

## Add-Ons For Gassers

# WORKS PERFORMANCE RESERVOIRS

## HOW TO INSTALL THE RESERVOIRS

When Work Performance Shocks were introduced several years ago, they proved to be one of the more interesting approaches to dampers for motorcycles. Designed with a series of velocity/pressure sensitive check ball valves, the shocks proved to be excellent choices for the off-road rider.

The design of the shock permitted extremely plush riding through very bad terrain. Many considered the Works units to be the best whoop-de-do shock available.

Next in the evolutionary steps was gas charging. Under pressure, the nitrogen dissolves into the oil and allows the fluid to be compressed in extreme hydraulic situations. This made the shocks feel very smooth.

Now comes the third stage of evolution of the Works Performance shocks—reservoirs. This provides a separate chamber for the gas so that the oil doesn't foam, and the oil can stay predictable. It still allows the fluid to compress, but it is done by varying the size of the hydraulic container. Instead of a piston separator, the reservoir utilizes a rubber bladder. The bladder doesn't create its own heat as the piston type separators do.

Not only are they offered as complete shocks, but as additions to any of the current gas Works Performance

units already built and purchased. The reservoirs can be added by the owner, or the guys at Works Performance will install them. The labor price for adding the reservoirs is \$15, but that includes overhauling the shocks (normally \$10.).

If you plan to install the reservoirs yourself, you will need a pipe thread tap and some special spanners that will be available from WP. With the right tools, it is not difficult to add the reservoirs, but a good deal of patience

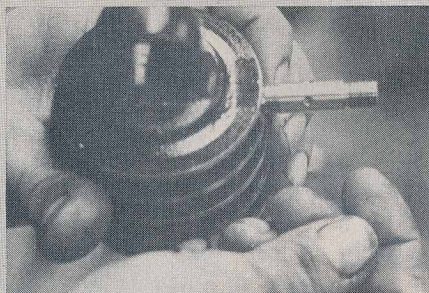
must be taken to insure a proper fit. Measurements of the spacers between the shock body and reservoirs is critical.

The reservoir itself consists of a rubber-bladder-fitted chamber that is bolted to the gas shock body through the original valve hole. Attachment springs are used to help secure the reservoir to the body.

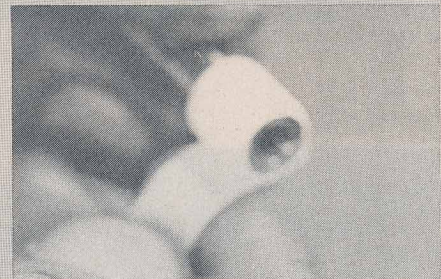
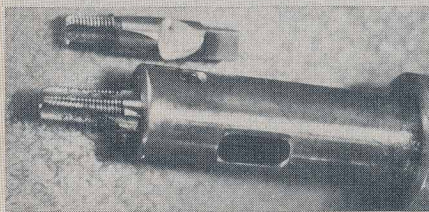
Cost of the reservoirs is \$60 plus \$15 for installation. If you don't already have a pair of Works gassers, the complete reservoir shock sets are available for \$199.95. (Regular WP gas shocks are \$139.95.)

Special application remote reservoirs will also be available. Prices will depend on the length of the hoses necessary.

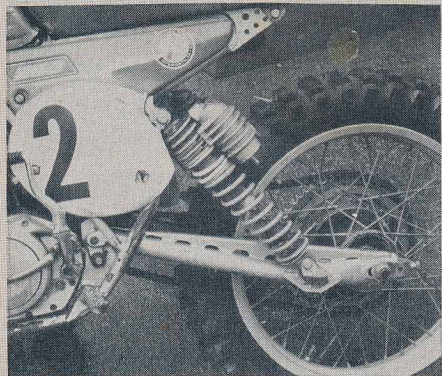
For more information, or to order the reservoirs, contact: Works Performance Products, 20970 Knapp St.,



1. Disassemble shock completely and remove valve from shock body. Set shaft and piston assembly aside to assure cleanliness. Screw in stud by hand—three threads should show.

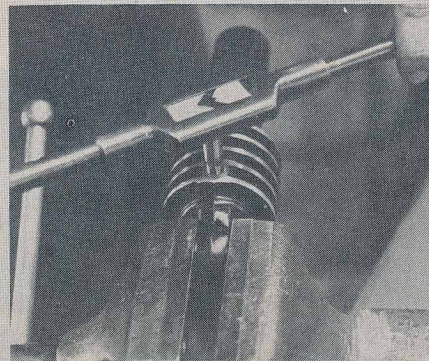


3. Wrap the stud with Teflon tape in the direction of the threads, so that it does not bunch up when screwed in.

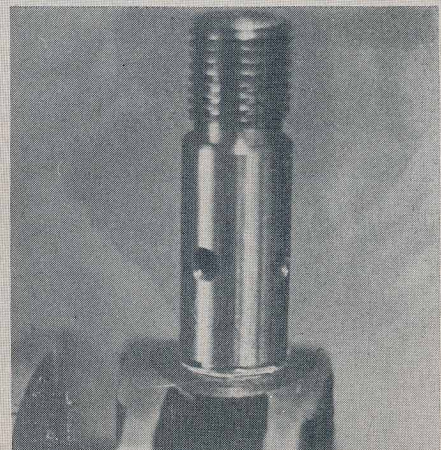


Reservoir gas shocks with split rate springs mounted on one of the well-thrashed test beds used in Works Performance testing and evaluation.

