCTITE 271 (red), install and tighten pivot shaft pinch fastener (7) to 17-19 ft-lbs (23-26 Nm).
4. See Figure 2-93. Install shock bushings.
5. Install lower shock absorber mounting fastener and spacer from shock absorber and swingarm and tighten to 15-17 ft-lbs (20.3-23 Nm).
6. Install right side footpeg mount. Tighten to 132-144 in-lbs (15-16.2 Nm). See 2.34 HEEL GUARD AND FOOTPEG MOUNTS.
7. Connect the three oil lines to the swingarm fittings. See 3.10 OIL LINE FITTINGS.
8. Install oil line p-clamps and tighten to 48-72 in-lbs (5.4-8 Nm).
9. Install lower stone guard. See 2.37 BELT GUARDS.
10. Install rear wheel. See 2.6 REAR WHEEL.

NOTE
Installing the rear wheel will include installation of the belt drive system. See 6.6 DRIVE BELT SYSTEM.
11. Install rear fender/belt guard. See 2.36 FENDERS.
12. Fill motorcycle with recommended oil. See 1.5 ENGINE LUBRICATION SYSTEM.

Brace
1. See Figure 2-85. Install swingarm brace (11) with swingarm brace mounting fasteners (10) loosely. Do not tighten.
2. Tighten swingarm brace fasteners (10) to 25-27 ft-lbs (34-37 Nm).
3. Tighten rear axle to 48-52 ft-lbs (65-70 Nm).
4. Tighten rear axle pinch fastener (12) to 40-45 ft-lbs (54-61 Nm).
5. Install right footpeg mount. Tighten to 132-144 in-lbs (15-16.2 Nm). See 2.34 HEEL GUARD AND FOOTPEG MOUNTS.

WARNING
Connect positive (+) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00068a)

6. Install battery by threading positive cable (red) into threaded hole first tightening to 72-96 in-lbs (8-11 Nm). See 1.4 BATTERY MAINTENANCE.

WARNING
After installing seat, pull upward on front of seat to be sure it is in locked position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070a)

7. Install seat. See 2.45 SEAT.

Final Swingarm Inspection
1. Check oil level after starting motorcycle and allowing it to reach operating temperature.
2. Check rear brake operation.

WARNING
After servicing brakes and before moving motorcycle, pump brakes to build brake system pressure. Insufficient pressure can adversely affect brake performance, which could result in death or serious injury. (00279a)
FRONT ISOLATOR

Removal

**NOTE**
Avoid cross-threading front isolator bolt or insert. Keep weight of motorcycle off front isolator by alternately loosening front isolator bolt and raising scissor jack to support engine.

1. Place a scissor jack under jacking point for supporting engine only. For location of jacking point see 2.32 EXHAUST SYSTEM.
2. See Figure 2-87. Remove clutch cable wire form.

3. See Figure 2-88. Remove front isolator bolt (6).
4. Remove front isolator mount fasteners (5).
5. Remove front isolator bracket (4).
6. Remove upper snubber fastener (2) and remove upper snubber (1).

Installation

1. See Figure 2-88. If the threaded insert (3) is damaged and needs to be replaced, install new insert with LOCTITE 271 (red) and tighten to 59-61 ft-lbs (80-82.7 Nm).
2. Loosely install front isolator bracket (4) with front isolator bolt (6).
3. See Figure 2-88. Install front isolator bracket fasteners (5), and tighten to 49-51 ft-lbs (66-69 Nm).

**CAUTION**
Avoid cross-threading front isolator bolt or insert. Keep weight of motorcycle off front isolator by alternately tightening front isolator bolt and raising scissor jack to support engine.

4. Tighten front isolator bolt (6) to 49-51 ft-lbs (66-69 Nm).

**NOTE**
Hold wire form while tightening to prevent it from twisting.
5. See Figure 2-87. Install clutch cable wire form. Tighten fastener to 84-92 in-lbs (9.5-10.4 Nm).

**NOTE**

REAR ISOLATOR

It is necessary to remove engine to access rear isolator.
See 3.4 STRIPPING MOTORCYCLE FOR ENGINE SERVICE to access the rear isolator.
REMOVAL

1. Remove fuel from frame. See DRAINING FUEL TANK in 4.39 FUEL PUMP.
2. Rotate engine. See 3.3 ENGINE ROTATION FOR SERVICE.
3. Remove exhaust header. See 2.32 EXHAUST SYSTEM.
4. Remove tail frame. See 2.41 LEFT TAIL SECTION AND BATTERY PAN.
5. Remove rear shock. See 2.23 REAR SHOCK ABSORBER.
6. Remove upper and lower fork clamps. See 2.17 FORK CLAMPS, UPPER AND LOWER.
7. Remove main wire harness. See 7.24 MAIN WIRE HARNESS.
8. Remove rear isolator fastener. See 3.4 STRIPPING MOTORCYCLE FOR ENGINE SERVICE.
9. See Figure 2-89. Lift and remove frame from the motorcycle.

INSTALLATION

1. Place frame over the motorcycle.
2. Install rear isolator fastener. See 3.5 ENGINE INSTALLATION.
3. Install main wire harness. See 7.24 MAIN WIRE HARNESS.
4. Install upper and lower fork clamps. See 2.17 FORK CLAMPS, UPPER AND LOWER.
5. Install rear shock. See 2.23 REAR SHOCK ABSORBER.
6. Install tail frame. See 2.41 LEFT TAIL SECTION AND BATTERY PAN.
7. Install exhaust header. See 2.32 EXHAUST SYSTEM.
8. Rotate engine. See 3.3 ENGINE ROTATION FOR SERVICE.

Figure 2-89. Lift Frame Off Motorcycle (Typical)
FRAME PUCKS

REMOVAL

<table>
<thead>
<tr>
<th>WARNING</th>
</tr>
</thead>
<tbody>
<tr>
<td>The aluminum frame of this motorcycle is the fuel tank. Drilling, welding, cutting, grinding, sanding, polishing or other modifications to this frame can weaken it or cause a fire, which could result in death or serious injury. (00126b)</td>
</tr>
</tbody>
</table>

1. To break the adhesive bond, apply isopropyl alcohol along the perimeter edge of the puck at the upper or lower rear corner. Wipe off excess alcohol.

2. Fit fingers under the corner edge and pry to loosen puck. 

   **NOTE**
   
   If the puck fit prevents getting finger tips under puck, cover the blade of a putty knife or similar tool with duct tape, to prevent scraping the frame, and pry up one corner of the puck.

3. Slip fingers under the loose corner and slowly pull the puck away from the frame. Apply isopropyl alcohol as needed to loosen remaining adhesive bond.

4. Clean adhesive from painted finish with isopropyl alcohol. Wipe up excess alcohol with cloth.

INSTALLATION

1. Using isopropyl alcohol, clean the frame for the new puck. Wait a minimum of 5 minutes for the alcohol to evaporate.

   **NOTE**
   
   Do not sand or scuff the surface where the puck will be installed.

2. See Figure 2-90. Identify the left and right side pucks by forward facing directional point.

3. With the adhesive backing in place, locate the puck on the frame making contact all around its perimeter and fitting the horizontal crease and V-shaped edge.

4. See Figure 2-91. With a pencil, outline the upper rear and lower rear corners on the frame.

   **NOTE**
   
   The puck can only be applied once. If the puck is peeled off, it will have reduced adhesive strength when it is re-applied to the frame.

5. Starting from the edge and working toward the center, carefully peel off the adhesive backing from the puck.

   **NOTE**
   
   Peeling away the backing may loosen the adhesive in the center of the puck. This will not affect the final seal.

6. Align the corners with the pencil marks and tack the puck to the frame at the corners.

7. From the tacked corners, pivot the puck onto the frame keeping the directional point aligned with the horizontal crease.

8. See Figure 2-92. For 60 seconds, press evenly around the perimeter to firmly seal the puck. Allow the puck to cure for at least one hour before riding.

