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TTR125--08/10/00

YAMAHA TTR125 INSTALLATION TIPS

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.

SHOCK TYPES

Works offers two types of shocks for the TTR125. One is a gas emulsion shock where the gas is charged into the oil. The second is a reservoir type with a hose mounted reservoir and polyurethane bladder that separates the nitrogen from the oil. The mounting concerns are different for each shock.

EMULSION SHOCK MOUNTING

The Works emulsion shock will bolt right on without requiring any modifications. The shock is designed to mount with the shaft down, clevis at the bottom--same as the stock shock. The gas valve should point up.

RESERVOIR SHOCK MOUNTING

This is a very tight fit when the stock airbox is used. Please note the necessary changes. Note the following illustrations for shock mounting. The airbox should be removed to facilitate mounting the reservoir shock. Because of the space limitations around the upper shock mount, seat tab and stock airbox, part of the bracket on the left (riders view) needs to be modified. Grind or file the rearward outer portion away to give the hose more room. (See Fig.2) The hose will exit to the rear towards the left over the top of the airbox, but under the frame rail Do not go over the frame rail or over the seat bracket as the seat can damage the hose. It then goes outside the frame with the hose laying on the airbox. The reservoir fits behind the airbox, under the seat and is attached to the cross-bar. The reservoir should be clamped to the cross-bar after the airbox is installed. Install the two washer/spacers between the airbox and the bracket to move the airbox down slightly.(See Fig. 1) This will take some of the tension off of the hose.

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

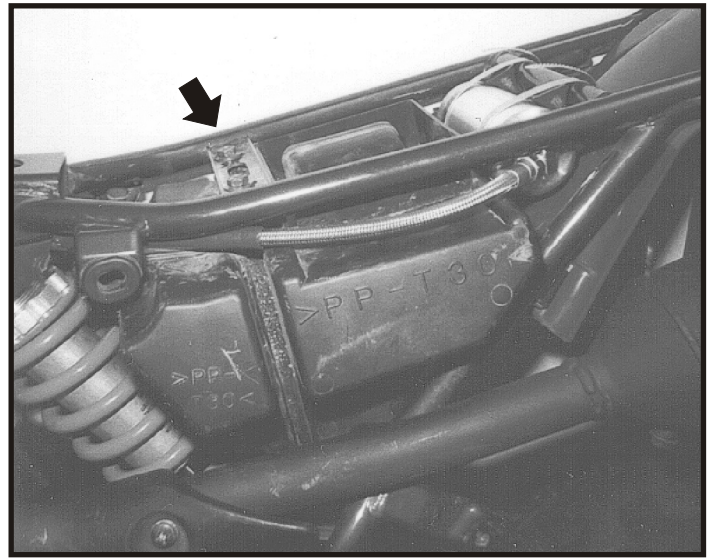


Fig. 1. Arrow indicates position of washer/spacers that go between the bracket and the airbox. Reservoir is mounted to cross rail with hose clamps and rubber stand offs.

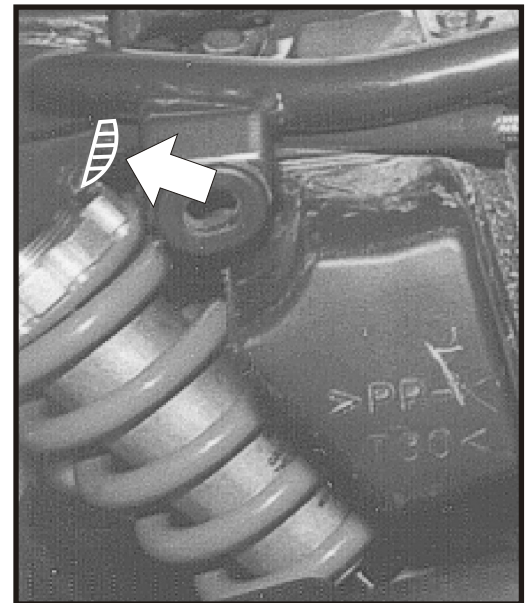


Fig. 2. Arrow indicates portion of gusset that must be removed to give adequate clearance to the hose.

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the bushing set is necessary to ensure smooth operation of the damper assembly.

NOTE: The upper bearing (referred to as an Igus bearing, or Igus 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.

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.

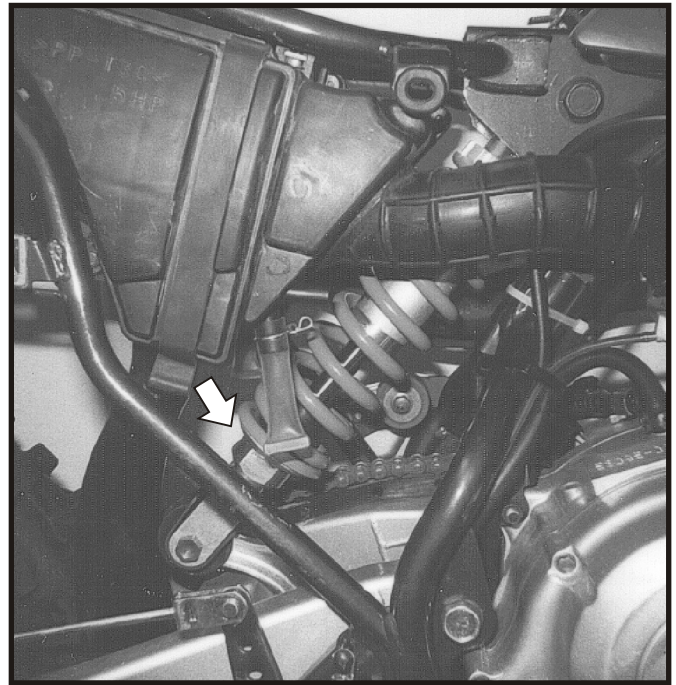


Fig. 3. Arrow indicates rebound adjuster location on shocks with that feature. (Shocks without the adjustable rebound will have a “dummy” screw installed.) See the rear shock adjustment instructions for more details.