

Lario Valve Modification

There are several modifications one can upgrade the Lario and V75/4 engine by.

First there are the valves themselves. Here you also find the culprit to most of the issues around the valve drop we see so often on a Lario and V75/4, namely the extremely strong spring and the original Lario valves. The valve train has to push 2 such springs simultaneously due to the 4V valve train architecture. This is too much for the lifters and cam shaft – even the 14mm cam version. Cam lobes get worn “flat”, tappets break and valves drop. A lot of technical people have looked into lifter pressure against cams vs. spring strength etc. The remedies (spring types) are many, end state seems the same. Less pressure on cams/tappets and less strain on valve stems.

This is my solution to the Lario valve issues, which runs on my own Lario – without issues. Top RPM still 8000. The Lario officially redlines at 7.800rpm.

A Lario should be equipped with the cam shaft having the 14mm cam lobes. If not, replace with the appropriate cam shaft with matching Lario/V75-4 tappets. These are rare but should be available from Martin Hagemann – Lario expert from Germany and chairman of the German Lario Club. You will need to return the existing tappets to him as he needs the concave push rod support cone in the tappets for the modification to the Lario version.

These are the parts and numbers for the full valve mod and upgrade. Lario's since engine # PT003823 and for the V75/4 engine number PX000945 has 14mm lobes and matching lifters from the factory and need not a cam shaft and lifter upgrade. (This info is from Guzziology).

Lario Tappets for 14mm cam

27045781

4



Lario cam shaft 14mm cam lobes

27053362

1



Nevada cam shaft 14mm (Moto Plat/Lucas Rita ignition fit) **27053463**

Can replace the Lario cam shaft if one would like to use an electronic ignition setup/adaptation.

Progressive spring

27037521

8



Recommended for all 2V small blocks since 1990 (inner spring used in 2V heads should NOT be installed with this spring in ANY model). They do however work VERY well in the Lario.

Spring top cap/retainer fitting the progressive spring 31038015 8
(OEM Lario spring cab/retainer do not support the progressive spring correctly.)



Spring bottom retainer 31037015 8
(OEM Lario spring retainers do not support the progressive spring correctly.)



Collets 61038100 16
(OEM Lario collets do not fit the upgrade spring cap/retainer.)



Lash caps 31038650 8

It's required to use this lash cap with the Chinese valves, the Lario tappets don't hit the stem dead center, which is meant to rotate the valve. This seems to slightly mushroom the top of the stem if not protected by the cap. The Chinese valve stems has softer tops than some OEM valves. If not available from Guzzi you need to order 5,5mm caps – available from other sources like <http://www.rdvalvespring.com/>. Choose the thinnest 5,5mm cap (0.35x5.5mm).



There are several opportunities relating to the choice of new valves. The Nissan GA16D engine seems to have valves that can be modified to fit the Lario heads (not confirmed). Some dealers still have some in stock. Custom manufactures are happy to make them likely at about 100\$ a pop.

If one can find a set of late OEM valves, they should be OK as long as the spring upgrades are done.

Valve clearance adjustment screws are available from Guzzi in two sizes. Short bolts meant for lash cap, longer version for no lash caps. Below picture is the screw for Yamaha XT600, which has a much better shape than the Guzzi versions, which wear fast too. That bolt will fit the Lario rockers nicely.

Part number is (Yamaha) 2NX-12159-00-00 8



I have had a small batch of custom valves done in Taiwan at a very fair price, primarily for my own 8V projects. I have had some after work done to the inlet valve to make them stay within the weight specifications of the original valves. Hopefully we can keep our Lario's breathing for some years to come. I have more valves than I can use for projects, so surplus valves goes for 10€/pop. A complete set goes at 80€ plus shipping.

Remember - these valves are plug_and_play, BUT it's still required to have the valves seated (grinded) into a perfect fit and tested for leaking.

Ciao

PETITS BLOCS 4 SOUPAPES MODIFICATION

Traduction du document précédent dont je n'ai pas la source qui doit être US. Cela dit, je m'étonne que ce doc parle des V75 4 soupapes car il semble que ceux-ci n'ont jamais été importés aux USA.

Le document original indique Martin Hagemann et le German Lario Club comme étant experts es-Lario en Allemagne. Il semble qu'il s'agisse de cette échoppe <http://www.guzziepiu.de/shop/> mais qui ne fait plus Moto Guzzi à compter du 1^{er} janvier 2018...

PRÉAMBULE

Il existe plusieurs façons d'améliorer le haut moteur des V65 Lario et V75 4 soupapes.

D'abord, les soupapes. Elles sont coupables de la plupart des casses et plus particulièrement leurs trop puissants ressorts de rappel et les soupapes de Lario elle-mêmes.

En effet, la distribution doit pousser 2 jeux de ressorts. Ce qui est trop pour les culbuteurs et l'arbre à cames, même celui avec des cames de 14mm. Les cames s'aplatissent, les godets cassent, les soupapes tombent.

Nombreux techniciens se sont attaqués aux ressorts. Les modifications de ressorts n'ont pas résolu le problème. En réalité, moins il y a de pression sur les cames et les poussoirs, moins il y en aura sur les queues de soupapes.

SOLUTION

Voici ma solution pour les Lario, qui fonctionne sur le mien sans problème, jusqu'à 8000 trs/mn alors que la zone rouge officielle est à 7800 trs/mn.

L'arbre à cames doit être celui dont les cames font 14mm de large. Si ce n'est pas le cas, le remplacer ainsi que les poussoirs qui vont avec.

Selon les sources du Guzziology (V7,0 page 5-25), les Lario disposent de l'arbre à cames et des poussoirs corrects à partir du moteur N° PT003823, et les V75 à partir du moteur N° PX 000945.

PIÈCES À PRÉVOIR

| | |
|---|---|
| Arbre à cames de Lario (14mm) : 1 ou Arbre à cames pour allumage Motoplat (nez + court) : 1 | 27 05 33 62 27 05 34 63 <i>Les arbres à cames 27 05 34 63 ont été montés sur les 750 Nevada Club jusqu'en 1999 (cadre type ZGULF). Il est remplacé ensuite par le 27 05 34 64 (cadre type ZGULK).</i> |
| Poussoirs : 4 | 27 04 57 81 <i>Ne pas utiliser des poussoirs de moteurs à 2 soupapes car ils sont moins larges (20mm au lieu de 22) que ceux des 4 soupapes.</i> |
| Ressorts progressifs : 8 | 27 03 75 21 <i>Ces ressorts ont été montés jusqu'aux V7 II My2017</i> |
| Coupelles supérieures : 8 | 31 03 80 15 <i>Ces coupelles ont été montées jusqu'aux V7 II My2017</i> |
| Coupelles inférieures : 8 | 31 03 70 15 <i>Ces coupelles ont été montées jusqu'aux V7 II My2017</i> |
| Clavettes : 16 | 61 03 81 00 <i>Ces clavettes ont été montées jusqu'aux V7 II My2017</i> |

Le document original fait ensuite référence à des soupapes ainsi qu'à des grains de culbuteurs non-Guzzi. Je ne traduis pas cette partie là.

Avant toute monte, il est évident qu'il faut que soupapes et sièges soient parfaitement adaptés.