9. Erase the pencil marks.

---

Figure 2-90. Left Side Puck

Figure 2-91. Outlining Puck Corner

Figure 2-92. Pressing Puck to Frame
GENERAL

The rear suspension is controlled by the shock absorber. The shock allows adjustment of rear compression and rebound damping and spring preload. The most important rear shock adjustment is the preload setting. Before making any damping adjustments, set the proper preload. See 1.11 SUSPENSION DAMPING ADJUSTMENTS.
REMOVAL

1. Remove seat. See 2.45 SEAT.

**WARNING**

Disconnect negative (-) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00049a)

2. Disconnect and remove battery. See 1.4 BATTERY MAINTENANCE.

3. Place a scissor jack under jacking point at the rear muffler and raise chassis until load has been removed from the lower shock bolt (13). See 2.32 EXHAUST SYSTEM for jacking point.

4. Cut and remove cable strap holding transmission vent line to shock assembly.

5. Cut and remove cable strap holding the remote preload adjuster hose to main harness.

6. Remove ECM. See 4.30 ELECTRONIC CONTROL MODULE.

**NOTE**

When removing the ECM, the fastener closest to the shock assembly has a nut that is captured in the plastic shield below the ECM. You need to place your finger under the nut when removing the fastener to prevent the nut from falling out. Slide the ECM to one side and loosely install the fastener to retain the nut in the correct location. The rear fastener attaches directly to the battery pan.

7. See Figure 2-93. Remove reservoir retainer fastener (6) and retainer (7).

8. Remove the two fasteners (4) holding the preload adjuster in place.

9. Remove the nut (9) and thick washer (10) from the lower shock bolt and raise scissor jack until the lower bolt can be removed by hand.

10. After removing both shock fasteners (13, 14), remove rear shock assembly.

**NOTES**

- Remove shock assembly through the top of the tail section (opening beneath rider seat).
- If preload knob is removed for any reason, there is a spring and check ball that is held in place by the knob. Use caution when removing knob in order to not lose spring and check ball.
- If it is necessary to remove the preload adjuster knob fastener, when reinstalling the fastener, tighten to 25-43 in-lbs (2.8-4.9 Nm).

INSTALLATION

1. See Figure 2-93. Lower rear shock assembly, preload adjuster assembly and remote reservoir into position.

**NOTE**

Rear brake switch wiring is routed over the remote reservoir.

2. Install fastener (14) and tighten to 48-52 ft-lbs (65-70.5 Nm).

3. Install lower shock mount with fasteners (9, 10, 11, and 13) and lower shock mount sleeve (12) and tighten to 15-17 ft-lbs (20.3-23 Nm).

**NOTE**

- See Figure 2-94. Verify preload adjuster knob is facing out.
- Verify that fan spins freely after shock is installed.

4. Install the two fasteners holding the preload adjuster in place and tighten to 36-60 in-lbs (4.0-6.7 Nm).

5. Install rear shock reservoir clamp (7) and fastener (6) and tighten clamp fastener to 80-88 in-lbs (9.0-9.9 Nm).

6. Install ECM. See 4.30 ELECTRONIC CONTROL MODULE.

7. Install cable strap securing preload adjuster hose to main harness.

8. Install cable strap securing transmission vent line to shock assembly.

**WARNING**

Connect positive (+) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00068a)

10. Install positive battery cable (red) to positive terminal of battery. Tighten to 72-96 in-lbs (8-11 Nm).

11. Connect negative battery cable. Tighten to 72-96 in-lbs (8-11 Nm).

**WARNING**

After installing seat, pull upward on front of seat to be sure it is in locked position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070a)

12. Install seat. See 2.45 SEAT.
REMOVAL/DISASSEMBLY

1. Remove right handlebar deflector. See 2.25 DEFLECTORS/HANDLEBARS.
2. See Figure 2-95. Loosen cable adjuster lock (thick disc) (3) on each cable.
3. Turn adjusters (3) in direction which will shorten cable housings to minimum length.
4. Remove fasteners (1) on right switch housing and separate housing from handlebar.
5. See Figure 2-96. Remove cables (2, 3) from notches in front housing (4).
6. Remove cables (2, 3) and ferrules (6) from cable wheel (7).
7. Remove airbox cover and baseplate. See 4.44 AIR CLEANER ASSEMBLY.
8. Disconnect cables from throttle body manifold to remove.
9. Cut cable straps and remove cables.

CLEANING AND INSPECTION

![WARNING]

Compressed air can pierce the skin and flying debris from compressed air could cause serious eye injury. Wear safety glasses when working with compressed air. Never use your hand to check for air leaks or to determine air flow rates. (00061a)

Clean all parts except cables in a non-flammable cleaning solvent. Blow dry with compressed air. Replace cables if frayed, kinked or bent.

ASSEMBLY/INSTALLATION

1. Route cable as shown in D.1 HOSE AND WIRE ROUTING.
2. Add cable straps as shown in the throttle cable routing in D.1 HOSE AND WIRE ROUTING.
3. Install throttle grip and position ferrules (6) into cable wheel (7).
4. Insert idle control into front switch housing.
5. Slide switch housing over throttle.
6. Insert throttle cable into front switch housing.
7. See Figure 2-95. Attach rear switch housing and position housings on right handlebar by engaging locating pin on front housing with hole in handlebar. Attach housings with two fasteners, installing longer fastener on bottom. Tighten to 25-33 in-lbs (3-4 Nm).
8. Adjust cables. See 1.15 THROTTLE CABLE AND IDLE SPEED ADJUSTMENT.
9. Install airbox assembly. See 4.44 AIR CLEANER ASSEMBLY.
10. Install right handlebar deflector. See 2.25 DEFLECTORS/HANDLEBARS.
REMoval/Disassembly

1. Remove fasteners (2) from clutch and brake pivot shafts (3 & 6) and pivot shaft risers (4).
2. Unsnap deflectors (1) from handlebar endcaps (7).
3. Lift deflectors off of the pivot shafts (3 & 6) and pivot shaft risers (4).
4. Loosen pivot shaft riser (4) and jam nut (5) and remove from both pivot shafts (3 & 6).
5. Remove pivot shafts (3 & 6) with levers.

AsSemBly/Installation

1. Install brake and clutch levers with pivot shafts (3 & 6). See 2.26 Clutch Control/Cable and 2.10 Front Brake Master Cylinder and Hand Lever for procedure details.
2. Install jam nuts (5) and tighten to 39-48 in-lbs (4.4-5.4 Nm).
3. Install pivot shaft risers (4) and tighten to 43-49 in-lbs (4.8-5.5 Nm).
4. Spread deflectors (1) and place over the pivot shaft and riser ends.
5. Snap deflectors onto handlebar end caps (7).
6. Install new deflector fasteners (2) and tighten to 24-36 in-lbs (2.7-4.1 Nm).

Figure 2-97. Deflectors
GENERAL

For clutch adjustment, see 1.8 CLUTCH.
For clutch replacement, see 6.4 CLUTCH.

REMOVAL/DISASSEMBLY

Clutch Cable

WARNING

To prevent accidental vehicle start-up, which could cause death or serious injury, disconnect negative (-) battery cable before proceeding. (00048a)

1. Remove seat. See 2.45 SEAT.
2. Disconnect negative battery cable. See 1.4 BATTERY MAINTENANCE.
3. Remove chin fairing. See 2.38 CHIN FAIRING.
4. Cut tie wrap from clutch cable/regulator wire harness.

NOTE

Always disconnect front tie bar from the "V" bracket first.

5. Remove front tie bar from "V" bracket.
6. Remove front tie bar, P-clamp (2) and clutch cable from engine.
7. See Figure 2-98. Slide clutch cable adjuster boot (1) up to access clutch adjuster (2).
8. Loosen clutch adjuster (2) to release tension from hand lever and clutch release mechanism.
9. See Figure 2-100. Remove clutch cable ferrule (7) from hand lever (4).

NOTE

See D.1 HOSE AND WIRE ROUTING in Appendix D.

10. Pull clutch cable down and out of upper triple clamp.
11. Remove three TORX screws with washers securing clutch inspection cover.

