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#HM50 - 5/27/99

HM CRX50 / BAJA & ATK 50MX INSTALLATION AND ADJUSTMENT TIPS

Thank you for choosing works Performance shock absorbers. These simple instructions and helpful installation tips will enable you to enjoy maximum performance for years to come.

CAUTION: These shocks are 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.

MOUNTING

Your Works shock will bolt right on without requiring any modifications. Normally, Works shocks are designed to be mounted with the body of the shock at the top and the shaft coming out toward the bottom. Note the following illustrations for shock mounting. The shock should mount with the valve pointing toward the front of the bike. When it is in this position, the flange (washer face) on the bushing should be up against the stock mounting spacer. If the bushing is installed the other way, then the shock could "walk" over the spacer and cause misalignment. If the bushing is installed incorrectly, it can be easily pushed out and reinstalled the correct direction.

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.

NOTE: The lower bearing (referred to as an Iigus bearing, or Iigus 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 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.

PRELOAD ADJUSTMENT—

On some Works shocks a threaded preload is standard. This allows the adjustment of the ride height of the motorcycle. The preload 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.

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.

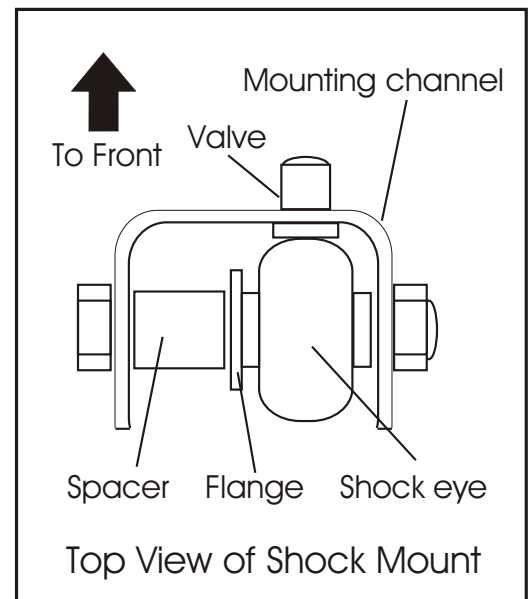


Fig. 1 Top view of upper shock mount. The flange on the shock bushing must face toward the spacer. The valve should point toward the front of the bike

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3. The amount of settle, or “sag” is a function of the wheel travel. It should only be between 1/4 and 1/3 of the total travel.
4. If the difference is less than the minimum, reduce the spring preload. Measure the distance again starting with Step 2. Adjust again if necessary.
5. If the difference is more than the maximum, increase the spring preload. 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. Concerns with the gauge volume and the gas volume in the shock body create a situation where you cannot accurately determine what pressure was in the shock. In addition when the pressure is lowered (i.e. checking the pressure) the gas and some of the shock oil escapes into the gauge. It is possible to lose a large percentage of the shock oil by depressing the core of a charged shock to the atmosphere.

Please note that in order to check the pressure, some of the gas must escape and fill the gauge assembly. The volume of the gas pocket is about half the size of your thumb, so a very small volume change results in a large pressure drop. Because the gauges' volumes vary, it is not possible to deduce the actual pressure in the shock prior to attaching the gauge. Therefore it is imperative that any attempt to check pressure be accompanied by the capability of refilling the shock. In other words: If you don't have a nitrogen source handy, don't check the pressure!

PRESSURIZING EMULSION SHOCKS

The pressure setting for Works gas shocks is 250 p.s.i. of dry nitrogen. To pressurize a shock with some residual pressure in it, bring the gauge manifold up to 250 p.s.i. and depress the core with the T-handle. This will either equalize the pressure or refill the shock without transferring oil from the shock into the gauge assembly.

The best gauges for this purpose screw on to the valve and incorporate a T-handled core depressor to isolate the shock from the gauge. This allows a leak-free separation once the desired pressure is reached. For simplified operation, an extra valve is provided for the filling apparatus, allowing pressure adjustment with the gauge in place. Works offers a suitable gauge and filling manifold. Most motorcycle shops that deal with dirt bikes can pressurize the shock.