(NOTE: The damping characteristics of the shocks have to be changed in some cases. Contact Works Performance for more information, before you start to work.)



2. If more threads are showing, the hole may have to be tapped deeper. (Some taps may have to be ground down to provide proper depth). Cut some and hand fit the slug, until only three threads are showing. Clean assembly carefully.



4. Using one nut tightened against another, run the stud down tight until only one thread is visible. Trim away excess Teflon tape.

Chatsworth, CA 91311. (213) 998-1977.

(For tips on overhauling WP shocks, complete with step by step photos, see Modern Cycle, February 1976. It's available through the Back Issues Department.)

5. Install trial spacer on stud between body and reservoir. Add outside washer and snug lock nut down.

6. Measure distance between body and reservoir. It should be .015 inch. If it is wrong try another spacer. (These trial spacers are equal to the compressed thickness of a sealing O-ring and seal washer.)

7. With the proper clearance obtained select washer that corresponds to trial spacer. Install on stud.

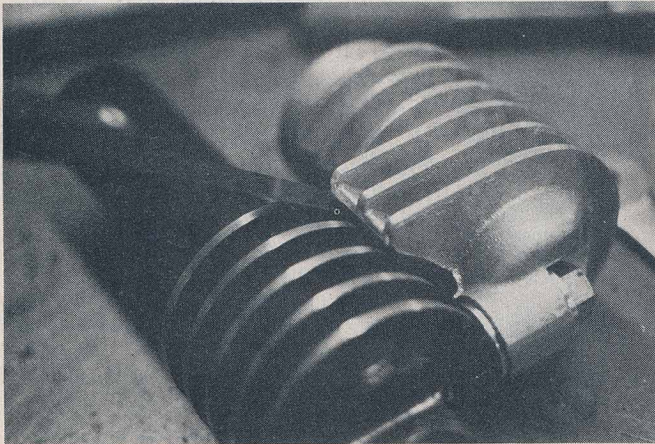
8. Lubricate O-ring with Bel-Ray LT-100 and fit into rear of reservoir. Insure that it is seated.

9. Carefully slide the reservoir over the stud. With socket, compress O-ring carefully, to insure that it is not cocked.

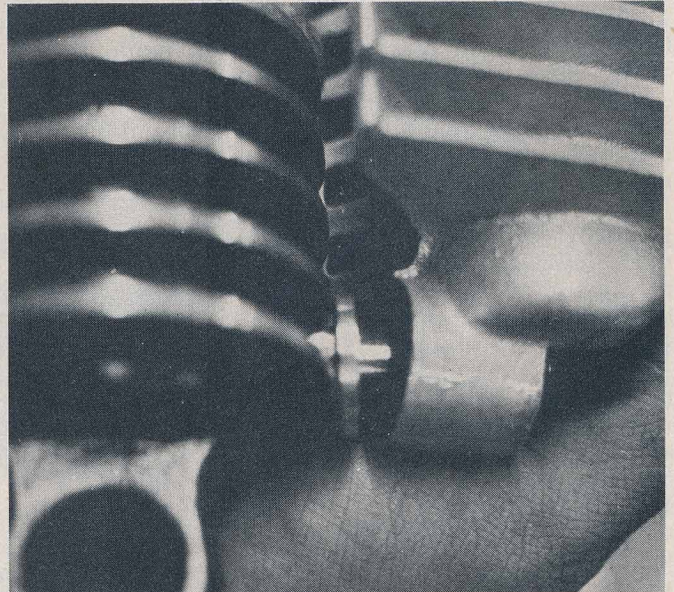
10. Lubricate outer O-ring, slide over stud and into reservoir groove. Insure fit with clean box end wrench by pressing carefully.

11. Install outer washer and lock nut. Snug down until bodies just touch. Overtightening will cause everything to be out of alignment. **Caution:** Overtightening can also bend the stud or break the casting.

12. Install springs. Don't overstretch them or they will lose tension. Start pulling out on the spring before you start wrapping it around the body.



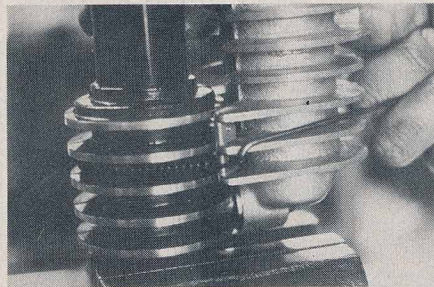
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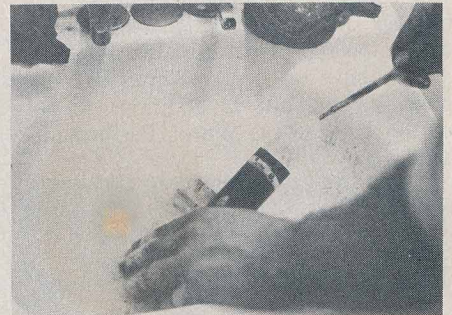
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13. Wash the assembly thoroughly with soap and water. Blow dry.