Figure 2-98. Clutch Cable Adjuster Mechanism

1. Rubber boot
2. Cable adjuster
3. Jam nut
4. Cable end

Figure 2-99. Clutch Cable Wire Form

1. Clutch cable wire form
2. P-clamp

Figure 2-100. Clutch Hand Control Assembly

1. Hand lever clamp pinch fastener
2. Hand lever clamp
3. Wind deflector standoff
4. Clutch hand lever
5. Clutch adjuster
6. Clutch cable adjuster boot
7. Clutch cable ferrule
12. See Figure 2-101. Remove clutch inspection cover (2).
13. Remove complete shift assembly.
   a. Remove flange bolt (6) from primary cover.
   b. Remove engine shift lever assembly (3). Do not scratch primary cover.
14. See Figure 2-102. Remove the outer ramp and hook (1) from the cable end (3) and coupling (2). Remove cable end from slot in coupling. See 6.3 CLUTCH RELEASE MECHANISM.
15. See Figure 2-103. Unscrew the cable fitting from the primary cover. Remove clutch cable and fitting.
16. Remove and discard o-ring on the clutch cable fitting.

Figure 2-101. Shifter Linkage

1. Primary cover  
2. Clutch inspection cover  
3. Engine shift lever  
4. Shift pedal assembly  
5. Shift linkage assembly  
6. Flange head bolt  
7. Shifter bracket  
8. Drain plug  
9. Sleeve, shift lever  
10. Bearings, shift lever

Figure 2-102. Clutch Release Mechanism (Typical)

1. Outer ramp and hook  
2. Coupling  
3. Cable end

Figure 2-103. Clutch Cable and Fitting
ASSEMBLY/INSTALLATION

Clutch Cable

1. Install new O-ring on the clutch cable fitting before installing.

2. Apply 565 thread sealer to fitting on clutch cable and screw the clutch cable fitting into the primary cover and tighten to 36-108 in-lbs (4-12.2 Nm).

3. See Figure 2-102. Install cable end into slot in coupling. Install the outer ramp and hook (1) onto the cable end (3) and coupling (2) and place assembly back into the clutch inspection area in the primary cover. See 6.3 CLUTCH RELEASE MECHANISM.

4. See Figure 2-104. Install rubber washer and shift lever assembly (1).

5. See Figure 2-101. Install (10) bearings and (9) sleeve into the shift lever.

6. After applying LOCTITE 271 (red), install flange bolt (5) and shift pedal to primary cover, and tighten to 22-24 ft-lbs (30-32.5Nm).

7. After applying LOCTITE 271 (red), tighten engine shift lever pinch screw to 48-60 in-lbs (5.4-6.8 Nm).

8. See Figure 2-104. If the shift linkage assembly (8) was removed for any reason, apply Loctite 271 to fasteners and tighten to 36-60 in-lbs (4-6.8 Nm). Adjust to rider comfort.

NOTE

See D.1 HOSE AND WIRE ROUTING in Appendix D.

9. Route clutch cable through clutch cable wire form and upper triple clamp.
10. See Figure 2-105. Connect clutch cable ferrule (7) to hand lever (4).

11. Adjust clutch adjusting screw. See 1.8 CLUTCH.

12. Add FORMULA+ TRANSMISSION AND PRIMARY CHAINCASE LUBRICANT (Part No. 99851-05) if needed as required until fluid level is even with bottom of clutch diaphragm spring. See TRANSMISSION FLUID under 1.8 CLUTCH.

NOTE
Each time the clutch inspection cover is removed the gasket must be replaced.

13. Install new clutch cover gasket.

14. See Figure 2-101. Install clutch inspection cover (2) with three TORX screws with washers. Tighten screws in a crosswise pattern to 84-108 in-lbs (9.5-12.2 Nm).

15. Install front tie bar, p-clamp and clutch cable to front engine mount and tighten fastener to 25-27 ft-lbs (33.9-36.6 Nm).

16. Connect front tie bar to "V" bracket and tighten fastener to 25-27 ft-lbs (33.9-36.6 Nm).

17. Adjust clutch cable. See 1.8 CLUTCH.

18. Install cable strap to voltage regulator wire.

**WARNING**
Connect positive (+) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00068a)

19. Install chin fairing. See 2.38 CHIN FAIRING.

20. Connect negative battery cable to battery terminal. Tighten fastener to 72-96 in-lbs (8-11 Nm).

**WARNING**
After installing seat, pull upward on front of seat to be sure it is in locked position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070a)

21. Install seat. See 2.45 SEAT.
REPLACEMENT

1. See Figure 2-106. Grab headlight grille on both sides and spread to remove grill.

NOTE
When spreading the headlight grille during removal/installation be careful not to spread the grille too far. If this happens simply bend the grille back until it fits snugly on the headlights.

2. Spread headlight grille with hands and snap it back in place over the headlights.

Figure 2-106. Headlight Grille
REMOVAL

1. Remove seat. See 2.45 SEAT.

**WARNING**

To prevent accidental vehicle start-up, which could cause death or serious injury, disconnect negative (–) battery cable before proceeding. (00048a)

2. Disconnect negative (–) cable (black) from battery. See 1.4 BATTERY MAINTENANCE.

3. Remove windshield and windscreen. See 2.44 WINDSHIELD AND WINDSCREEN.

4. See Figure 2-107. Disconnect horn connectors [122] (2).

5. See Figure 2-107. Separate headlight connector [38] (5).

6. Remove female connector [38B] from support bracket (9) by sliding connector up and off of bracket clip.

7. Remove both upper headlight fasteners (6).

**NOTE**

Horn (1) can remain attached to support bracket. The horn can be removed and replaced as needed.

8. Remove headlight alignment fastener from underside of front fender and remove headlights.

9. Remove two fasteners (8) from the left and right modules and remove support bracket.

**NOTE**

Access the headlight fasteners with a socket extension through the openings in the sides of the front modules.

---

**Figure 2-107. Headlight and Support Bracket**

- Horn
- Horn connectors [122]
- Horn bracket
- Headlight connector [38]
- Screws (2), upper headlight mounting
- Headlight assembly
- Screws (2), headlight support bracket
- Headlight support bracket
- Left and right front modules
**DISASSEMBLY**

1. See Figure 2-108. Remove rubber boots (1) from rear of headlight housing.
2. Disconnect wiring harness (5) from headlight bulbs (3) and remove along with position bulb socket (6).
3. Remove bulb holders (2).
4. Remove headlight bulbs (3) from back of headlight housing (4).

**ASSEMBLY**

1. See Figure 2-108. Align and install headlight bulbs (3) into back of headlight housing (4).

**NOTE**

The tab on the base of the headlight bulb should rest between the two tabs located at the top of the hole on the back of the headlight assembly.

2. Install bulb holders (2).
3. Connect wiring harness (5) to headlight bulbs (3) and install rubber boots (1) and install position bulb socket (6) between the headlights. For alignment of rubber boots, see 7.12 HEADLIGHT.

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**Figure 2-108. Headlight Assembly**

- **1. Boot (2)**
- **2. Bulb holder (2)**
- **3. Bulb (2)**
- **4. Headlight housing**
- **5. Wiring harness**
- **6. Position bulb socket** (used for HDI only)
- **7. Headlight connector**
1. See Figure 2-109. Install headlight support bracket (9).
2. Apply LOCTITE 271 (red) and install fasteners (8) securing headlight support bracket/turn signal flasher to left and right front modules (10) and tighten to 48-72 in-lbs (5.4-8.1 Nm).
3. Install headlight assembly.
   a. Install headlight assembly (7) into headlight support bracket (9).
   b. Install both upper headlight fasteners (6) but do not tighten.
   c. Install lower fastener (under the front fender), do not tighten.
4. Attach headlight connector to headlight support bracket.
5. Connect headlight connector [38] (5).
6. Install horn (1) and tighten fastener (4) to 36-60 in-lbs (4-6.7 Nm).
7. Connect horn connectors [122] (2).
8. Adjust headlights. See 1.18 HEADLIGHTS.
9. Install windshield and windscreen. See 2.44 WINDSHIELD AND WINDSCREEN.

**WARNING**

Connect positive (+) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00068a)

10. Install battery by threading positive cable (red) into threaded hole first tightening to 72-96 in-lbs (8-11 Nm). See 1.4 BATTERY MAINTENANCE.

**WARNING**

After installing seat, pull upward on front of seat to be sure it is in locked position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070a)

11. Install seat. See 2.45 SEAT.
REMOVAL

1. Remove seat. See 2.45 SEAT.

**WARNING**
To protect against accidental start-up of vehicle and possible personal injury, disconnect the negative battery cable before proceeding. Inadequate safety precautions could cause a battery explosion, which could result in death or serious injury.

2. Disconnect battery by unthreading fastener removing negative cable (black) from battery first. See 1.4 BATTERY MAINTENANCE.

