

# MOTO-GUZZI TOP END

Out of the millions of people who watched the Rose Parade in person or on TV, there must have been quite a few who were surprised. The lead motorcycle was a shiny new Moto-Guzzi V-7 in full Police regalia. To some, the sight of a Police bike can instill feelings of fear and Paranoia (particularly if your chosen mode of transportation is a Chopper). To others, this sight means that the bike must be something really special. Recently when major cities decided that it was time to buy new machines over, they literally put several "Super-Bikes" through trial by fire. The bikes had to meet the following criteria: reliable; comfortable; fast, maneu-

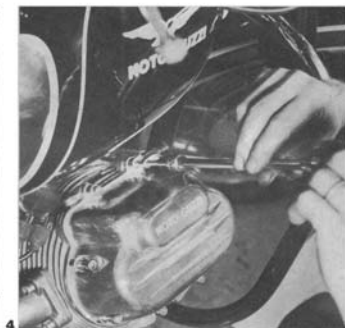
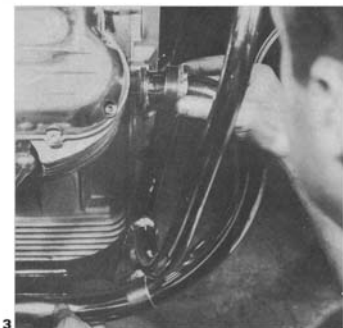
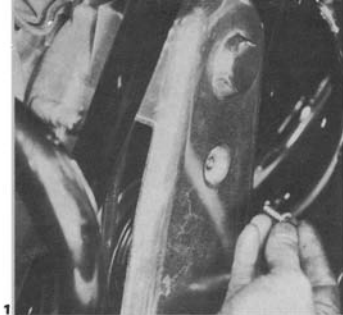
verable; quiet; quick starting; resistant to fouling; quick warming-up; excellent braking; superb electrical systems and easy maintenance.

The one bike chosen by some of Los Angeles' precincts was the Moto-Guzzi. To many riders, this type of endorsement is like being blessed by the Pope. Who can dispute the dollars-and-cents reasoning of a Government agency? (We ought to get some letters on that statement.) But no one can dispute the hard lives that Police bikes live through before they are retired. The miles put on them and the loads they must carry are almost unbelievable.

We spent many hours talking to

motor officers, Police mechanics, and the mechanics at XDS Motors to find out as many faults as possible. The most common complaint (?) was voiced by the motor officers. The engine cools very quickly and must be warmed up after sitting for short periods. These short periods would hardly phase the temperature of the Harleys. This little fault (?) won't bother you or me, but when I see a speeder, he has to get on that machine, stop.

If you own one, then you may want to look into tune-ups and job. The expense for maintenance is actually quite small, but it is accomplished in little time.



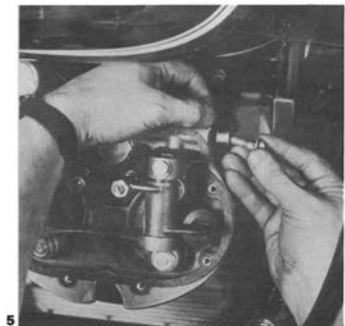
**1** Remove the belt guard from the front of the engine.

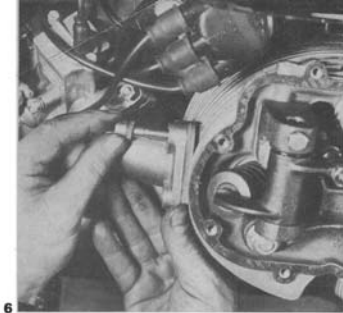
**2** The muffer should be removed next.

**3** Unscrew the mounting flange and remove the exhaust pipe.

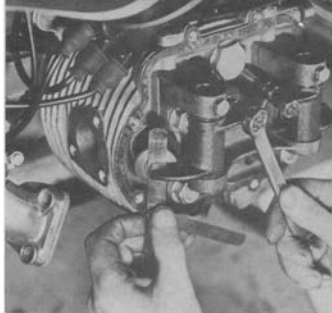
**4** A welcome touch on any bike are the Allen screws holding the rocker box cover in place.

