

# **Buell**<sup>®</sup>

**AMERICAN MOTORCYCLES**

## **BUELL**

## **BYTES**

COMPUTER GENERATED  
TECHNICAL UPDATES & INFORMATION  
FOR BUELL MOTORCYCLES

**ISSUE #6**

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# PRELOAD ADJUSTMENT CHANGES

There have been important changes to the procedure for establishing the proper amount of rear suspension preload or "squat" depending on the vehicle's load.

These procedural changes now incorporate any suspension travel that the vehicle uses from its own weight. The total motorcycle "squat" should reflect the suspension travel used by the vehicle's weight as well as the weight of the rider, passenger and any cargo.

The latest procedure can be found in the 1997 M2 Owner's Manual and Predelivery & Setup Manual. All future publications will be updated as they are published or reprinted (S2, S1, M2 & S3).

The most recent procedure has been reprinted here for your reference.

Before evaluating and adjusting suspension settings, check the motorcycle's tires. They must be in good condition and properly inflated.

### Rear Shock Preload

1. Remove all accessories from motorcycle including tank bag and/or saddlebags.
2. Take the motorcycle off the side stand. Bounce the rear up and down a few times to be sure the suspension is free and not binding.

#### NOTE

*When the rear suspension is fully unloaded, the motorcycle's weight is not compressing the rear shock. It is not necessary to raise the rear wheel off the ground to reach this point.*

3. See Figure 1. Take the first measurement. You will need a 24 in. (610 cm) welding rod and three O-rings.
  - a. Grasp the frame under the tail section. Without rider/passenger/cargo/accessories on motorcycle, lift until the rear suspension is fully unloaded.
  - b. Set welding rod on the end of the painted swingarm surface.
  - c. Align the first O-ring with the intersection of the tail lamp bracket and tail section.
  - d. Remove the rod and set down the motorcycle.
  - e. See Figure 2. Position the two other O-rings as shown.

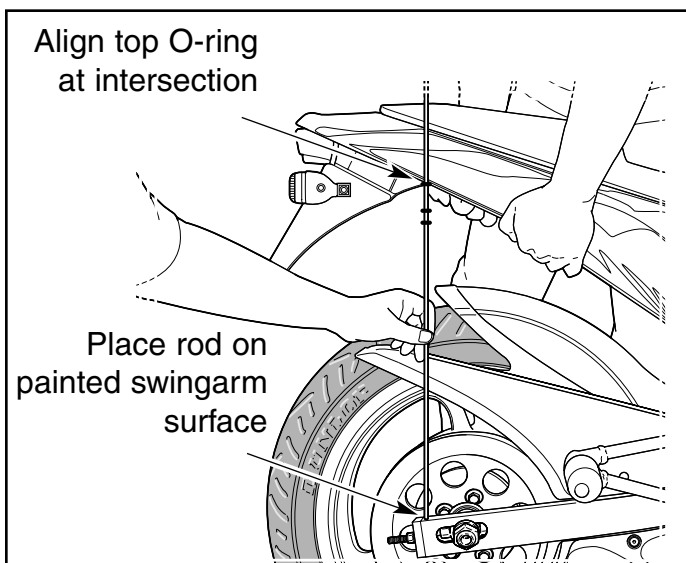


Figure 1 Unloading rear suspension

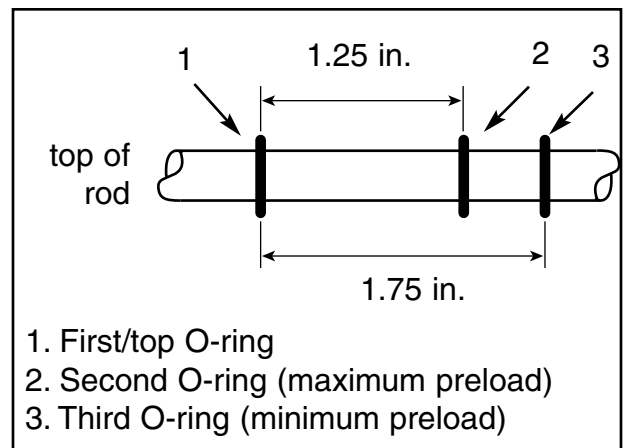


Figure 2 Measuring Tool

continued

4. Install items removed in Step 1. Load the vehicle with rider/passenger/cargo/accessories.
5. Bounce a few times on the seat to be sure the suspension is free and not binding.
6. With the help of an assistant, place the rod in the same spot as Step 3b. The assistant should help balance the motorcycle so the rider(s) can keep both feet on the footrests.
7. The intersection of the tail lamp bracket and tail section should be between the two lower O-rings (2, 3). If it is not, you will have to adjust the spring preload.