3. Remove windshield and windscreen. See 2.44 WINDSHIELD AND WINDSCREEN.

4. Remove headlight assembly and support bracket. See 2.28 HEADLIGHTS AND SUPPORT BRACKET.

5. Disconnect and remove instrument module and auxiliary power outlet connectors.

6. See Figure 2-111. Remove upper module (5) fasteners and remove upper module.

7. Remove ignition switch. See 7.3 IGNITION/HEADLIGHT KEY SWITCH.

**NOTE**
See Figure 2-110. Once the ignition switch has been removed there will be two remaining fasteners.

8. Disconnect front turn signals. See 7.15 TURN SIGNALS.

9. See Figure 2-110. Remove fastener attaching p-clamp to rear side of right front module.

**NOTE**
See Figure 2-111. Once the clamp load has been released on the final fastener securing the right front module to the upper triple clamp, the left front module can be removed.

10. See Figure 2-110. Loosen but do not remove final fastener securing the right front module to upper triple clamp.

11. See Figure 2-111. Remove the left front module.

12. See Figure 2-110. Remove the final fastener and the right front module.

INSTALLATION

1. See Figure 2-110. Install right front module leaving single fastener loose.

2. After installing the left front module and aligning with holes in upper triple clamp, tighten previously installed single fastener to 12-14 ft-lbs (16.3-19 Nm).

3. Attach front brake line p-clamp to rear of right front module and tighten fastener to 36-60 in-lbs (4.1-6.8 Nm).

4. Install ignition switch. See 7.3 IGNITION/HEADLIGHT KEY SWITCH.

5. Install and connect instrument module. See 7.19 INSTRUMENT MODULE.

6. Connect turn signals. See 7.15 TURN SIGNALS.

7. See Figure 2-111. Install upper module (5). Tighten fasteners to 36-60 in-lbs (4.1-6.8 Nm).

8. Connect speedometer and auxiliary outlet.

9. Install headlight assembly and support bracket. 2.28 HEADLIGHTS AND SUPPORT BRACKET.

10. Install windshield and windscreen. See 2.44 WINDSHIELD AND WINDSCREEN.

**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.

11. Install battery by threading positive cable (red) into threaded hole first tightening to 72-96 in-lbs (8-11 Nm). See 1.4 BATTERY MAINTENANCE.

**WARNING**
After installing seat, pull upward on front of seat to be sure it is in locked position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070a)

12. Install seat. See 2.45 SEAT.
Figure 2-110. Right Front Module Fastener and Brake Line P-Clamp Fastener (Typical)

Figure 2-111. Front Module

1. Left and right front module
2. Right front module overlaps left front module
3. Right front module
4. Left front module
5. Upper module
REMOVAL

1. Remove seat. See 2.45 SEAT.

WARNING

To prevent accidental vehicle start-up, which could cause death or serious injury, disconnect negative (-) battery cable before proceeding. (00048a)

2. Disconnect battery negative cable.
3. Remove deflectors. See 2.25 DEFLECTORS/HANDLEBARS.
4. Remove left handlebar switch housing. See 7.17 HANDLEBAR SWITCHES. Cut left handlebar grip and remove.
5. Detach clutch hand control from handlebars. See 2.26 CLUTCH CONTROL/CABLE.
6. Remove front brake master cylinder. See 2.10 FRONT BRAKE MASTER CYLINDER AND HAND LEVER.
7. Loosen screws on right handlebar switch housing, but do not detach throttle grip assembly from handlebar. See 2.24 THROTTLE CONTROL.
8. Remove four harness retainers securing switch housing harnesses to handlebars.
9. See Figure 2-112. Remove the four screws holding upper handlebar clamp.

NOTE

Right hand control assembly may now be removed from detached handlebar.

10. Remove handlebars without stretching throttle cables.
11. See Figure 2-112. Remove endcaps.

INSTALLATION

1. Slide handlebars into throttle grip assembly. Fasten right handlebar switch housing to handlebar. See 2.24 THROTTLE CONTROL.
2. See Figure 2-112. Attach handlebars.
   a. Position handlebar on lower clamp.
   b. Place the upper handlebar clamp in position and thread the four screws in place after applying LOC-TITE 271 (red).
   c. Tighten both front screws to 10-12 ft-lbs (14-16 Nm).
   d. Then tighten both rear screws (2) 10-12 ft-lbs (14-16 Nm).
3. Install clutch hand control. Tighten but do not torque. See 2.26 CLUTCH CONTROL/CABLE.
4. Install left switch housing. See 7.17 HANDLEBAR SWITCHES.
5. Check control wire routing. See D.1 HOSE AND WIRE ROUTING.
   a. Route right hand control wires between the lower clamp and fork tube and on the outside of the clutch cable.
   b. Route left hand control wires between the lower clamp and fork tube.
   c. Install harness retainers.
6. Install a new left hand grip.
7. Position clutch hand lever to rider preferences and tighten fastener (1) to 60-84 in-lbs (6.8-9.5 Nm). See 2.26 CLUTCH CONTROL/CABLE.
8. Install front brake master cylinder. See 2.10 FRONT BRAKE MASTER CYLINDER AND HAND LEVER.
9. Install deflectors. See 2.25 DEFLECTORS/HANDLEBARS.
10. Check steering motion range to both fork stops.

WARNING

Connect positive (+) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00068a)

11. Install battery by threading positive cable (red) into threaded hole first tightening to 72-96 in-lbs (8-11 Nm). See 1.4 BATTERY MAINTENANCE.

WARNING

After installing seat, pull upward on front of seat to be sure it is in locked position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070a)

12. Install seat. See 2.45 SEAT.
Figure 2-112. Handlebar Assembly

1. Endcap (2)
2. Handlebar
3. Handlebar clamp
4. Clamp fasteners (4)
5. Left hand grip
6. Harness retainer (4)
REMOVAL

1. See Figure 2-113. Loosen adjuster nut (2) and remove mirror (1) from mount (3).
2. Loosen mount (3) and remove from bracket (4).

INSTALLATION

1. Install mount (3) onto bracket (4) and tighten to 20-22 ft-lbs (27.1-29.8 Nm).

   NOTE
   Before tightening adjuster nut, position mirrors for rider.
2. Install mirror (1) and tighten adjuster to 115-130 in-lbs (13-14.7 Nm).

Figure 2-113. Mirrors and Mounting Hardware
REMOVAL/DISASSEMBLY

NOTE
For details on removal of interactive exhaust system components, see REMOVAL under 7.6 INTERACTIVE EXHAUST SYSTEM.

Muffler
1. Remove chin fairing. See 2.38 CHIN FAIRING.
2. Remove front sprocket cover. See 2.35 SPROCKET COVER.
3. Remove idler pulley. See DRIVE BELT REMOVAL in 1.9 DRIVE BELT.
4. See Figure 2-114. Loosen front muffler mount fastener (5) but do not remove.
5. Remove front and rear muffler straps.
   Front: Remove front muffler strap fastener (4).
   NOTE
   Always replace the front muffler strap.
   Rear: Alternately loosen rear strap fasteners (7) and remove straps (8).
6. See Figure 2-115. Loosen Torca clamp (1).
7. Disconnect interactive exhaust cable and remove muffler.
   NOTE
   The muffler may be removed for replacement without removing the exhaust header.

Front Muffler Mount
1. Remove muffler.
   NOTE
   For details on removal of interactive exhaust system components, see REMOVAL under 7.6 INTERACTIVE EXHAUST SYSTEM.
2. See Figure 2-114. Remove front muffler mount fastener (5).
3. Remove strap (3) from front muffler mount (5).
4. Remove front muffler mount bushings by punching out with suitable tool.

Rear Muffler Bracket
1. Remove muffler.
2. Drain oil. See Drain Oil in 1.5 ENGINE LUBRICATION SYSTEM.
3. Remove oil feed line and p-clamp from swingarm. See 3.9 OIL HOSE ROUTING AND OIL RESERVOIR.
4. See Figure 2-114. Remove rear muffler bracket fasteners.
5. Slide oil lines from rear muffler bracket off the oil feed line and remove rear muffler bracket.

