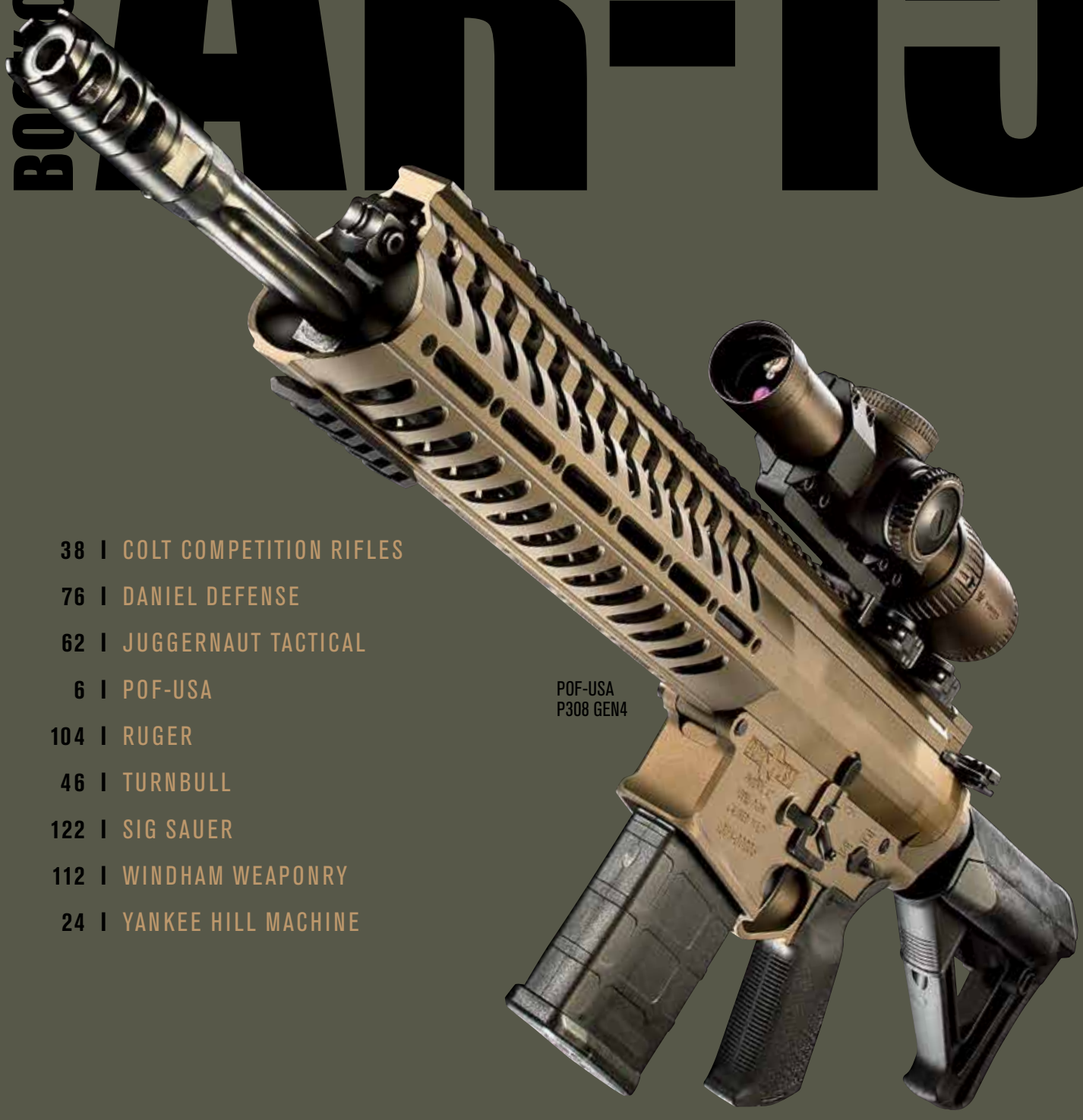
BOOK OF THE AR-15



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BOOK OF THE AR-15
SPRING 2014
PRINTED IN U.S.A.

BY TOM BECKSTRAND

HIPERFIRE

DUAL SPRINGS AND A LIGHTWEIGHT HAMMER MAKE FOR FAST LOCK-TIME AND IMPROVED ACCURACY POTENTIAL.

Hiperfire is a new and trending trigger manufacturer that's offering three models to AR shooters: the 24, 24C and 24E. There are a lot of triggers out on the market, and it's hard to find one in particular that stands out, but Hiperfire has a couple of unique design features that will enormously benefit a large segment of the AR-owning public.

The traditional Mil-Spec trigger is what we find in the majority of ARs, especially those purchased by casual shooters from the larger manufacturers. These triggers have pulls frequently in excess of 6 pounds and are gritty with lots of creep and overtravel. The AR was designed for mass production and use at relatively short ranges, so little thought was given to the trigger other than to make sure the gun went bang when someone tugged on it.

