

CHAINS & BELTS

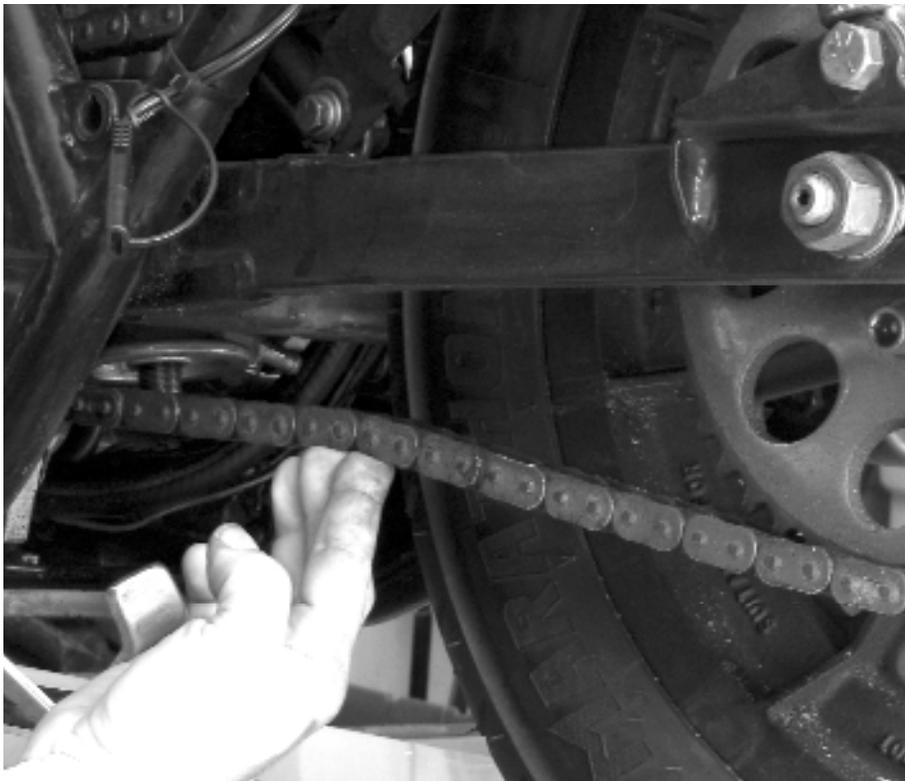
Adjusting and aligning your secondary drive

■ ALIGNMENT AND ADJUSTMENT OF YOUR SECONDARY DRIVE IS A critical aspect of your bike's maintenance schedule. In fact, it's something you can easily check on a regular basis, rather than during a big scheduled service at the dealership. The purpose of this Biker Basics is to make you familiar with what needs to be done, so you will be comfortable doing it regularly. This way you will be aware of any change in the condition of your belt/chain that requires your attention before you're stuck on the side of the road. The common misconception among riders is that O-ring chains, and especially belts, are maintenance-free items. This is not true. Although once bedded in and adjusted after their initial install, these components are pretty consistent; they still need to be checked and periodically adjusted.

The procedure for checking a bike's secondary drive is similar in both belt and chain applications. Start by checking the tension as per the manual for your specific machine. Then check the belt/chain alignment. Finish by tightening, with a torque wrench, the rear axle nut. Sounds simple, right? Well, it is. The accompanying photos show you just what to do. We'll do the chain version first and then a belt system. (And don't mind the dirt. I just got back from an extended road trip.)



2 Then drop the bike off the center lift and check the chain's slack with someone about the same weight as you sitting on the bike. I do this by pushing up on the midpoint of the chain.



1 With the bike up on the lift so the rear wheel is off the ground, find the tightest section of chain. Do this by moving the wheel to get different sections of chain between the sprockets.

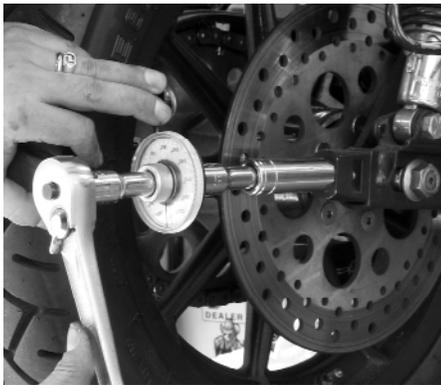


3 If the chain's slack is not within the spec called for in the bike's service manual, loosen the rear axle nut just enough to move the wheel. There's no need to loosen it a lot, so it's sloppy.

PHOTOS BY BOB FEATHER



4 Some people count flats when adjusting their bike's rear chain and some people use a razor blade to count threads. I like to use a degree wheel, so I move each side of the axle the same amount.



