

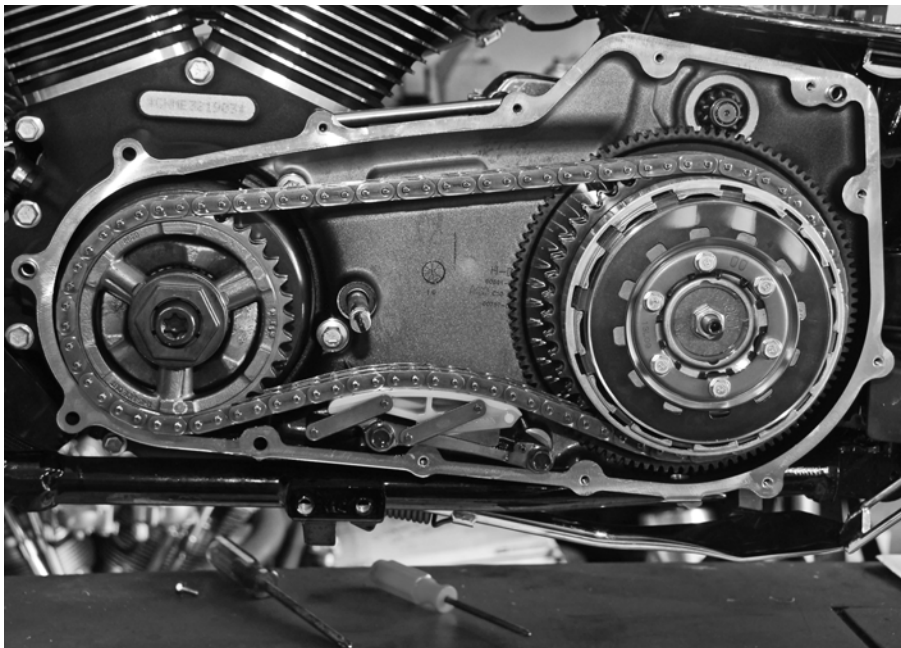
# HAYDEN M6 CHAIN TENSIONER

*Clank eliminator for a '14 Dyna Low Rider*

**I**N 1989, I HAD THE PLEASURE OF MEETING AND BECOMING friends with Tom Hayden, inventor of the M6 automatic primary chain tensioner, now manufactured and distributed by Hayden Enterprises. Tom, who I'm sad to say passed away a few years later, sent one for me to install on my Softail and evaluate for a feature in American Iron. I liked the M6, wrote the article, saw sales skyrocket, and enjoyed knowing that I'd played a small role — very small, since the M6 virtually sold itself once word got out — in helping that happen.

The M6's beauty lies in its balance of simplicity and function. It consists of five parts: a polymer shoe upon which the chain rides; two springs (one inner, one outer) that support the shoe and maintain proper chain tension; adjustment shims to compensate for wear-related chain stretch; and a steel guide plate, now CNC-machined. The springs rest on the guide plate with their other ends inside the shoe. The assembly then takes the stock tensioner's place inside the primary chaincase. If required to achieve the specified compressed spring height, 3/8" for my Low Rider, one or both of two supplied shims can be inserted between the

**I** The work area; note where the short and long primary cover screws belong as you remove the primary cover.



spring assembly and guide plate.

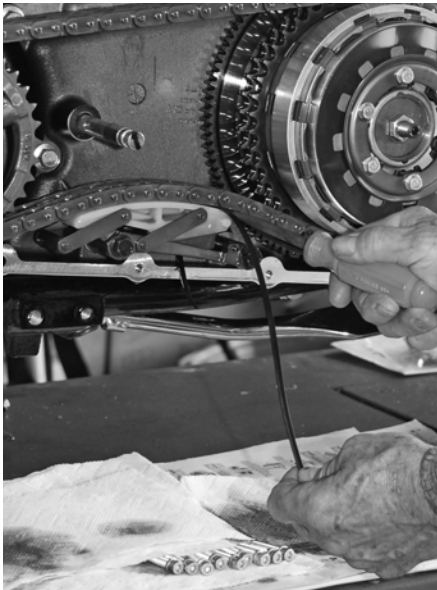
With models available for 1965 and later Big Twins and 1977 and later Sportsters, the M6 is a popular add-on now more than ever, as it turns out. Ironically, Harley-Davidson seems to have boosted sales with the automatic

