



2003 BUELL® SERVICE MANUAL



FIREBOLT XB9R MODEL

OFFICIAL FACTORY MANUAL - Part No. 99493-03Y

**2003
BUELL® XB9R FIREBOLT™
MODEL**

**SERVICE
MANUAL**

The information in this Service Manual applies
to 2003 Buell® Firebolt™ XB9R model motorcycles.

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Bleeding Front Brake

NOTE

Hydraulic brake fluid bladder-type pressure equipment can be used to fill the brake master cylinder through the bleeder valve if master cylinder reservoir cover is removed to prevent pressurization.

1. See Figure 1-6. Install end of plastic tubing over front caliper bleeder valve; place other end in a clean container. Stand motorcycle upright.

CAUTION

Cover molded-in-color surfaces and right handlebar switches and use care when removing brake reservoir cover and adding D.O.T. 4 brake fluid. Spilling D.O.T. 4 brake fluid on molded-in-color surfaces will result in cosmetic damage. Spilling brake fluid on switches may render them inoperative.

2. Cover body surfaces, right handlebar switches and instrument panel to protect from spillage.
3. See Figure 1-7. Remove two fasteners from front master cylinder cover.
4. Add **D.O.T. 4 BRAKE FLUID** to master cylinder reservoir. Bring fluid level to within 1/8 in. (3.2 mm) of molded boss inside front master cylinder.

NOTE

Do not reuse brake fluid.

5. Depress, release and then hold brake hand lever to build up hydraulic pressure.
6. Open bleeder valve about 1/2-turn counterclockwise; brake fluid will flow from bleeder valve and through tubing. When brake lever has moved 1/2 to 3/4 of its full range of travel, close bleeder valve (clockwise). Allow brake lever to return slowly to its released position.
7. Repeat steps 5-6 until all air bubbles are purged.
8. Tighten front caliper bleeder valves (metric) to 36-60 **in-lbs** (4-7 Nm).
9. Verify master cylinder fluid level as described in step 4.
10. Attach cover to front master cylinder reservoir and tighten fastener to 9-13 **in-lbs** (1.0-1.5 Nm).
11. Remove cover from molded-in-color surfaces, right handlebar switches and instrument panel.

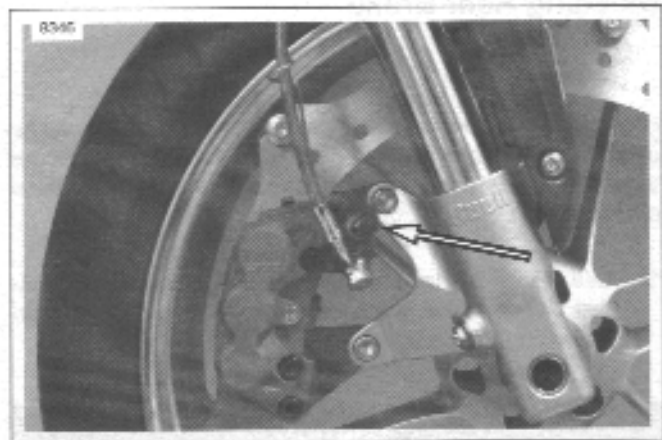


Figure 1-6. Front Caliper Bleeder Valve

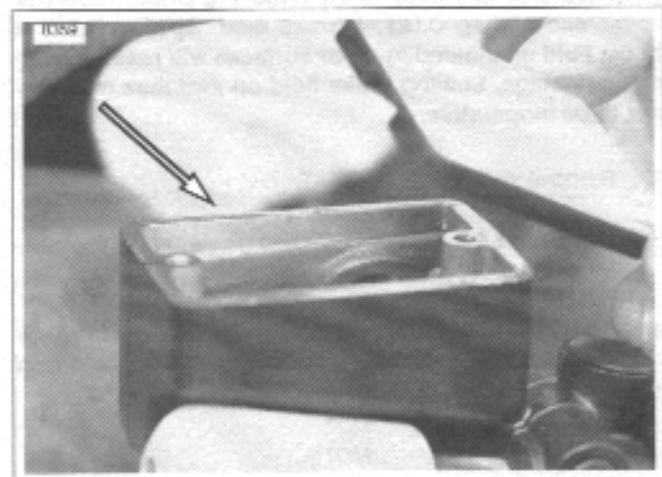


Figure 1-7. Front Master Cylinder Reservoir

Current and Voltage Output Test

1. Connect load tester.
 - a. Connect negative and positive leads to battery terminals.
 - b. See Figure 7-25. Place load tester induction pickup over positive regulator cable.

