



To make lap, center hexagonal brass nut over mold cavity and cast as one unit



Prior to application of abrasive, spin mold so it will not bind after abrasive is

Lap that mold

By C. A. Bunker

LET us suppose you have a bullet mold that is rusty or rough inside, or that casts bullets a few thousandths of an inch smaller than you would like them. The remedy in each case is lapping, and a first-class job can be done without elaborate equipment.

The only 'special' items required are emery flour (*abrasive grain* if the clerk looks puzzled) in 220 grit or finer, and a few hexagonal brass nuts of the type used on compression and flare fittings. Such fittings are commonly made to fit 1/4-inch, 5/16-inch, and 3/8-inch tubing. The size of the nut is unimportant so long as you select one with a hole somewhat smaller than the diameter of the mold cavity, thus insuring against unintentional lapping of the top of the mold.

Castings the lap

Lapping a mold consists in spinning an abrasive-coated bullet in the mold cavity. In order to rotate the bullet,

some sort of stem or spindle must be attached at its base, and this is where the hexagonal nuts are put to use. By centering one of these over the mold cavity, both lap and stem can be cast at the same time.

Good laps are cast in the same manner as are good bullets—the mold must be oil-free and pre-heated, and the lead must be at a proper heat. A casting which does not fill the mold perfectly will not serve well as a lap, as it cannot cut where it does not bear. Since emery will not embed itself properly in a hard bullet alloy, soft lead only should be used to cast laps.

In casting, remove the sprue cutter, center one of the brass nuts small-hole-down over the mold cavity with a pair of pliers, and pour both mold and nut full. Examine the lap carefully when you take it from the mold. If the lap is imperfectly formed or poorly centered on the nut, toss it back in the pot and try again. One lap should be sufficient

for a mold that is only a trifle rusty. If the purpose in lapping is to cut the mold, considerable time is saved by making up four or five laps at a time.

Be sure you measure one of the if you do not already know the proper diameter of the bullets cast by the mold in question. By checking this measurement against one made on a bullet in the mold after one or two laps have been worn out in it, a fairly accurate gauge of the rate of cutting may be obtained.

To prevent binding

Prior to application of the abrasive, each lap should be placed back in the mold and spun a few times with a hand wrench. This will discourage the lap's tendency to bind after the abrasive has been applied. The lap will tend to bind in any case, and very little abrasive should be used at first. Always spin the lap counter-clockwise to keep the bullet from tightening against the mold.

Either of two methods of applying the emery to the lap may be employed, depending on the fault in the mold to be corrected. If the mold requires enlarging, the abrasives should be embedded

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If mold requires enlarging, put abrasive on driving bands only. If it is desirable to lap entire surface of mold, cut flats on lap at three alternate corners of hex nut



Here is the way to embed abrasive in driving bands of lap