## TOOLS NEEDED

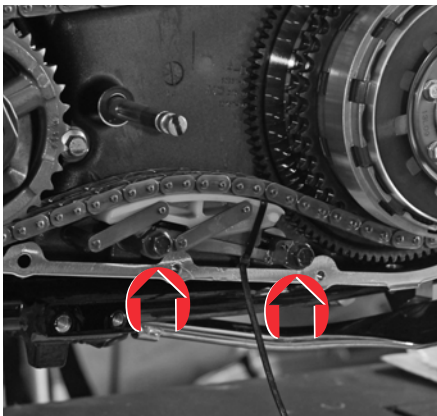
- Teflon tape
- Blue Loctite 242
- 3/16" Allen
- 5/16" Allen
- T27 Torx
- Phillips screwdriver (#2)
- Phillips screwdriver (#3)
- 1/2" socket
- 5/8" socket
- Torque wrench (in-lbs.)
- Torque wrench (ft-lbs.) ■



**2** But before removing the primary cover, disconnect the cables from the negative (-) side of the battery. Use a #2 Phillips screwdriver to remove the battery cover and a #3 Phillips to disconnect the cable.



**3** As directed in the H-D service manual, capture the original tensioner with a wire-tie to ease removal. Gently levering up the chain with a screwdriver will make inserting the wire-tie easier.



**4** With the original tensioner captured, removing the two 3/8" bolts (arrows) that secure the tensioner to the inner primary cover and easing the tensioner out should be a breeze.



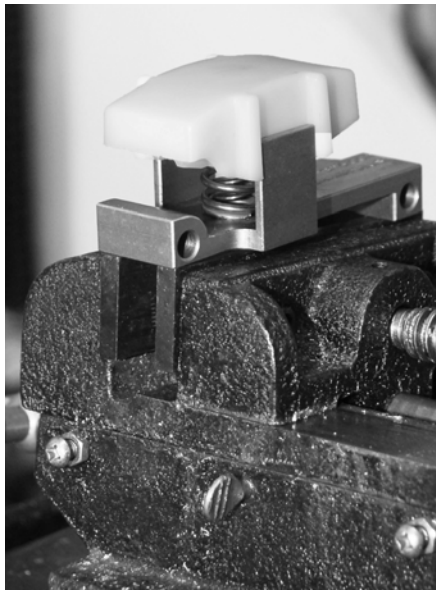
**5** After a thorough cleaning and a drop of 242 Loctite, the original bolts will be used to install the new Hayden M6 tensioner.



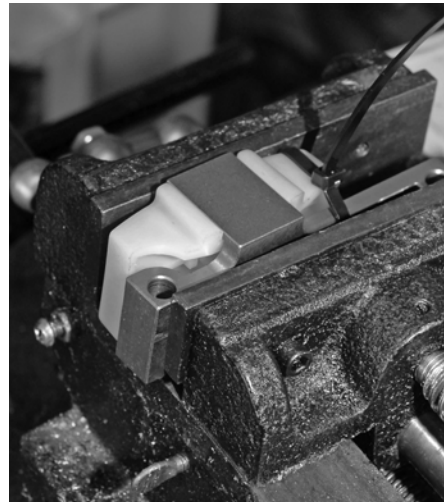
**6** The new Hayden M6 springs go one inside the other. The springs then go inside the Hayden shoe.



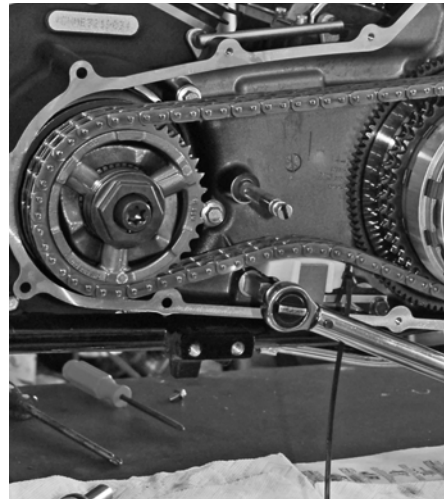
**7** The shoe and springs fit onto the guide plate as shown, with the curved relief in the shoe (arrow) facing the front of the bike.