CAUTION

Do not leave any load switch turned on for more than 20 seconds or overheating and tester damage are possible.

2. Run the engine at 3000 RPM. Increase the load as required to obtain a constant 13.0 VDC.
3. The current output should be 34-38 amps. Make note of measurement for use in TOTAL CURRENT DRAW TEST.

NOTE

Rider's habits may require output test at lower RPM.

Voltage Output Test

1. See Figure 7-25. After removing the load, read the load tester voltage meter.
 - a. If voltage to the battery is not more than 15 VDC, voltage output is within specifications. Investigate other possible problems. See TROUBLESHOOTING in this section.
 - b. If voltage is higher, regulator is not functioning properly or connections are loose or dirty.

Stator Check

1. Turn ignition key switch to OFF.
2. See Figure 7-26. Connect an ohmmeter.
 - a. Locate voltage regulator connector [46] under sprocket cover. See 7.24 SPROCKET COVER WIRING. Disconnect from alternator stator wiring.
 - b. Insert one ohmmeter lead into a stator socket.
 - c. Attach the other lead to a suitable ground.
3. Test for continuity with ohmmeter set on the RX1 scale.
 - a. A good stator will show no continuity (∞ ohms) across all stator sockets and ground.
 - b. Any other reading indicates a grounded stator which must be replaced.
4. See Figure 7-27. Remove ground lead. Check resistance across stator sockets 1-2, 2-3 and 3-1.
5. Test for resistance with ohmmeter set on the RX1 scale.
 - a. Resistance across the stator sockets should be 0.1-0.3 ohms.
 - b. If the resistance is lower, the stator is damaged and must be replaced.

NOTE

Verify that meter reads 0 ohms when probes are shorted together. If not, subtract lowest value to resistance value of stator.

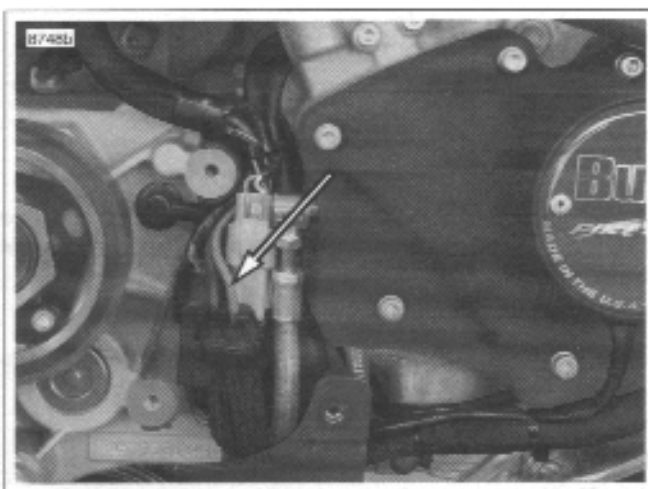


Figure 7-25. Positive Regulator Cable (red wire)

