The ultimate solution for ticking noises coming from the rocker box area in Harley-Davidson engines.

If you hear a ticking noise coming from the rocker box area of your engine, and it gets louder as it warms up, there could be several causes. In addition to defective hydraulic tappets, worn valve guides, or worn rocker arm shaft bushings, it may also be due to excessive play in the rocker arm shaft seats in the rocker box.

Until now, this could only be remedied by purchasing new lower rocker boxes.

This is because as soon as the rocker arm shaft seat has play (you can tell by the fact that the rocker arm shafts can be easily pushed into the seat), the lateral forces of the rising push rods cause the rocker arm shafts to turn against the housing screw with every stroke until they reach the stop, thus causing a ticking noise.

This problem can now be remedied. A component developed by HD.M.G.I. permanently prevents the ticking noise from occurring. The conversion can be carried out on original frames with the engine installed; only the rocker boxes need to be removed for installation.

Kit contents:

* Detailed installation instructions

* Stainless steel rocker box sleeves

* Press-in tool

* Alignment and removal tool

Suitable for the following engines:

EVO Big Twin from 1984-1999

Twin Cams from 1999 onwards

Evolution Sporster from 1986 onwards

XR1200 from 2008-2012

XB Buell from 1991-2010

Please read through the entire manual before you start work!

Installation instructions:

Disassemble the complete rocker boxes according to the SERVICE MANUAL.

Now press the shafts out of the rocker arms and clean all parts of seal residues and oil (caution: shafts & rocker arms should remain paired with each other).

Oil one rocker arm on the outer surfaces and on the inner bushings and install it so that the notch on the shaft lines up perfectly with the hole in the rocker box. Precise alignment is important, as otherwise the sleeve may become deformed during installation and the screw will no longer fit. Use the tool provided for this purpose.


Aligning the rocker arm shaft

1. Now lightly grease the outside of a sleeve with oil or grease and insert it into the hole, applying gentle pressure.


Image shows inserted sleeve

Now screw the press-in tool together, adding the washers, and loosen the nut by hand. Always insert the sleeve with the washer facing upwards.

Now you can use a small ratchet and a wrench to easily pull the press-fit tool together, pressing the bushings into the hole until the collar of the bushing seats.


Pressing in the sleeve

Now remove the press-in tool and repeat this process for the other rocker arms. If, after pressing in, a bushing is slightly dented inward due to not being 100% aligned beforehand, so that the screw does not go through, the sleeve can be re-drilled with an 8 mm drill bit while installed.


ready pressed sleeve

The rocker boxes can now be reinstalled according to the instructions in the service manual. When installing the 5/16" retaining screws, omit the washers on the sleeves, except for TC engines.

The tool supplied can also be used for removal. Ideally, this should be done under a press, but the sleeve can also be driven out by tapping it lightly with a hammer.


Removing the sleeve be driven out.

Here are a few useful tips:

Once you've gotten this far, it makes sense to replace the tappet cover gaskets at the same time. When reassembling, please note that the tappet rods are different lengths and must NOT be mixed up. They are installed with the color code facing up.

Purple: rear outlet (second longest)

Blue: rear intake (shortest)

Yellow: front intake (third longest)

Green: front exhaust (longest)

Always use new gaskets when installing the rocker boxes!

Turn the engine so that both tappets of the cylinder are at the lowest position of the camshaft and install the rocker box with the covers and push rods in this position. After tightening the lower rocker box, check that the tappet rods can be turned easily. This depends on the venting of the individual tappet rods and may take a few minutes.

Do not turn the engine until the tappet rods can be turned easily and smoothly with your fingers, otherwise the valves may be damaged.

ATTENTION: These installation instructions do not replace the service manual