Exhaust Header
1. Rotate engine down. See 3.3 ENGINE ROTATION FOR SERVICE.
2. Remove oxygen sensor. See 4.33 OXYGEN SENSOR.
3. See Figure 2-115. Remove exhaust header (2) by removing mounting fasteners (3).
4. Remove exhaust ring (4), retaining ring (5) and port gasket (6).
ASSEMBLY/INSTALLATION

Exhaust Header
1. See Figure 2-115. Install exhaust ring (4), retaining ring (5) and new port gasket (6).
2. Install exhaust header (2). Tighten mounting fasteners (3) to 72-96 in-lbs (8-11 Nm).

   NOTES
   ● The front header fasteners must be torqued first.
   ● Tighten header nuts gradually, alternating between studs to insure that exhaust rings are flush with engine.

3. Install oxygen sensor. See 4.33 OXYGEN SENSOR.
4. Rotate engine up. See 3.3 ENGINE ROTATION FOR SERVICE.

Rear Muffler Bracket
1. See Figure 2-114. Slide rear muffler bracket over oil feed line.
2. Apply LOCTITE 271 (red), install rear muffler bracket fasteners and tighten to 32-36 ft-lbs (43-49 Nm).
3. Install oil feed line and p-clamp. Tighten p-clamp to 48-72 in-lbs (5.4-8 Nm). See 3.9 OIL HOSE ROUTING AND OIL RESERVOIR.
4. Fill swingarm/oil tank with 2.5 quarts (3.3 liters) oil. See Drain Oil in 1.5 ENGINE LUBRICATION SYSTEM.
5. Install muffler.

Front Muffler Mount
1. See Figure 2-114. Install front muffler mount bushings.
2. Install new strap on front muffler mount (5).
3. Install front fastener loosely. Do not tighten.
4. Install muffler.

   NOTE
   For assembly details of the interactive exhaust system, see INSTALLATION under 7.6 INTERACTIVE EXHAUST SYSTEM.

Figure 2-114. Muffler and Mounting System
Muffler and Straps

NOTE
Torca muffler clamps have eliminated the need for silicone or graphite tape during assembly. To ensure sealing integrity of muffler clamps and prevent the possibility of leakage, Buell recommends that muffler clamp assemblies be discarded and replaced each time they are removed.

1. Install muffler and new Torca clamp onto header.
   
   NOTE
   If necessary, use a fiber hammer to fit muffler on header.

2. Install interactive exhaust cable to muffler.

3. See Figure 2-114. Loosely install new front and rear muffler straps (2, 4).

   NOTES
   ● Never re-use front muffler strap. Always replace front muffler strap with a new strap when removed from system.
   ● It is important that the front muffler mount is tightened last in order to ensure proper alignment of the exhaust system.
   ● When rear muffler straps have been installed, it is important that strap fasteners do not contact idler pulley bracket.
   ● On the front muffler mount fastener, torque is applied to the head and not to the nut.

4. Tighten front strap fastener and alternately tighten rear muffler strap fasteners evenly till fasteners are tightened to:
   
   a. Front: Tighten around the muffler until snug.
   b. Rear: 48-60 in-lbs (5-7 Nm).
   d. Front: 108-120 in-lbs (12-14 Nm). Back off fastener two full turns and then retighten to 108-120 in-lbs (12-14 Nm).

5. See Figure 2-115. Tighten the Torca clamp (1) to 28-30 ft-lbs (38-40.6 Nm).

6. Tighten the front muffler mount to 16-18 ft-lbs (20.3-24.4 Nm).

7. Install idler pulley. See DRIVE BELT REMOVAL in 1.9 DRIVE BELT.

8. Install front sprocket cover. See 2.35 SPROCKET COVER.

9. Install chin fairing. See 2.38 CHIN FAIRING.

10. Adjust interactive exhaust cable. See 1.16 INTERACTIVE EXHAUST CABLE.
RIDERS AND PASSENGER FOOTPEGS

RIDER

Remove Footpeg
1. See Figure 2-116. Remove clip (3).
2. Remove footpeg pin (8).
3. Remove footpeg (10) and spring (9).

Install Footpeg
1. See Figure 2-116. Fit spring ends to footpeg mount and footpeg.
2. Hold footpeg (10), controlling spring, to footpeg mount (1).
3. Install footpeg pin (8) through mount, spring and footpeg.
4. Install clip (3)

PASSENGER

Remove Footpeg
1. Remove clip (3).
2. Remove footpeg pin (8).
3. Remove footpeg (4), detent plate (5), ball (6) and spring (7).

Install Footpeg
1. Position footpeg (4), detent plate (5), ball (6), and spring (7) on to footpeg mount (1).
2. Install footpeg pin (8).
3. Install clip (3).
4. Check that footpeg clicks in the up and down position.

Figure 2-116. Rider Footpeg, Mount and Heel Guard Assembly

1. Footpeg mount
2. Footpeg mount fasteners (3)
3. Clip, footpeg
4. Passenger footpeg
5. Detent plate
6. Ball
7. Spring
8. Pin
9. Spring
10. Rider footpeg
REMOVE MOUNT

1. On the right side remove the rear brake pedal fastener. See 2.9 BRAKE PEDAL.
2. See Figure 2-116. Remove footpeg mount fasteners (2). See Figure 2-119. On the right side, remove the 2 fasteners holding the rear brake master cylinder to the mount.
3. Remove two fasteners from rear brake line bracket.
4. Remove footpeg mount (1).

REPLACE HEEL GUARD

1. If necessary, cut the rubber heel guard tabs on the inside of the footpeg mount to remove the heel guard.
2. Pull rubber cones of replacement heel guard through the holes in footpeg mount.
3. Cut excess rubber from ends of cones capturing the heel guard to the footpeg mount.

INSTALL MOUNT

1. On the right side, install the rear brake master cylinder. See 2.13 REAR BRAKE MASTER CYLINDER.
2. Install rear brake line bracket. Tighten fasteners to 48-72 in-lbs (5.4-8.1 Nm).
3. See Figure 2-116. Position footpeg mount (1).
4. Install footpeg mount fasteners (2), and tighten to 132-144 in-lbs (15-16 Nm).
5. Install brake pedal fastener. See 2.9 BRAKE PEDAL.
REMOVAL

1. See Figure 2-120. Remove rear right chin fairing fasteners.
2. See Figure 2-121. Remove sprocket cover fasteners and washers (1).

INSTALLATION

1. See Figure 2-121. Position sprocket cover (2) over front sprocket.

   NOTE
   Apply LOCTITE 222 to the long fastener (1) only.

2. Install sprocket cover (2) using sprocket cover fasteners (1, 3) and tighten all fasteners and washers (1, 3) to 12-36 in-lbs (1-4 Nm).
3. Install chin fairing. See 2.38 CHIN FAIRING.
FRONT FENDERS

Removal Upper Front Fender
1. See Figure 2-122. Remove fasteners and washers (1) securing the upper front fender (2) to lower triple clamp.
2. Remove fastener and washer (3) from headlight assembly. Carefully remove upper front fender (2).

Removal Lower Front Fender
1. Remove fasteners (6, 7) from the right lower front fender (9) and remove.
2. Remove fasteners (7) from left front lower fender (8) and remove lower front fender (8) and lower center fender (4) together.

Installation Upper Front Fender
NOTE
When installing the upper front fender it is important that the front brake line p-clamp be aligned with the slot in the back right side of the upper front fender before installing and tightening fastener.
1. See Figure 2-122. Align upper front fender (2) to fender mounts on lower triple clamp, apply LOCTITE 271 (red) and install front fender fasteners and washers (1) and tighten to 36-48 in-lbs (4.0-5.4 Nm).
2. Install front fender fastener and washer (3) and tighten to 36-48 in-lbs (4.0-5.4 Nm).

Installation Lower Front Fender
1. Apply LOCTITE 271 (red) and install fasteners (6,7) in left front lower fender (8). Leave fasteners loose.
2. Verify that the brake line grommet is captured between the lower fender and the right lower front fender.
3. Install the right lower front fender (9) with fasteners (6, 7). Tighten upper fender fasteners to 36-48 in-lbs (4-5.4 Nm).

REAR FENDER

Removal
1. See Figure 2-122. Remove fasteners and washers (11) securing the rear fender (10) to swingarm.
2. Remove rear fender (10).