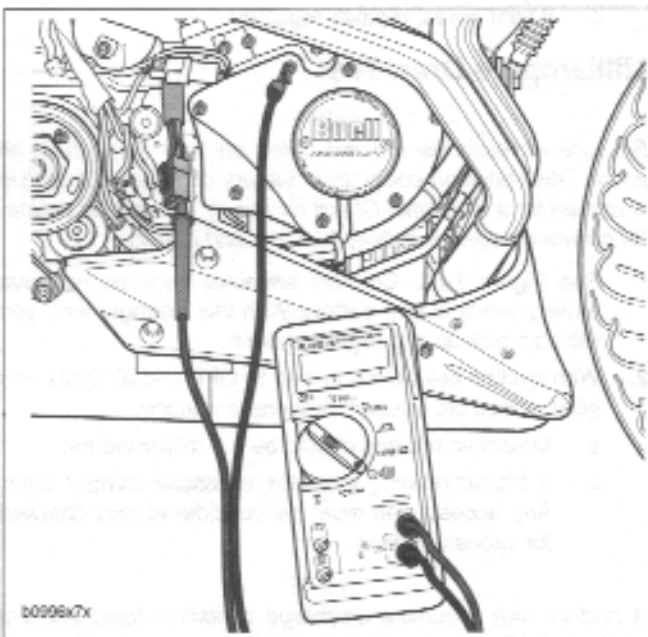
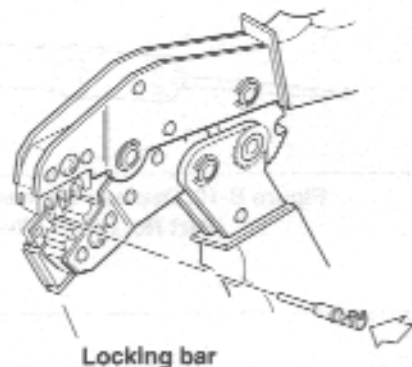
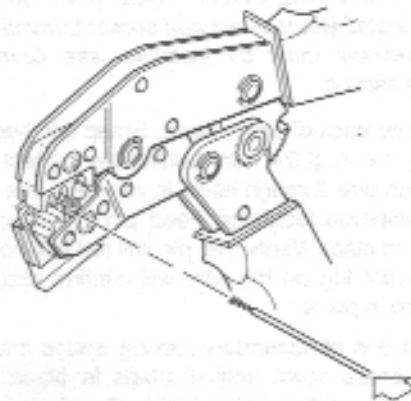


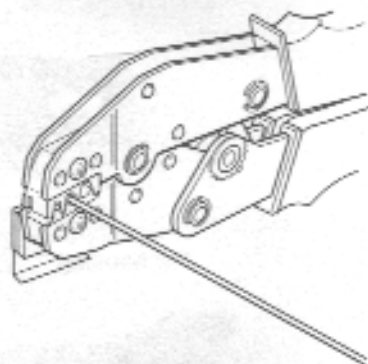
Figure 7-26. Test for Grounded Stator



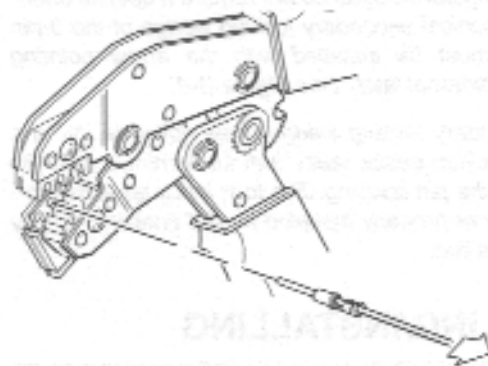
1. Insert contact through middle hole in locking bar.