**5** Remove the banjo nut and oil feed line from the head.

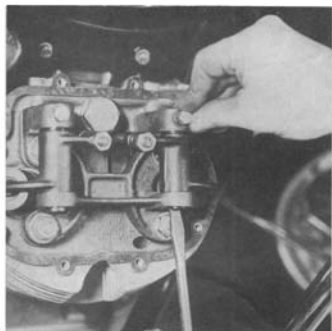




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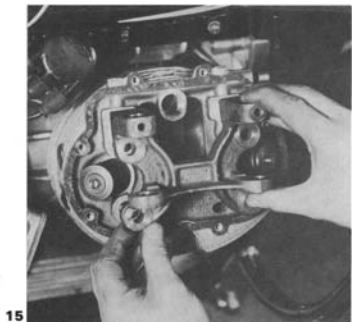
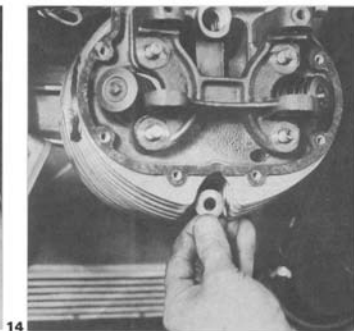
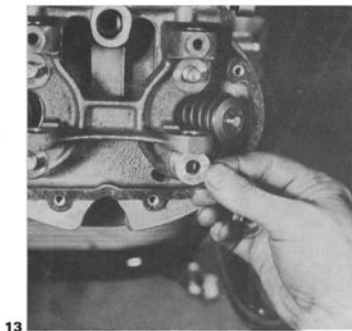
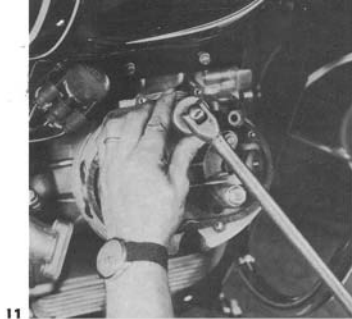
**6** *It isn't necessary to remove the carburetor entirely for a top end job, but you should move it out of the way.*

**7** *During assembly the valves should be readjusted to 0.10mm (.0039") for intake and 0.20mm (.0078") for exhaust.*

**8** *Use a screwdriver to remove the rocker arm shaft.*

**9** *Check the rocker arms for signs of wear and replace if necessary.*

**10** *The push rods must not show any deformation, and the contact surfaces must be free from roughness or seizing marks.*



**11** Loosen the six head nuts in a crossed sequence to avoid distorting the head and . . .

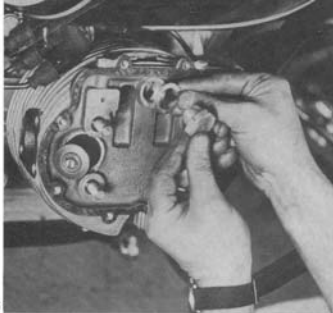
**12** . . . torque them down in a like manner. Tighten each nut one quarter turn until 28 foot pounds is read on a torque wrench.

**13** Washers fit under each bolt to avoid marring the aluminum and giving a false torque reading.

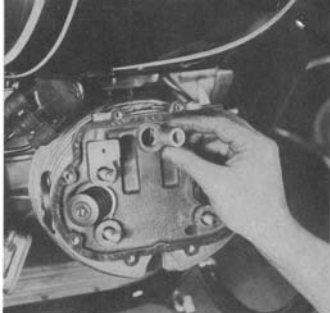
**14** Don't forget the two washers recessed in the head. These are often overlooked.