Installation
NOTE
When installing the rear fender it is necessary to align rear brake line with trough in left side of rear fender.
1. See Figure 2-122. Align rear fender (10) to swingarm and brake line.
2. Install rear fender (10) with fasteners and washers (11). Tighten to 12-36 in-lbs (1-4 Nm).
REMOVAL

1. Place a scissor jack under jacking point and raise rear wheel off ground. For location of jacking point see 2.32 EXHAUST SYSTEM.
2. Loosen rear axle pinch fastener.
3. Loosen rear axle approximately 15 rotations to allow partial tension to be removed from rear drive system.
4. See Figure 2-123. Remove rear fender/upper belt guard (1) by removing fasteners from swingarm.
5. Remove lower belt guard (3) by removing the two fasteners (4) located on the outside of the lower belt guard.
6. Once the lower belt guard has been removed, remove the metal stone guard (5).

INSTALLATION

1. See Figure 2-123. Install rear fender/belt guard (1) to swingarm. Tighten fasteners to 12-36 in-lbs (1-4 Nm).
2. Install stone guard and tighten fasteners to 12-36 in-lbs (1-4 Nm).
3. Install lower belt guard (3) and tighten fasteners (4) to 12-36 in-lbs (1-4 Nm).
4. Tighten rear axle to 48-52 ft-lbs (65-70 Nm).
5. Tighten rear axle pinch fastener to 40-45 ft-lbs (54-61 Nm).
6. Remove scissor jack from motorcycle.

Figure 2-123. Belt Guard Assembly
REMOVAL

1. Turn wheel full right or left for easier access to center fasteners.
2. See Figure 2-124. Remove center section fasteners and washers (2).
3. Remove left section fasteners and washers (4).
4. Remove right section fasteners and washers (6).
5. Remove chin fairing.

NOTE
To separate the left, right and center sections, drill out the rivets.

INSTALLATION

NOTE
To join the left, right and center sections, use the rivet gun from a Marson Thread-Setter™ Tool Kit MODEL NO. MAR39200HD.

1. Apply LOCTITE 271 (red) on all fasteners.
2. See Figure 2-124. Position the assembled chin fairing (5) and loosely install right side fasteners and washers (6).
3. Align center section (1) and loosely install center section fasteners and washers (2).

NOTE
Turn wheel full right or left for easier access to center fasteners.

4. Align left section (3) and loosely install left side fasteners and washers (4).
5. Tighten all fasteners to 36-48 in-lbs (4-5 Nm).

Figure 2-124. Chin Fairing
INTAKE COVER ASSEMBLY

REMOVAL

1. Remove seat. See 2.45 SEAT.
2. See Figure 2-125. Remove fasteners and nylon washers (2).
3. Remove intake cover assembly (1).

INSTALLATION

1. Position intake cover assembly over top of air cleaner cover.

   NOTE
   Front screws go in at a slight angle.

   2. See Figure 2-125. Start the front two fasteners (2) with nylon washers.
3. See Figure 2-125. Secure intake cover assembly (1) with fasteners and nylon washers (2). Tighten to 12-36 in-lbs (1.3-4 Nm).

   WARNING

   After installing seat, pull upward on front of seat to be sure it is in locked position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070a)
4. Install seat. See 2.45 SEAT.
RAM AIR SCOOP

Removal
1. See Figure 2-126. On left side of bike, locate ram air scoop (4).
2. Remove three ram air scoop fasteners (3).
3. Remove ram air scoop (4).

Installation
1. See Figure 2-126. Position ram air scoop (4).
2. Install ram air scoop (4) with three fasteners (3). Tighten to 12-36 in-lbs (1-4 Nm).

ENGINE SHROUD AIR SCOOP

Removal
1. See Figure 2-126. On right side of bike, locate engine shroud air scoop (6).
2. Remove three engine shroud air scoop fasteners (5).

Installation
1. See Figure 2-126. Position engine shroud air scoop (6).
2. Install engine shroud air scoop (6) with three fasteners (5). Tighten to 12-36 in-lbs (1-4 Nm).

OIL COOLER AIR SCOOP

Removal
1. See Figure 2-126. On left side of bike, locate oil cooler air scoop (2).
2. Remove two oil cooler air scoop fasteners (1).
3. Remove oil cooler air scoop (2).

Installation
1. See Figure 2-126. Position oil cooler air scoop (2).
2. Apply LOCTITE 271 (red) to oil cooler air scoop fasteners (1) and tighten to 48-72 in-lbs (5.4-8.0 Nm).

Figure 2-126. RAM Air Scoop, Engine Shroud, Oil Cooler
LEfT TAIL SECTION AND BATTERY PAN

DISASSEMBLY

1. Remove seat. See 2.45 SEAT.

**WARNING**

Disconnect negative (-) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00049a)

2. See Figure 2-127. Unthread fastener and remove battery negative cable (black) from battery negative (-) terminal.
3. Pull back terminal cover boot on battery positive cable (red).
4. Unthread fastener and remove battery positive cable from battery positive (+) terminal.
5. Remove battery.
6. Remove center tail loop. See 2.42 CENTER TAIL LOOP.
7. See Figure 2-127. Disconnect ECM connectors (4) [10], [11] and [164].
8. See Figure 2-127. Remove battery pan
   a. Remove ECM (3).
   b. Disconnect rear brake light switch connector [121].
   c. Disconnect and remove Bank Angle Sensor (2) [134].
   d. Remove fuse block and relay center (5).
   e. Remove main harness and plastic grommet (7) from battery pan.
   f. Remove fasteners securing battery tray to left and right tail sections.
   g. Lift battery pan straight up and out.
9. Remove fastener securing left front trunk pan to left side tail section.
10. Remove fasteners securing left tail section to main frame/fuel tank assembly.
11. Remove left tail section.
12. Remove the trunk pan.
   a. See Figure 2-127. Remove the two fasteners securing the preload adjuster to the trunk pan (13).
   b. Remove the shock reservoir fastener and retainer. Push the reservoir aside to access the fastener.
   c. Remove remaining fasteners securing right front trunk pan to right side tail sections.
   d. Remove remaining components on trunk pan as needed.

CLEANING

**NOTE**

Do not use wheel care products or other compounds developed specifically for cleaning and polishing powdercoat. These cleaners could potentially damage the tail section finish.

The cast aluminum tail section has a powder coat. Because the surface is not bare polished aluminum, it must be cleaned using only mild soap and warm water. After washing, always dry the surface using a clean, soft cloth.

**NOTE**

When removing the ECM, the fastener closest to the shock assembly has a nut that is captured in the plastic shield below the ECM. You need to place your finger under the nut when removing the fastener to prevent the nut from falling out. Slide the ECM to one side and loosely install the fastener to retain the nut in the correct location. The rear fastener attaches directly to the battery pan.

Do not use wheel care products or other compounds developed specifically for cleaning and polishing powdercoat. These cleaners could potentially damage the tail section finish.
Figure 2-127. Main Harness and Electrical Components Under Seat

1. Main harness
2. BAS (bank angle sensor) connector [134]
3. ECM
5. Fuse block and relay center
6. Main harness ground wire [GRD 2]
7. Main harness with plastic grommet
8. Battery ground cable
9. Battery positive cable
10. Left rear and right rear tail section fasteners (4)
11. Seat lock cable
12. Auxiliary power outlet
13. Trunk pan
14. Left tail section
1. See Figure 2-127. Install trunk pan assembly (13) from left side of vehicle.

2. Install fastener securing right front trunk pan to right side tail section and tighten to 12-36 in-lbs (1.3-4 Nm).

3. Install shock reservoir, retainer and fastener. Tighten fastener to 80-88 in-lbs (9.0-9.9 Nm).

4. Install left tail section (14) onto vehicle.
   a. Apply LOCTITE 271 (red) and install fasteners attaching left tail section to main frame/fuel tank assembly and tighten to 21-23 ft-lbs (28.5-31.2 Nm).
   b. Install fastener attaching left front trunk pan to left side tail section and tighten to 12-36 in-lbs (1.3-4 Nm).

5. Install two fasteners securing the preload adjuster to the trunk pan and tighten to 36-60 in-lbs (4-6.7 Nm).

6. Install battery pan:
   a. Install fasteners securing battery tray to left and right tail sections and tighten to 72-96 in-lbs (8-11 Nm).
   b. Install fuse block and relay center (5).
   c. Install main harness and plastic grommet (7) into battery pan.
   d. Install bank angle sensor (2), connect and tighten fastener to 12-36 in-lbs (1.3-4 Nm).
   e. Connect rear brake light switch connector [121].
   f. Install ECM and tighten fasteners to 36-60 in-lbs (4-6.7 Nm).