14. Install bladder in reservoir and fill shock with LT-100. Hold bladder down to prevent fluid from pushing it out.

15. Peel back edge of bladder to "burp" air bubbles. Insure the bladder is surrounded by fluid.

16. Using .002 shim stock to prevent piston ring from snagging threads, install shaft assembly. Oil should be up to the bottom edge of the threads. As the shaft is inserted some oil will probably run out—this is OK. Be sure to hold bladder down while installing the shaft.

17. With the piston just down below the threads, screw in seal holder and tighten with special wrench.

18. Carefully burp bladder again allowing excess oil to run into bladder. Once the bubbles and the excess oil are burped off, remove the bladder and wipe all the oil from inside.

19. Wipe bladder lip and threads in the top of the reservoir clean and reinstall bladder. No extra oil should be visible at the edge of the bladder.

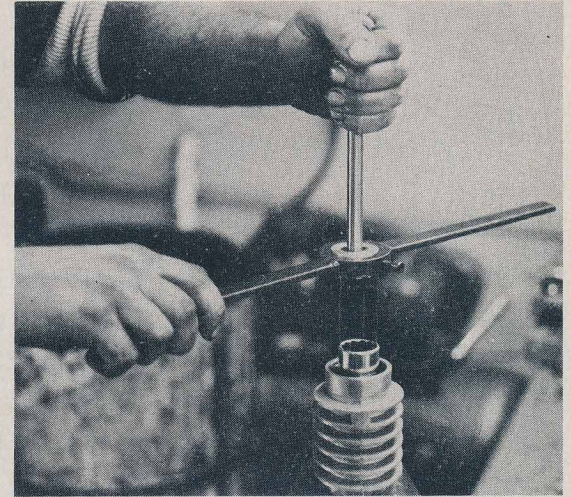
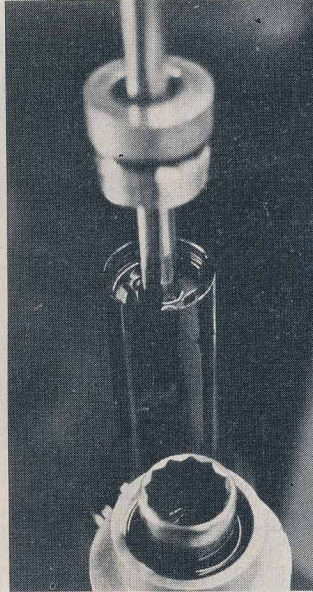
20. Coat threads of reservoir cap with anti-seize lubricant. With the reservoir in the vise, tighten cap down with  $1\frac{7}{8}$ -inch wrench or large crescent.

21. Charge with nitrogen to 250 psi. Anti-seize lubricant will bubble until threads are purged. If leaks are suspected immerse shock in water tank.

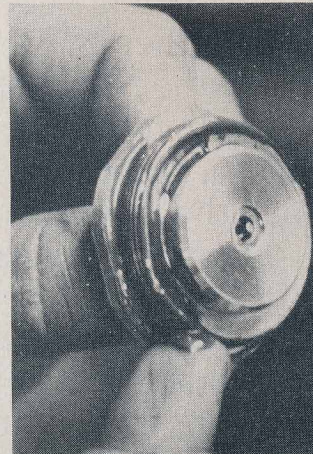
22. Install spring and keepers.



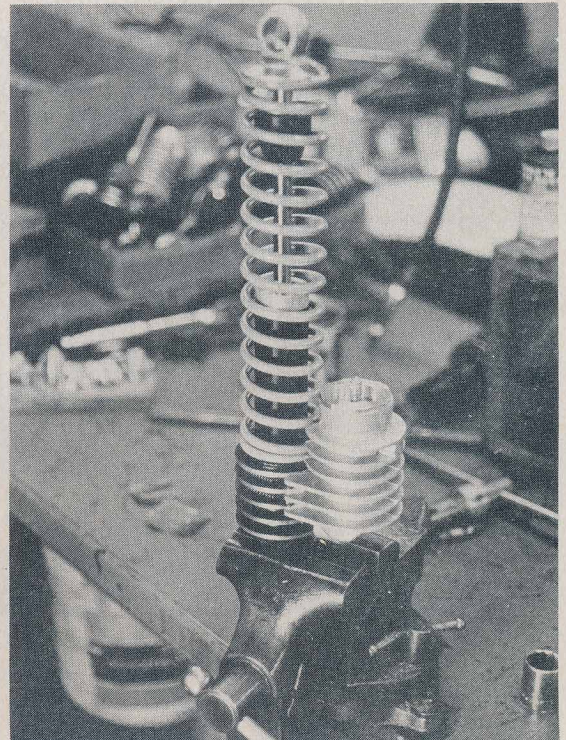
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