5 I use 10-degree increments to make my adjustments. It's a small turn of the wrench, but generally enough of an increment to make a difference in the chain's tension.



6 After making my adjustments, I double-check the chain's slack with my buddy back on the bike. Too tight and you'll have bearing problems, too loose makes a mess of the sprockets and chain.

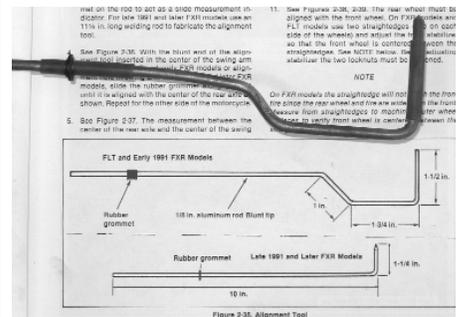
1/6 horiz
dragon fly

1/2 vert
mc advantages
(1 of 2)

1/6 horiz
race deck

1/2 vert
crane cams

Biker Basics



7 No rear drive adjustment is complete without checking the rear wheel alignment. I made my own alignment tool (from the H-D manual) using a steel rod that I bent in a vice and an O-ring.



8 To check the wheel alignment, I must get to the swingarm pivot bolt/shaft. To do that I need to pop the caps off the rubber-mount brackets.



9 Place one end of the alignment tool on the center of the swingarm pivot bolt/shaft and the other end over the center hole in the rear axle.



10 Then move the O-ring/marker on your alignment tool to the center point of the rear axle. You should have one end on the swingarm pivot shaft/bolt and the other end over the wheel's axle.



11 Then duplicate the process on the other side and compare your measurements. If both are not the same distance from the pivot shaft/bolt, move the non-chain side to conform.



12 After rechecking the chain tension (with a buddy aboard), if you have to make an alignment adjustment, torque the axle nut to the correct spec. (Mine is 65 ft-lbs.)

2/3

covington cycle

Biker Basics

1/3 vert
signal dyn.
(2 of 2)



13 As for you rear-belted guys, remove the saddlebags, if you've got 'em, and put the bike up on a lift. Be sure to strap it down.



14 Just as the chain gang had to do, remove the caps on the rubber-mount brackets to gain access to the swingarm pivot shafts/bolts.



15 Here's a little trick: Mark the side of your belt with a white grease pencil/china marker. This way you can easily see it through the observation window in the belt guard.



16 Armed with your trusty Harley-Davidson belt tension gauge (a great one to use, by the way), place the gauge (#40006-85) under the belt in the spot specified in the tool's instructions.

TIPS & TRICKS

ALWAYS USE TIE DOWNS WHEN YOUR BIKE IS ON ANY TYPE OF LIFT.

Use anti-seize on your axle nuts.

Have a buddy who's the same weight as you on the bike when checking the secondary drive belt/chain tension.

Use a torque wrench for critical nuts/bolts. This will keep you from over-tightening your axle nut and crushing your swingarm, or not tightening the axle nut enough, which leads to a different type of disaster.

While the bike is on the lift, clean your chain (I like WD 40 and a grunge brush) or your belt (clean brush and soapy water) and check them for damage.

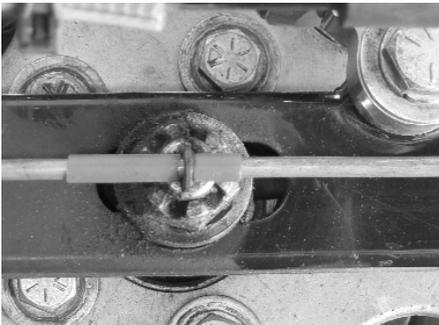
I made my own alignment tool, using the H-D manual as a guide. You'll need to bend a steel rod in a bench vice to get the proper configuration and find an O-ring that'll slip tightly over the rod, so it can be used as a distance marker. ■



17 With your buddy on the bike, press up on the belt in the specified location until the tool compresses to the 10-pound mark. Then check the belt's deflection. Ours is 3/8" (three marks on the belt).



18 With the belt tension correct, checking the rear wheel alignment is done just the same as on a chain-driven bike. Place one end of the alignment tool on the swingarm pivot bolt/shaft.



19 Then slide the O-ring on the other end of the tool down to the center point of the axle. Now that you have the distance from swingarm pivot to axle, compare it with the other side of the bike. If both are not the same distance from the pivot bolt/shaft, move the non-belt side to conform.

AIM

SOURCES

HARLEY-DAVIDSON MOTOR COMPANY

See your local H-D dealer
800/LUV-2RIDE
www.Harley-Davidson.com

1/6 horiz

forrest auto body

1/2 vert

markel