7. See Figure 2-127. Connect ECM connectors (4) [10], [11] and [164].

8. Install center tail loop. See 2.42 CENTER TAIL LOOP.

![WARNING]

Connect positive (+) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00068a)

9. Install battery. See 7.11 BATTERY.

![WARNING]

After installing seat, pull upward on front of seat to be sure it is in locked position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070a)

10. Install seat. See 2.45 SEAT.
Figure 2-128. Tail Frame and Trunk Pan Assembly

1. Fastener, washer and nut to main frame/fuel tank assembly (4)
2. Right tail section
3. Center tail loop
4. Center tail loop fastener to rear tail section (4)
5. Left tail section
6. Ground terminal fastener (2)
7. Front trunk pan fastener to side tail section (2)
8. Seat latch assembly
9. Trunk pan assembly
10. Rear trunk pan fastener to center tail loop (2)
11. Battery pan
DISASSEMBLY

1. Remove seat. See 2.45 SEAT.

**WARNING**

Disconnect negative (-) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00049a)

2. Unthread fastener and remove battery negative cable (black) from battery negative (-) terminal.

3. See Figure 2-129. Remove two fasteners securing trunk pan to center tail loop (1).

4. Remove cable strap from wire harness and seat latch cable.

5. See Figure 2-129. Remove wire cover (3) on bottom side of license plate bracket (2) in order to access wires.

6. Disconnect:
   a. Right turn signal connector [18]
   b. Left turn signal connector [19]
   c. License plate lamp connector [45]
   d. Tail light connectors [93]
   e. Auxiliary power outlet [180]

7. Remove two fasteners (10) securing trunk pan to center tail loop.

8. Remove fasteners securing left and right tail sections to center tail loop.

9. Remove center tail loop from vehicle.

10. To further disassemble center tail loop see 7.13 TAIL LAMP, 7.14 LICENSE PLATE LAMP ASSEMBLY, 7.15 TURN SIGNALS and 2.48 TRIPLE TAIL.

ASSEMBLY

1. Install center tail loop around left and right tail sections.

2. Install fasteners securing left and right tail sections to center tail loop but do not tighten.

3. Install two fasteners securing trunk pan to center tail loop but do not tighten.

4. Route wire harness and auxiliary power outlet under seat latch bracket.

5. Tighten nuts of left and right tail sections to 20-22 ft-lbs (27-30 Nm). Repeat to verify torque.

6. Connect:
   a. Right turn signal connector [18].
   b. Left turn signal connector [19].
   c. License plate lamp connector [45]
   d. Tail light connectors [93].
   e. Auxiliary power outlet [180]

7. Install cable strap.

8. Install wire cover (3) on bottom side of tail loop (1) and license plate bracket (2).

9. Tighten fasteners.
   a. Wire cover screws to 36-48 in-lbs (4-5.4 Nm).
   b. Install license plate light fasteners and to 12-36 in-lbs (1.4-4 Nm).

**WARNING**

Connect positive (+) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00068a)

10. Connect battery by threading negative cable (black) into threaded hole tightening to 72-96 in-lbs (8-11 Nm). See 1.4 BATTERY MAINTENANCE.

**WARNING**

After installing seat, pull upward on front of seat to be sure it is in locked position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070a)

11. Install seat. See 2.45 SEAT.

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Figure 2-129. Wire Cover/Tail Loop/License Plate Bracket

- **1. Tail loop**
- **2. License plate bracket**
- **3. Wire cover**

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DISASSEMBLY

1. Remove seat. See 2.45 SEAT.

**WARNING**
Disconnect negative (-) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00049a)

**NOTE**
The center tail loop must be removed before removing the left or right tail sections. See 2.42 CENTER TAIL LOOP.

2. See 7.11 BATTERY Unthread fastener and remove battery negative cable (black) from battery negative (-) terminal.

3. Pull back terminal cover boot on battery positive cable (red).

4. Unthread fastener and remove battery positive cable from battery positive (+) terminal.

5. Remove battery.

9. Move the rear shock reservoir out of the way in order to access right tail section fastener.

10. Remove the rear brake master cylinder reservoir.

11. See Figure 2-131. Remove the three fasteners on the inside of the right tail section.

12. See Figure 2-132. Remove the final two fasteners on the outside of the right tail section and remove the right side tail section.

**NOTE**
When removing the ECM, the fastener closest to the shock assembly has a nut that is captured in the plastic shield below the ECM. You need to place your finger under the nut when removing the fastener to prevent the nut from falling out. Slide the ECM to one side and loosely install the fastener to retain the nut in the correct location. The rear fastener attaches directly to the battery pan.

6. Remove ECM.

7. Remove rear shock reservoir fastener and retainer.

8. Disconnect the rear brake light switch.

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ASSEMBLY

1. See Figure 2-128. Install right tail section (2) onto vehicle.
   a. Install fastener (1) attaching right front trunk pan to right side tail section and tighten to 12-36 in-lbs (1.3-4 Nm).
   b. Install fasteners (5) attaching right rear tail section to center tail loop and tighten to 20-22 ft-lbs (27.1-29.8 Nm).
   c. Apply LOCTITE 271 (red) and install fasteners attaching right tail section to main frame/fuel tank assembly and tighten to 21-23 ft-lbs (28.5-31.2 Nm).
   d. Install battery tray and ground wire fasteners and tighten to 72-96 in-lbs (8-10.8 Nm).

2. Install master cylinder remote reservoir. See 2.13 REAR BRAKE MASTER CYLINDER.

3. Install shock reservoir, retainer, and fastener. Tighten to 80-88 in-lbs (9.0-9.9 Nm).

4. Connect rear brake light switch connector [121].

5. Install ECM and tighten fasteners to 36-60 in-lbs (4.0-6.8 Nm).

**WARNING**

Connect positive (+) battery cable first. If positive (+) cable should contact ground with negative (-) cable connected, the resulting sparks can cause a battery explosion, which could result in death or serious injury. (00068a)

6. Install battery by threading positive cable (red) into threaded hole first tightening to 72-96 in-lbs (8-11 Nm). See 1.4 BATTERY MAINTENANCE.

**WARNING**

After installing seat, pull upward on front of seat to be sure it is in locked position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070a)

7. Install seat. See 2.45 SEAT.
REMOVAL

NOTES
● The windshield releases from the windscreen by pulling outward and away from vehicle.
● The windscreen fastens into the left and right front modules (2, 8) and the center fairing support (6).
1. See Figure 2-133. Remove windshield (4) by pulling loose from windscreen (6).
2. Remove six windscreen fasteners (5).
3. Remove windscreen (6).

INSTALLATION
1. See Figure 2-133. Position windscreen (6) onto left and right front modules (2, 8) and the center fairing support (6).
2. Install six fasteners and tighten to 10-12 in-lbs (1.1-1.4 Nm).
3. Install windshield (4) by pushing into place. Pull on windscreen when installed to verify attachment.

Figure 2-133. Windshield and Windscreen

1. Headlight mounting bracket
2. Left front module
3. Windscreen fastener (4)
4. Windshield
5. Windscreen fasteners (6)
6. Windscreen
7. Fairing support, center
8. Right front module
GENERAL

See Figure 2-134. The seat anchors in six places on the vehicle. The first is a front tab (1) which fits into a slot in the frame. Four seats hooks (2) slide onto the shouldered lugs located in the left and right forward tail sections. The last is the seat lock latch which fits into the slot on the seat latch.

REMOVAL

1. Insert ignition key into seat lock located at rear of motorcycle below taillight.
2. Turn key clockwise to disengage rear seat latch.
3. Grip the rear of the seat and pull towards the rear of the motorcycle.

INSTALLATION

1. See Figure 2-134. Position seat and slide forward to engage the front tab (1) with the slot in the frame and the four hooks (2) with the shouldered lugs on the tail sections.
2. Align rear tab with latch slot at rear of motorcycle.
3. Press down firmly on rear of seat to engage seat lock latch (3).
4. Pull up on rear of seat to make sure latch is engaged.
5. Remove ignition key from seat lock.

