

Many of our members may not be aware of what happens when a cam drive belt lets go - the following photos are from a recent failure on my 4WD diesel engine due to a diesel engine service centre not taking due care when reinstalling a drive belt after overhauling the fuel injection pump. The major damage included a broken camshaft, 6 bent valves, 6 bent/indented adjusting shims and fortunately only one piston crown indented from hitting a valve which did not require replacement. The belt broke at a speed of 110Km/hr [70mph] about 120Km [75 miles] from home at 8pm necessitating a trip home on the back of a flat-top truck after a 2 hour wait for it to come from Taree.



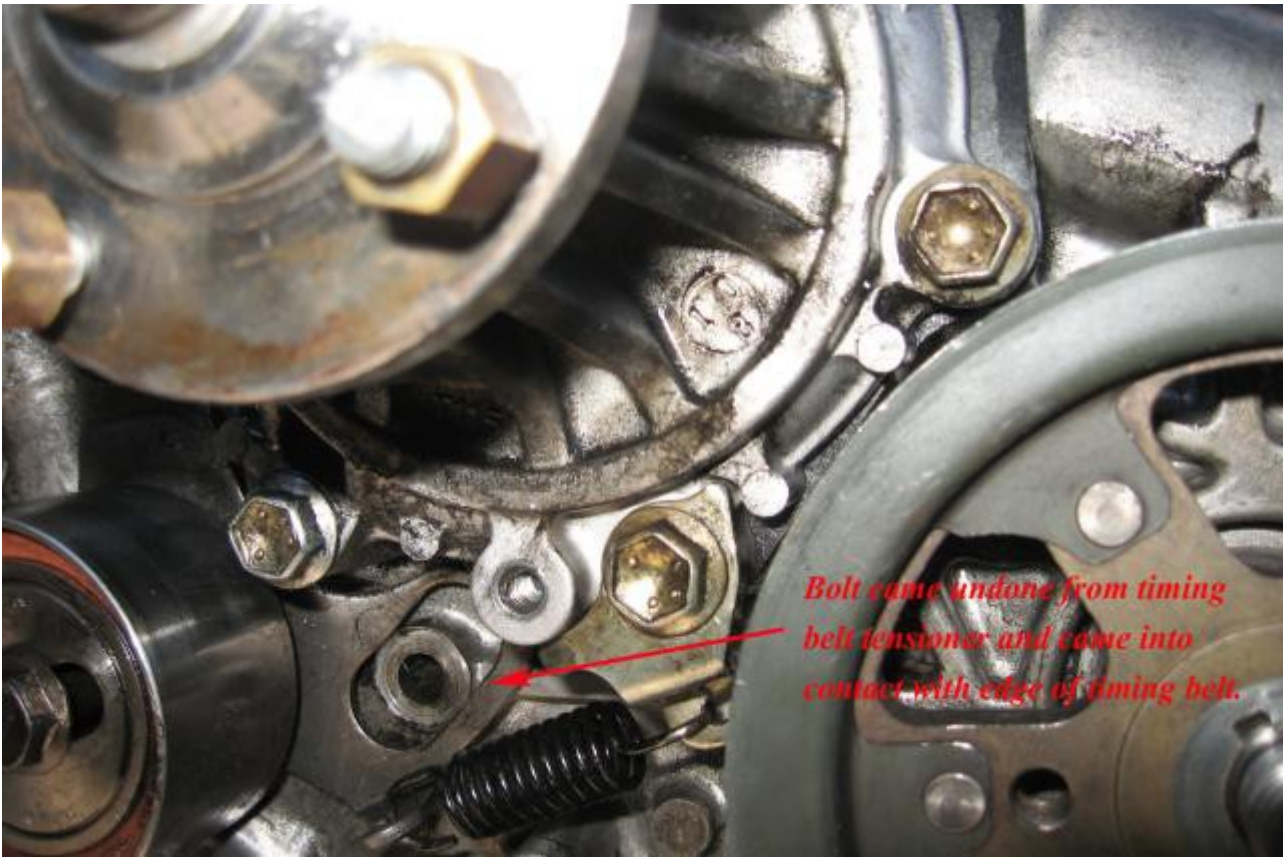
This is what I found when I removed the front cover of the timing case. The bolt was in the bottom of the case not as shown here.



