



WORKS PERFORMANCE PRODUCTS, INC.
21045 Osborne St., Canoga Park, CA 91304
818.701.1010 fax 818.701.9043
www.worksperformance.com

ISODYNE--10/01/2001

ISODYNE SHOCK INSTALLATION TIPS

CAUTION: This shock is pressurized to 250 psi nitrogen. This pressure is not an adjustable feature of the shock. Unless there is a leak, the shock should not normally lose pressure. If the shock damping becomes soft or mushy (after an extended period of time or number of miles) the shock may need to be serviced, which includes shock oil and a nitrogen charge. In this situation, re-pressurizing the shock alone may not improve the action of the shock. The shock should be returned to Works Performance Products, Inc., or to a qualified shop that has the appropriate tools, training and nitrogen handling equipment.

THAT SCREW

the shock is charged with nitrogen through a small screw on the flat of one side of the body eye. (See Figure 1) Unscrewing this screw--even partially-- will allow oil and nitrogen under pressure to blow out of the shock. Since the gas pressure is not an adjustable feature of the shock, there is no reason to tamper with this screw. If the gas charge is lost, or oil escapes from the shock, it will have to be sent to Works Performance Products, Inc. To be disassembled for an oil change and re-charged. Don't mess with the screw.

SHOCK TYPE

This Works Performance shock is a gas-emulsion mono-tube design where the gas is charged into the oil. This means that there is a nitrogen bubble inside the shock. Positioning the shock has to take this bubble into consideration.

EMULSION SHOCK MOUNTING

The Works shock will bolt right on without requiring any modifications. However the shock must be mounted so that the gas bubble is at the highest point. This means that the shaft is pointed slightly down, with the shock body at the top. See Figure 2 for this mounting position.

NOTE: The shock bushings are designed to have a certain side-to-side "float" to keep them from binding. As a result, do not grind or file the inner or outer edges of the bushings to make them narrower. The amount of "float" in the bushing set is necessary to ensure smooth operation of the damper assembly.

SHOCK MAINTENANCE

The inner bearing (referred to as an Icus bearing, or Icus bushing set) is designed to function without lubrication. However, a light grease can be used, if desired. **Do not** use chain lube or other aerosol lubricants as these compounds and/or the carriers can attack the bearing material, make it swell and seize against the bushings. Ride quality, seal longevity and function of the shock will be compromised.

Use a light standard grease, an anti-sieze compound or dry lube on the threads of the shock body under the pre-load ring. This will keep any kind of corrosion from causing the pre-load ring to seize against the body. This lubrication should be maintained as spray cleaners and high pressure sprayers can remove the lube.

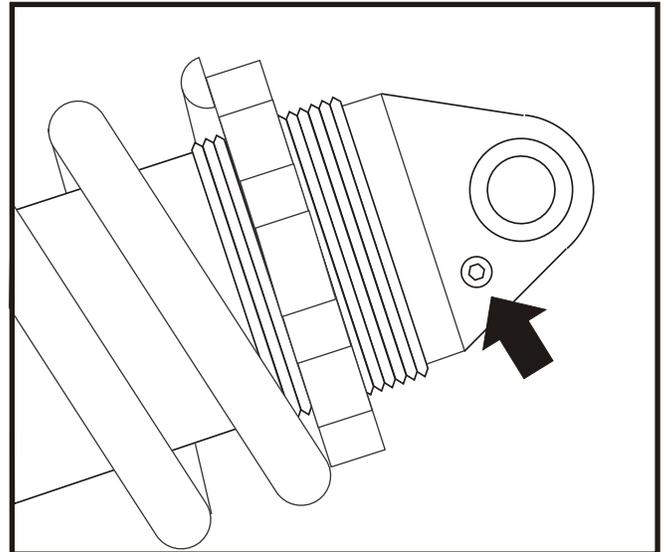


Fig. 1. Arrow indicates the small screw that is used to charge the shock with nitrogen. Unscrewing this screw at all will allow gas and oil to blow out of the shock, requiring an oil change and recharge. Don't mess with the screw!

Continued on next page.

PRE-LOAD ADJUSTMENT

On this shock a threaded spring pre-load is standard. This allows the adjustment of the ride height of the motorcycle to accommodate different size and weight riders. The spring pre-load is changed by turning a threaded nut down towards the spring (higher ride height) or up away from the spring (lower ride height). The nut is a right-hand thread. Spring pre-load is not sufficient to handle very heavy loads, or mechanical clearance problems. For example, if the fender is positioned so that the tire hits the fender, increasing the pre-load (or a heavier spring) will not fix the problem. The problem is that the collapsed length of the shock needs to be altered (a spacer installed to limit the shaft travel).