WARNING

After installing seat, pull upward on front of seat to be sure it is in locked position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070a)

1. See Figure 2-134. Position seat and slide forward to engage the front tab (1) with the slot in the frame and the four hooks (2) with the shouldered lugs on the tail sections.
2. Align rear tab with latch slot at rear of motorcycle.
3. Press down firmly on rear of seat to engage seat lock latch (3).
4. Pull up on rear of seat to make sure latch is engaged.
5. Remove ignition key from seat lock.
REMOVAL

1. Remove seat. See 2.45 SEAT.
2. Cut cable strap securing wire harness to seat lock cable.
3. See Figure 2-135. Disconnect seat lock cable (5):
   a. Remove latch (8) from latch bracket (9) by removing two fasteners (7).
   b. Remove cable end (6) and cable (5) from latch (8).
4. Remove seat lock:
   a. Remove wire cover from bottom side of license plate bracket to access seat lock.
   b. Remove seat lock retainer (3) from seat lock (1).
   c. Remove seat lock (1) from plate (2) and license plate bracket.

   **NOTE**
   *When removing seat lock (1), cable end (4) should release from seat lock.*
5. Remove cable (5) from plate (2).

INSTALLATION

1. See Figure 2-135. Install cable (5) into plate (2).
2. Install the seat lock (1) into license plate bracket and plate (2).

   **NOTES**
   *Once seat lock has been started through the hole in the license plate bracket and plate (2), now is the time to connect the cable end to the seat lock.*
   *Seat lock plate must be aligned to tab on seat lock for proper installation.*
3. Install seat lock retainer (3) by aligning retainer to retainer grooves on back side of seat lock (1).
4. Connect seat lock cable to latch:
   a. Install cable end (6) and cable (5) onto latch (8).
   b. Install latch (8) to latch bracket (9) and tighten fasteners (7) to 60-96 in-lbs (6.7-10.8 Nm).
5. Open and close the seat lock with ignition key to verify that cable is working properly.
6. Install the wire cover fasteners and tighten to 36-48 in-lbs (4-5.4 Nm).
7. Install license plate light fasteners and tighten to 12-36 in-lbs (1.3-4 Nm)

   **WARNING**
   After installing seat, pull upward on front of seat to be sure it is in locked position. While riding, a loose seat can shift causing loss of control, which could result in death or serious injury. (00070a)
8. Install cable strap around seat lock cable in original location.
9. Install seat. See 2.45 SEAT.
1. Seat lock
2. Plate
3. Retainer
4. Cable end
5. Cable
6. Cable end
7. Latch screw (metric) (2)
8. Latch
9. Latch bracket
10. Trunk pan
11. Center tail loop

Figure 2-135. Seat Lock Assembly
GENERAL

CAUTION

This motorcycle does NOT have a locking sidestand. Park the motorcycle on a level, firm surface. An unbalanced motorcycle can fall, which could result in death or serious injury. (00122a)

The sidestand is located on the left side of the motorcycle. The sidestand swings outward to support the motorcycle for parking.

REMOVAL

1. Remove muffler. See Muffler and Straps in 2.32 EXHAUST SYSTEM.
2. See Figure 2-137. Remove fasteners (4) securing sidestand bracket (3) to engine.
3. Remove sidestand.

DISASSEMBLY

NOTE

Sidestand assembly does not have to be removed from motorcycle in order to remove sidestand leg.

1. Remove two fasteners from the left side of chin fairing. See 2.38 CHIN FAIRING.
2. See Figure 2-137. Remove sidestand leg (1).
   a. Retract sidestand leg.
   b. Remove sidestand spring (2) and spring extension plate (4) using SNAP-ON SPRING TOOL (Part No. HE-52B).
   c. Remove sidestand pivot pin circlip (7) and remove sidestand pivot pin (3).
3. Extend sidestand leg and remove.
ASSEMBLY

1. See Figure 2-138. Install sidestand leg (1).
   a. Lubricate sidestand pivot pin and mating portions on sidestand bracket with WHEEL BEARING GREASE (Part No. 99855-89) as shown in Figure 2-139.
   b. See Figure 2-138. Install the sidestand leg (1) to the bracket (5) by installing the pivot pin (3) and pivot pin circlip (7).
   c. Retract sidestand leg.
   d. Install spring extension plate (6) and sidestand spring (7) using SNAP-ON SPRING TOOL (Part No. HE-52B).

   NOTE
   Extension plate should curve away from primary chain adjustment screw to allow for clearance around adjustment screw.

INSTALLATION

1. See Figure 2-138. Apply LOCTITE 271 (red) to the sidestand bracket fasteners (6). Loosely install the sidestand assembly to the crankcase with the sidestand bracket fasteners (6). Extend the sidestand leg (1) and hold forward in the fully extended position while tightening the sidestand bracket fasteners (6) in the following sequence:
   a. Tighten the front fastener to 25-27 ft-lbs (34-37 Nm).
   b. Tighten the rear fastener to 25-27 ft-lbs (34-37 Nm).
2. Repeat the tightening sequence Step 1 to verify proper clamp load.
3. Install muffler. See Muffler and Straps in 2.32 EXHAUST SYSTEM.
4. Install chin fairing fasteners. See 2.38 CHIN FAIRING.
5. Extend and retract sidestand leg to check for proper operation.
GENERAL

See Figure 2-140. The Triple Tail™ when folded forward acts as a luggage rack (1) with integrated tie-down hooks. When in the upright position, it is a passenger backrest (2) with subtle flex for passenger comfort. When in the rearward position, you can carry a passenger and have a luggage rack (3) for extra carrying capacity.

REMOVAL

NOTE
The portion of the grab handle closest to the front of the vehicle is slotted for easy access. The fastener does not need to be fully removed.

1. Remove the seat. Refer to 2.45 SEAT.
2. See Figure 2-141. To access fasteners (3, 11), remove the plastic wire cover under the license plate light. Remove the two screws and the two nuts to remove the plastic cover.
3. Remove the right hand (RH) rear fastener (3).
4. Loosen but do not remove the front (RH) fastener (1).
5. Hold the triple tail rack (5) in place and remove the RH grab handle (2).
6. Slowly, slide the tail towards the right.

NOTE
The spring (6) in the left hand (LH) grab handle is held under tension.

7. Loosen but do not remove the front (LH) fastener (12).
8. Remove rear fastener (11) and the LH grab handle (13).

DISASSEMBLY

1. See Figure 2-141. Remove the fastener (9) and the plastic collar (10) from the LH grab handle(13).
2. To remove the bearings (4) from the right hand grab handle, insert a 3/4 in. blind bearing collet and extract.
3. To remove the bearing (4) from the LH grab handle, insert a 3/4 in. blind bearing collet and extract.
4. Remove the pin (7) and detent (8).
5. Inspect and replace the spring, pin and detent as necessary.

NOTE
Replace the bushing with a new bushing if removed from the grab handle.

ASSEMBLY

1. Hold the RH grab handle and using a Snap-on seal and bushing driver, tap in the bearing.
2. Hold the LH grab handle to assemble the detent and pin.
3. Using a Snap-on seal and bushing driver, tap in the bearing.

Figure 2-140. Triple Tail Positions
INSTALLATION

1. Install the LH grab handle unto the front fastener and install the rear fastener. Do not tighten.
2. Slide the spring into the LH grab handle.
3. Press the spring with the shaft of the triple tail rack and hold the rack in place capturing the spring.
4. Install the plastic collar (10) and tighten the fastener to 36-48 in-lbs (4.0-5.4 Nm).
5. Holding the rack, fit the RH grab handle unto the front fastener and install the rear fastener. Do not tighten.
6. See Figure 2-141. Apply LOCTITE 271 (red) to LH and RH grab handle fasteners.
   a. Tighten rear fasteners (3, 11) to 23-25 ft-lbs (31-34 Nm). Tighten
   b. Tighten front fasteners (1, 12) to 96-120 in-lbs (11-13.5 Nm).
7. Verify that the rack operates properly.
8. Install the plastic wire cover under the license plate lamp. Tighten the screws to 36-48 in-lbs (4.0-5.4 Nm) and tighten the nuts to 12-36 in-lbs (1.4-4.0 Nm).

Figure 2-141. Triple Tail, Passenger Backrest and Luggage Rack