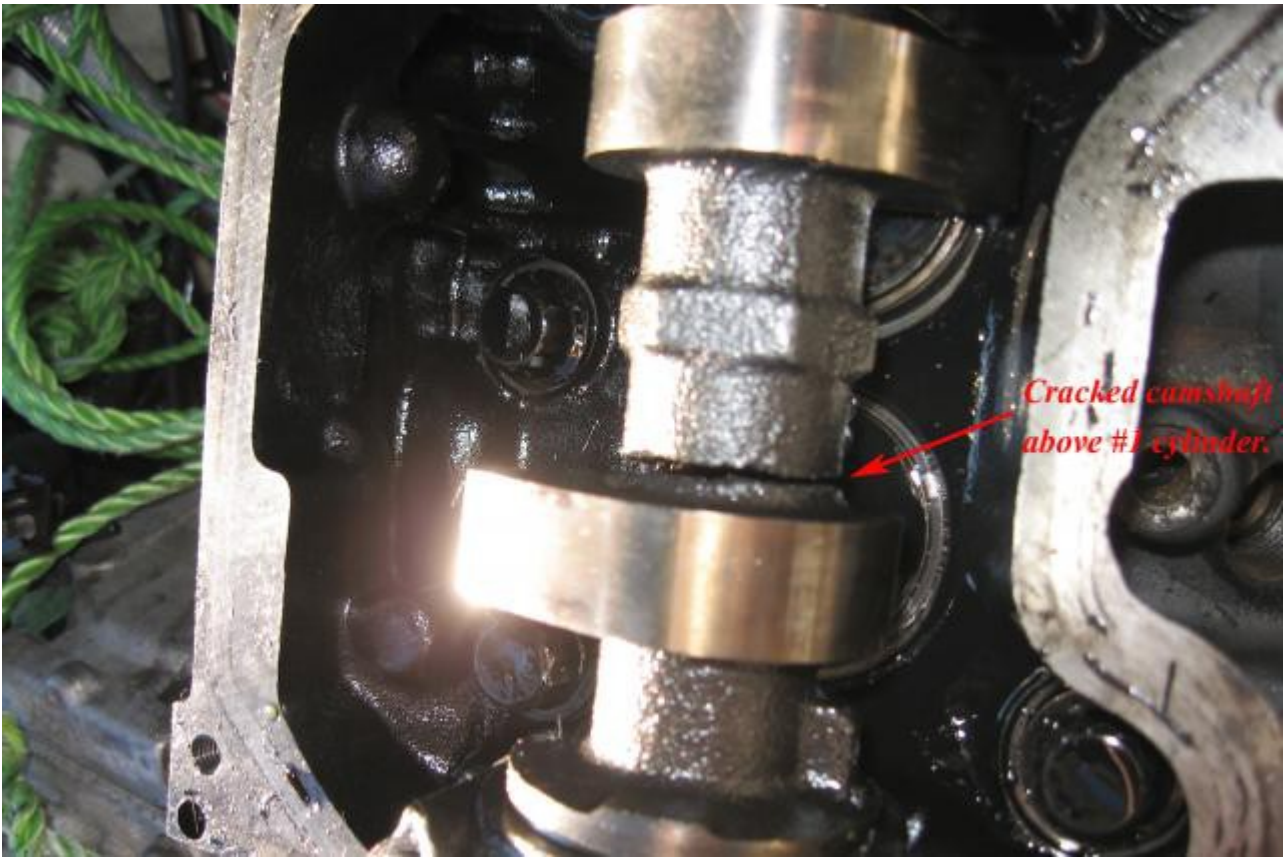
Remains of timing belt - note damage to edge of belt-from head of tensioner locating bolt that came loose.