Other than the typically horrific trigger pull, the Mil-Spec hammer places much of its 29 grams of mass at the hammer's head, the point farthest away from its rotational axis. Having all that mass away from the pivot point means that the Mil-Spec hammer will always have a very slow lock-time and that it will have considerable momentum by the time it crashes home.

Momentum, a combination of mass and velocity, is not our friend when we're trying to do something very precise like shoot our rifle. An experiment anyone can do at home is to take one of his ARs that has a Mil-Spec trigger and dry-fire the rifle using a bipod to support the forend and a small sandbag to support the stock's toe. A scope with at least 15X is best for this experiment. While looking through the scope, drop the hammer on an empty chamber. When the hammer strikes the firing pin, we can watch the crosshairs jump.

This jump occurs when that swinging mass from the Mil-Spec hammer crashes into the firing pin. The heavy hammer hits with a lot of momentum and imparts a lot of vibration into our rifle. The vibration imparted into the bolt carrier and, from there, the rest of the rifle is what we must eliminate if we ever hope to extract maximum accuracy potential.

One of the best changes we can make to our AR is to get rid of the Mil-Spec hammer and replace it with something that has a better design. When I saw Hiperfire's trigger kit, I immediately noticed the size and shape of the hammer and thought they made one huge improvement to a Mil-Spec AR before I even opened the package.

The Hiperfire trigger has a flat, narrow hammer that is much lighter than the Mil-Spec design. It tips the

Hiperfire 24, 24C, 24E

Type	Component trigger available with both curved and straight bows
Trigger Release	User adjustable, 2 to 4 lbs.
Springs	Mil-Spec hammer and trigger-return springs, supplemental toggle springs. Installation: Same installation procedure as Mil-Spec component trigger except additional installation of toggle shafts, springs and pivot is required.
MSRP	$185 to $235
Manufacturer	Hiperfire 612-729-3829 hiperfire.com

Already popular with the 3-Gun scene, the 24C, or "competition" model, is a single-stage unit featuring a flat trigger bow. A red adjustable shoe is included.

scales at 22 grams, but most of that weight is close to the hammer pin and doesn't generate much momentum as the hammer moves. It can reliably fire even the hardest primers, thanks to its full-power, Mil-Spec hammer spring and some help from a uniquely Hiperfire feature. The hammer spring is supplemented by two additional toggle springs that also push the hammer forward toward the firing pin when we pull the trigger. No other trigger design has this valuable feature.

Once we use a lighter hammer to remove most of the vibration caused by the massive Mil-Spec version, we need to ensure that the lighter hammer (that could have less momentum when it strikes the firing pin) can still hit hard enough to get the job done. The two extra springs give the lighter hammer the additional speed it needs to ignite the primer. What the Hiperfire hammer gives up in mass, it more than makes up in speed.

If forced to choose between a heavy hammer and a fast hammer, always take the fast hammer. Lighter, faster hammers will disturb our crosshairs less when they strike the firing pin. Lighter hammers also have a much faster lock-time, or the amount of time it takes the hammer to travel from the sear to the firing pin.

Lock-time matters because it is the crucial moment when the sear releases the hammer but before the primer

ignites. Even a slight disturbance of the rifle during this time will degrade our accuracy, so we want to be vulnerable for the least amount of time possible. The lock-time for the Hiperfire hammer has to be the shortest of any AR trigger due to the light hammer and the extra springs that both push and pull it toward the firing pin.

Each Hiperfire trigger has a user-adjustable pull weight thanks to three sets of springs that ship in each package. The plain springs give the lightest pull weight and also generate more striking energy than even a Mil-Spec hammer/spring arrangement. Such is the science behind the design. The lightest pull weight for the Hiperfire trigger can be set at 2.7 pounds with the silver coil springs. The yellow coil springs have a pull weight of 3½ pounds, and the blue coil springs measure 3.8 pounds.

I tested two Hiperfire triggers, the 24 and 24C. The 24 is the base model with a curved trigger bow. It feels a lot like a cross between a two-stage and a single-stage trigger. When we initiate the pull, the trigger moves rearward with 2.7 to 3½ pounds of pressure. There is no stacking or stages to pull through. Once we initiate our stroke, it is light and smooth and continues until the trigger breaks. There is a small amount of overtravel with this model.

The 24C is the model I prefer. It is a traditional single stage that has a very light pull weight once the silver coil springs are installed. Overtravel is minimal with this trigger, and it represents the best choice when choosing a Hiperfire trigger for precision use.

Through the use of a cleverly redesigned hammer and some additional springs, Hiperfire has found a way to build a trigger that has an exceptionally fast lock-time and offers minimal disturbance of our reticle when the hammer slams home. Like most worthy aftermarket AR triggers, it is not cheap. Retail is anywhere from $185 to $235, depending on the model chosen. If you're a trigger snob like me, these are worth a look, especially the 24C.