2. Insert stripped lead until it contacts locking bar.



3. Close and squeeze crimp tool



4. Raise locking bar and remove contact.

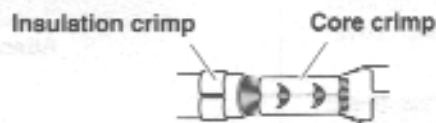
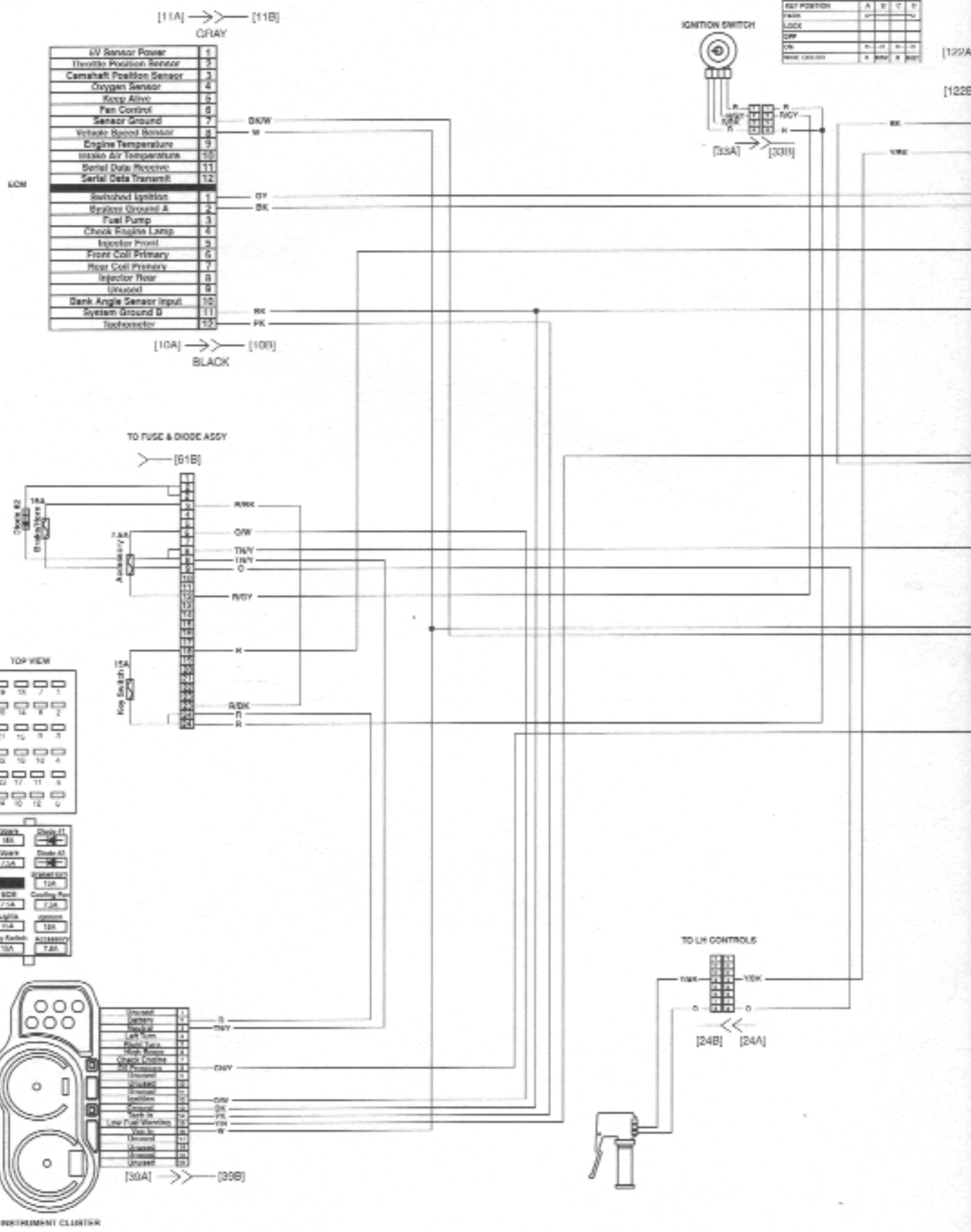


Figure B-12. Deutsch Crimping Procedure

CRIMPING INSTRUCTIONS

1. See Figure B-12. Squeeze the handles to cycle the crimp tool to the fully open position.
2. Raise locking bar by pushing up on bottom flange. With the crimp tails facing upward and the rounded side of the contact barrel resting on the concave split level area of the crimp tool, insert contact (socket/pin) through middle hole of locking bar.
3. Release locking bar to lock position of contact. If the crimp tails are slightly out of vertical alignment, the crimp tool automatically rotates the contact so that the tails face straight upward. When correctly positioned, the locking bar fits snugly in the space between the contact band and the core crimp tails.

4. Strip lead removing 5/32 in. (4 mm) of insulation. Insert wire between crimp tails until ends make contact with locking bar. Verify that wire is positioned so that short pair of crimp tails squeeze bare wire strands, while long pair folds over insulation material.
5. Squeeze handle of crimp tool until tightly closed. Tool automatically opens when the crimping sequence is complete. Raise up locking bar and remove contact.
6. Inspect the quality of the core and insulation crimps. Distortion should be minimal.