**8** Here's the assembled M6 tensioner. If required, the supplied adjustment shims will be installed later.



**9** After putting the M6 tensioner sideways in the vise, carefully compress it and then capture it with a tie-wrap, which should insure a painless installation.



**10** Tighten the Loctite-prepared stock 3/8" bolts to 21-24 ft-lbs.

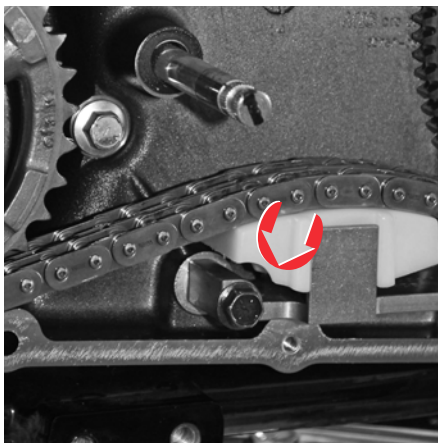


**11** For proper spring tension, the distance between the guide plate and the bottom of the shoe should be 3/8".

tensioner it introduced on Dynas in 2006, other models in 2007. A concern expressed by some owners of these motorcycles is that, while the stock tensioner automatically ratchets tighter to increase tension as the chain repeatedly stretches with heat from friction



**12** If needed, one or both of the supplied shims can be inserted under the shoe to correct the installed spring height. Try the thin one first.

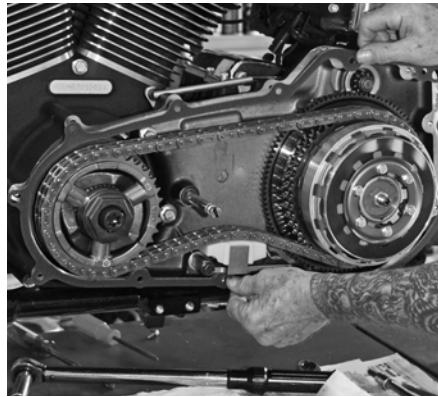


**13** Yep, the curved relief in the bottom of the shoe (arrow) faces forward to clear the front mounting bolt.



**14** The drain plug was wrapped with Teflon tape at the factory. I followed suit after installing a new O-ring. Tighten the plug to 14-21 ft.-lbs.

and the nearby engine, it has no provision for reducing tension as the chain cools and returns to its baseline dimensions. Ongoing repetition of the heating-cooling cycle, so the argument goes, may then cause a too-tight condition resulting in premature failure of



**15** Though primary gaskets can sometimes be reused with no problem, I bought a new one.



**16** After insuring that the long and short screws go where they belong and have each gotten a drop of Loctite 242, tighten them to 12-13 ft.-lbs.



**17** Remove the derby cover screws with a T7 Torx and pour a quart of primary lube into the primary case. This is where you'll notice if you forgot to replace the drain plug.

the engine, transmission, and/or clutch bearings.

Not one to fret about the long haul, I had a more pressing reason for installing an M6 on my 4-month-old Low Rider. As much as I enjoyed the bike's power, braking, and handling, a bothersome noise inside the primary housing, which I can best describe as a cross between an annoying click and a worrisome clank — and it only occurred as the Low Rider made its way up to operating temperature — was making me crazy, and I don't mean a little. Armed with a new M6, one quart of primary lube, a primary cover gasket, a replacement O-ring for the drain plug, and the tools listed on the first page of this article, I finally tore into my shiny new motorcycle. As a result, I am happy to report that, when I headed out for a test ride an hour later, the irksome click-clank was gone.

Installing an M6 should be straightforward for readers who are comfortable with wrenches and such, though a vise is highly recommended. However, one word of advice: search the Internet for product reviews to your heart's content, but direct any installation questions not answered by the included instructions to Hayden Enterprises in Corona, California. Based on my experience with installing the M6 compared to some of the comments I found online, I can all but guarantee you'll save yourself needless concern and perhaps even avoid making a really silly mistake.



**18** Then tighten the derby screws to 84-108 in.-lbs. and ride on! AIM

#### SOURCES

HAYDEN ENTERPRISES  
800/664-6872  
HaydensM6.com