



MOTORCYCLE DOCTOR LLC

Craig Silvers, Owner PO Box 1676 / 108 N. Business Rt. 5 Camdenton, Mo 65020
(573) 346-6867

web site: www.MotorcycleDoctor.com email: Craig@MotorcycleDoctor.com

V-Twin Clutch Workings

HiSun & Odes 800, 900, 1000

The most common problem on the V-Twin is the Clutch Belt is Turning at Idle. It should NOT ! If the Belt is turning so is the Transmission Shaft. This makes shifting difficult and can ruin the Gears, Shift Forks and Drive Shafts. Many Transmissions have been replaced because of the harshness of gears grinding and popping in and out of gear.

The main cause of this is from the Primary Clutch failing and it drags the belt at idle. Both HiSun and Odes have updated their Primary many times trying to solve this issue. The Secondary Clutch usually does not fail but, must be mated with the Primary because of the off-set distance that the Belt is away from the Crankshaft Taper.

The early year models, 2010-2014ish used the Can-Am style (copied) which has too many parts and failed often. The 2015ish and Up now use the CV Tech style (some copied) built in Canada that has less moving parts to wear and can take more abuse.

Another cause of failure is due to the extreme heat that is not being properly vented in or out. Make sure to inspect both the Air flow coming in the back side of the Primary and the Air flow coming out of Cover Case. These clutches are 'Air Cooled' and need as much air as possible. Some add a Fan blowing cool air in the Duct/Snorkle to help keeping the clutch parts from melting. The Air flow out must be unobstructed and make sure you can feel the air coming out of the Clutch Cover by the Secondary.

Sometimes the Primary can simply be cleaned and the 6 Sliders (Trail Block) and 3 Bushings need to be inspected for replacement. The moveable clutch head that holds the sliders and weights can seize open or closed and not allow proper movement. This can be serviced still on the crankshaft. Remove main center clutch bolt then the nut which is slightly spring loaded. This is a dry clutch no grease is needed.

When all is installed and belt is on, leave the cover off to watch it work. With proper eye protection watch the Clutches in neutral when you rev it up and down. They should change in from 1:3 to 3:1 ratio smoothly and without jerking and the belt is not turning at idle. Go for a short test ride with the cover still off, just don't go thru a lot of gravel or water. When you come back, get out and again, make sure the belt is not turning at idle ! If all is good, shut off the engine and install the cover, double check the air vents for good flow !