**⚠CAUTION**

**Be sure to apply the same number of turns to each preload adjusting nut to ensure that the drawing rings do not become misaligned. Misaligned drawing rings will cause the shock absorber spring to bind against the adjustment rods.**

**⚠CAUTION**

**Be sure the drawing rings are parallel within 1/64 in. (0.4 mm). Misaligned drawing rings will cause the shock absorber spring to bind against the adjustment rods.**

## ***SUSPENSION MODIFICATIONS***

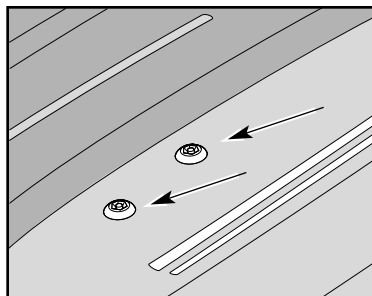
NEVER attempt to lower the front end on any Buell model by sliding the forks farther up into the triple trees. During hard braking the front fender could contact the "V" bracket on the frame.

## ***REPLACEMENT FRONT BRAKE PARTS***

When servicing and replacing the front brake rotor, it is recommended that the rotor and carrier be replaced as an assembly. The part number for both parts is 47175-96Y.

## ***S2 SADDLEBAG TOOLS***

A 5/32" Tamper-Resistant Hex bit is needed to assemble and tighten certain saddlebag fasteners on S2T and S3T saddlebag mounting hardware. This tool can be obtained through McMaster-Carr Supply Co. in Chicago, Il. is required. Their part number for a 1/4" insert bit is **7257A23**. Contact their Customer Service Dept. at (708) 833-0300 or FAX (708) 834-9600.



Tamper-Resistant hex fastener



## ***1997 SERVICE LITERATURE***

Buell Service literature is now available on a CD-ROM format as well as the traditional printed copy. Part numbers for the currently available publications are listed below.

### **CD-ROM**

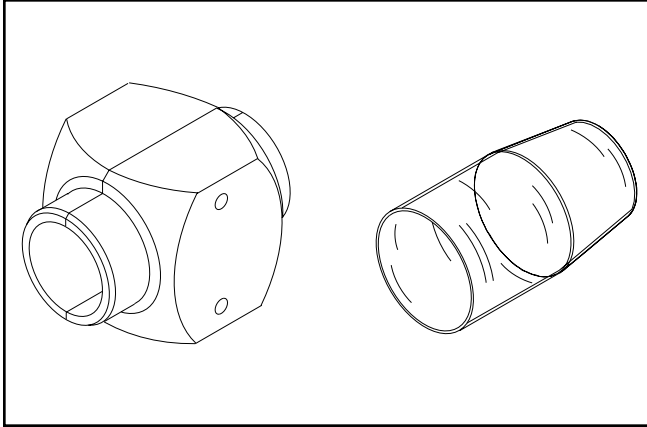
Buell Service Information	99475-97Y
contains instruction sheets, Buell Bytes Service Bulletins, & '97 S1 predelivery	
1996-97 S1 Service Manual	99490-97YE
1997 S1 Owner's Manual	99476-97Y

### **PRINTED LITERATURE**

1997 S1 Predelivery	99946-97Y
1997 S1 Service Supplement	99490-97Y
1997 S1/M2 Job Time Codes	99997-97YC
1997 S1 Owner's Manual	99477-97Y
1997 M2 Owner's Manual	99478-97Y
1997 M2 Predelivery	99948-97Y
1997 S3/S3T Owner's Manual	99479-97Y
1997 S3/S3T Predelivery	99947-97Y

## ***TECHNICAL SUPPORT***

Please remember to direct all inquiries for technical support to the appropriate Buell Distribution Corporation personnel listed in the Road Map section of your 1997 RoadWorks. The individuals listed there provide all support functions. Contacting Buell Motorcycle Company might delay your request for assistance.



### ***M2 FRONT FORK SEAL/DUST COVER INSTALLATION TOOL***

The large 43mm front forks of the M2 Cyclone required a new service tool for fork seal replacement. This tool, part number B-42571, will be shipped to your dealership in December.



### ***FRONT LIFT ADAPTER***

Front end servicing is a snap if you're using the Buell Front Lift, B-41395.

Because of changes to the airbox and fairing, a new adapter was needed for the S3 models. This adapter, B-42577, will also work on the M2 model, all European configured vehicles, and will replace the earlier adapter, B-41686, that was required for use on 1996/97 S1 Lightnings.