CHECKING RIDE HEIGHT

1. With the bike unloaded on the side stand and the shock fully extended, have an assistant measure from a point at the axle (center point) to a point on the frame, fender or bodywork directly above it. Record this measurement.
2. With the bike off the stand and the rider in the seat, bounce on the suspension and let the bike settle. Have the assistant measure from the same two points. Subtract the second measurement from the first.
3. The amount of settle, or "sag" is a function of the wheel travel. This measurement should only be between 3/4 and 1-inch. This represents 1/4 to 1/3 of the 3-inch wheel travel.
4. If the difference is less than the minimum, reduce the spring pre-load. Measure the distance again starting with Step 2. Adjust again if necessary.
5. If the difference is more than the maximum, increase the spring pre-load. Measure the distance again starting with Step 2. Adjust again if necessary.

Note: If the ride height is too low, the shock will bottom unnecessarily, resulting in a harsh ride. If the ride height is too high, the shock will "top out" too easily when rebounding from a bump or under hard deceleration.

NITROGEN PRESSURES IN EMULSION SHOCKS

CAUTION: The pressure in these shocks cannot successfully be checked.

PRESSURIZING EMULSION SHOCKS

The pressure setting for Works gas shocks is 250 p.s.i. of dry nitrogen. A pressure filling manifold is available from Works Performance Products, however the shock can be returned to Works for re-charging.

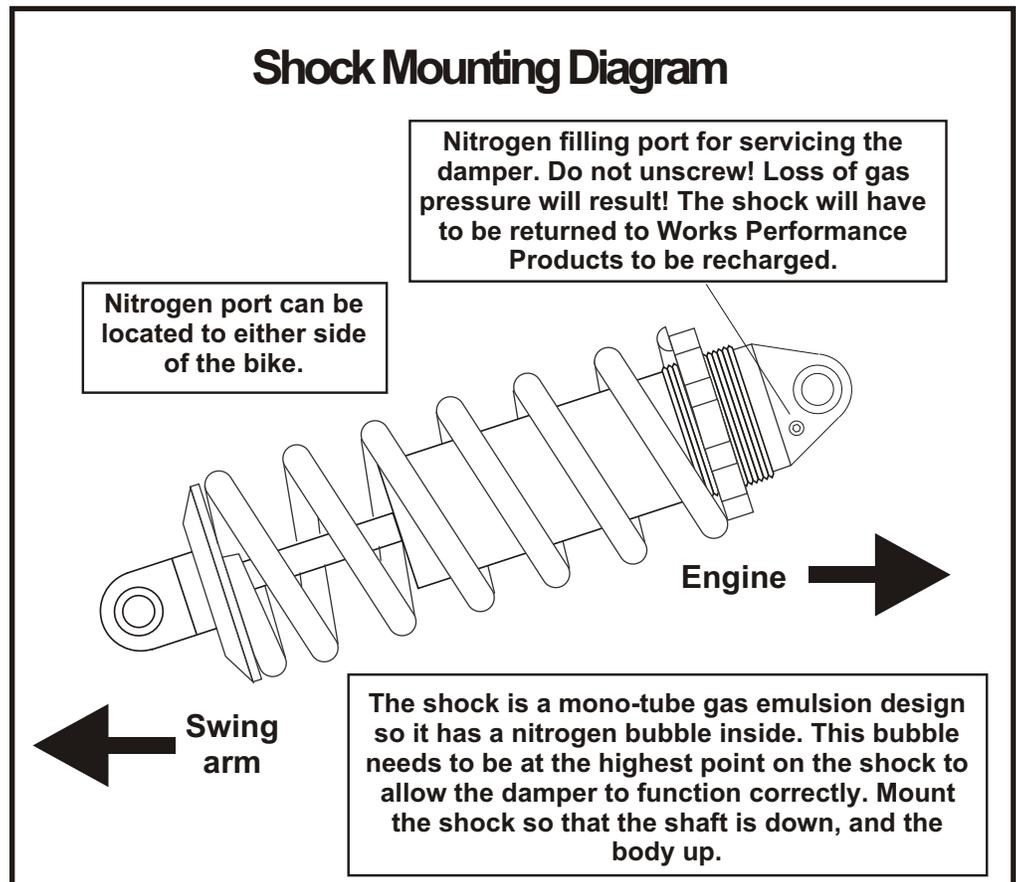


Fig. 2. Shock mounting orientation.