**15** Lift off the rocker arm support casting.

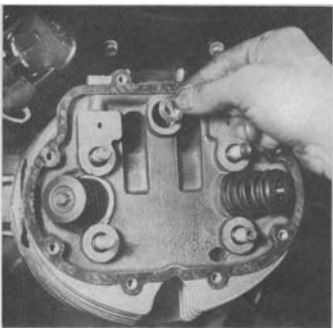
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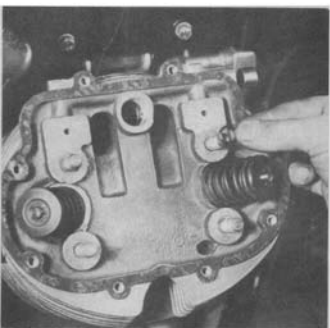
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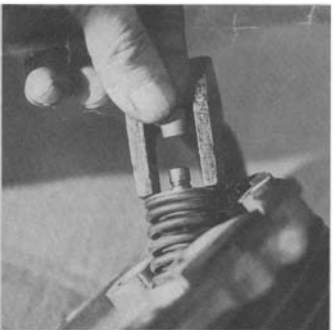
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**16** Remove the bolt and washer at the top of the head as shown . . .

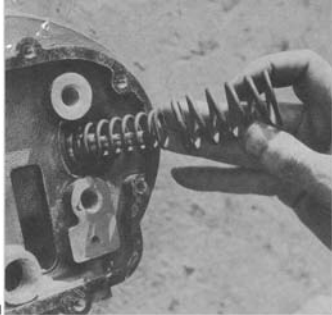
**17** . . . located in this hole is a cylindrical bushing and . . .

**18** . . . another washer that are often overlooked during assembly.

**19** Remove the four O'ring washers on the cylinder studs and replace them. Lift off the head and place it in a vise for further dis-assembly.

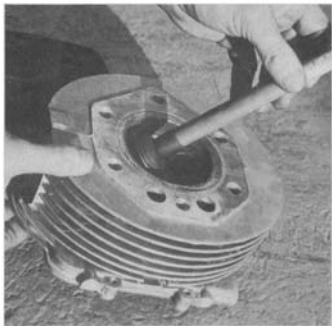
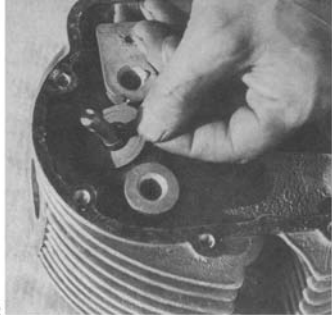
**20** A valve spring compressor is a must to remove the valve keepers.

**21** Remove the inner and outer valve springs. The external spring should show a load of 65 lbs. when compressed to 36 mm. The inner spring should read 37 lbs. at 31 mm.



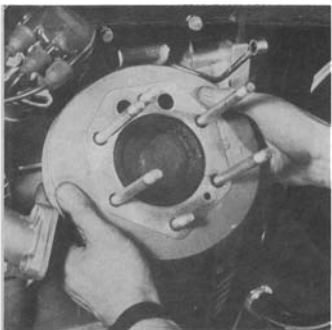
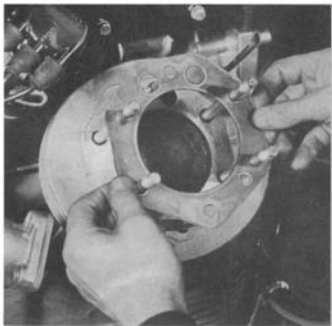
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**22** Lift off the spring retainer and spacing washer. You can use extra, or thicker, washers to shim the springs for more spring pressure.

**23** Tools for valve lapping are inexpensive from any automotive shop. Apply abrasive to the valve seat area. Twist the valve back and forth until the seat is consistent in its finish.

**24** Carefully remove the cylinder head gasket. A new gasket should be used and it won't require any sealant.

**25** Slide off the cylinder, remove wrist pin, replace rings if necessary and decarbonize the piston dome. Reverse the photos for assembly and check the applicable notes.