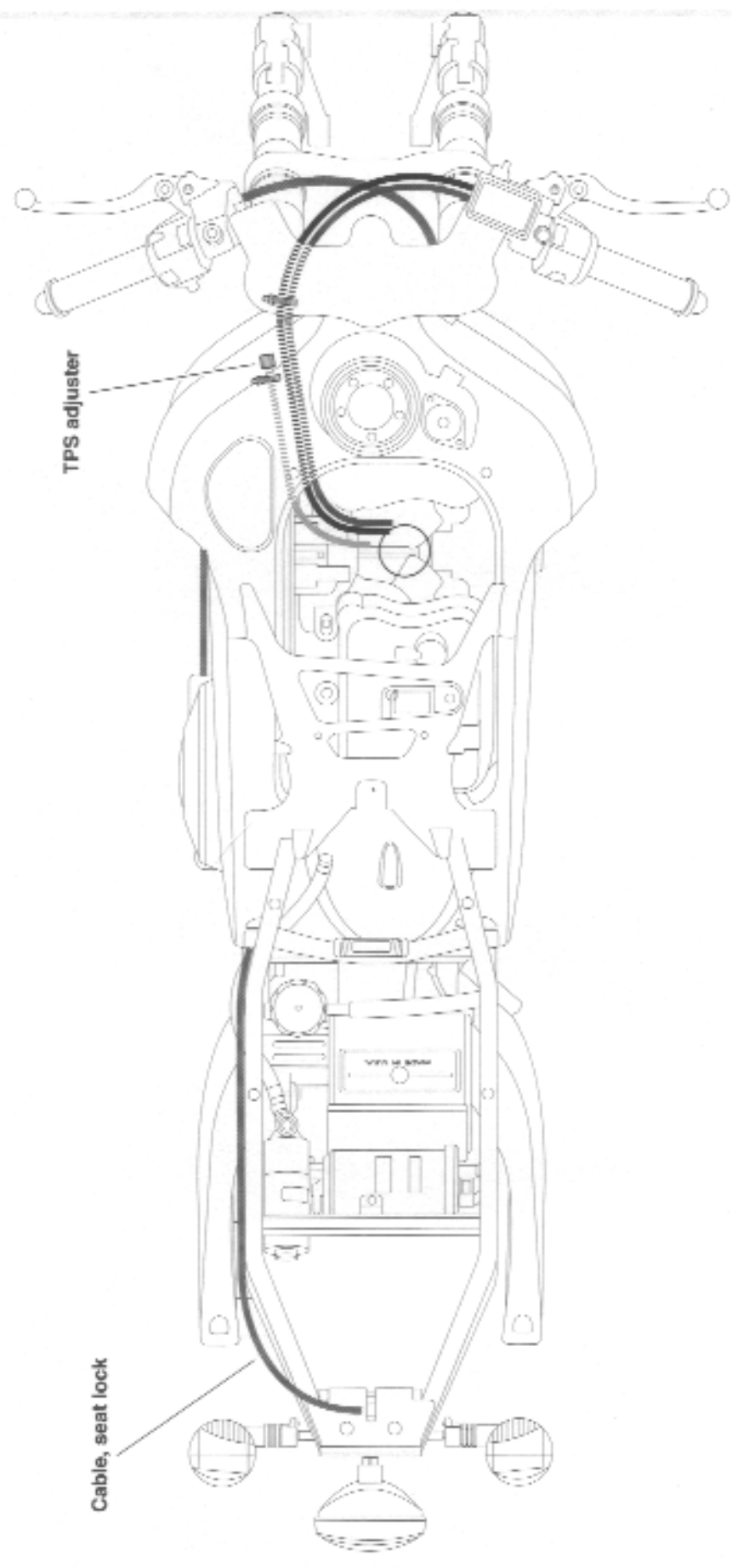


Figure D-13. Clutch, Throttle and Seat Release Cables, Top View

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