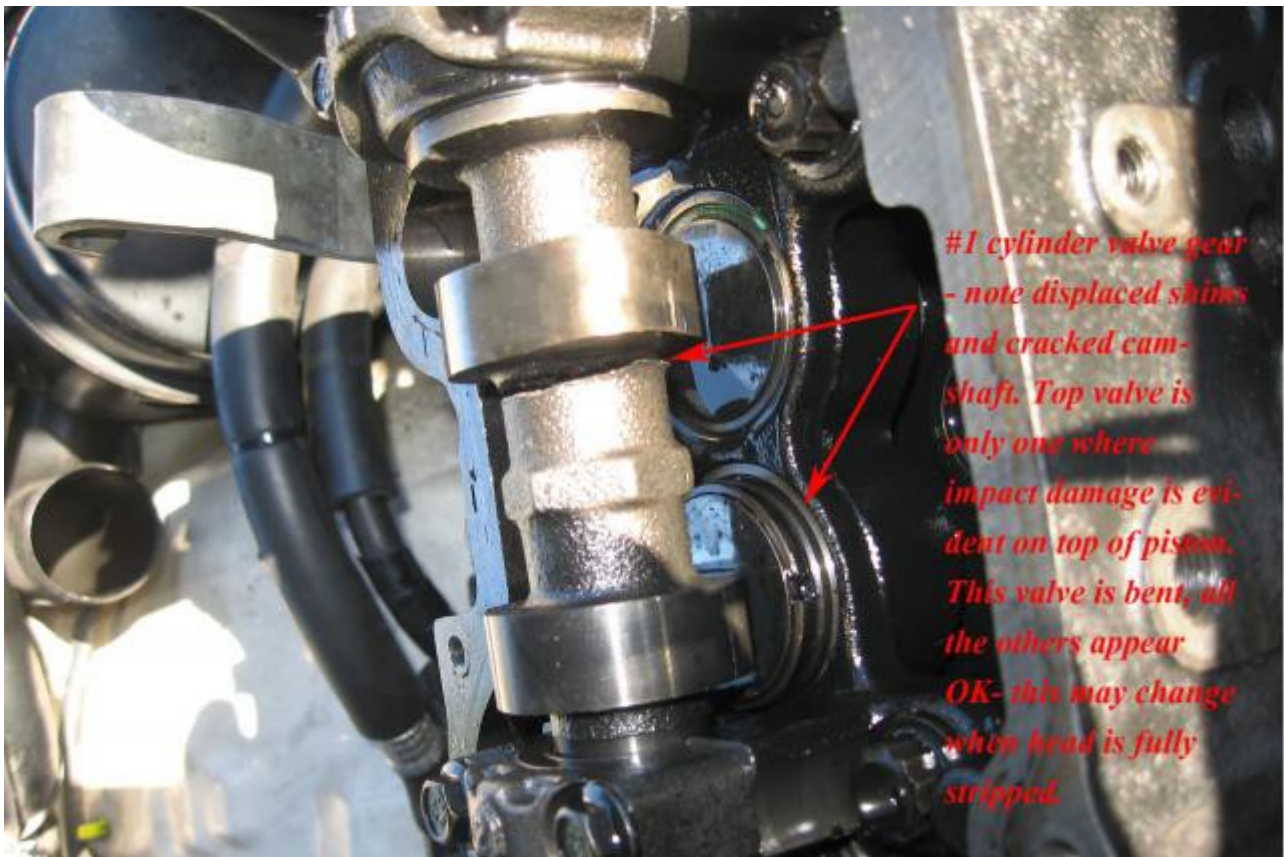
Tensioner locating bolt that unscrewed itself and came into contact with the edge of the timing belt. Head is highly polished and a groove from coming into contact with one of the drive gears is just visible on the shank.



Bolt came undone from timing belt tensioner and came into contact with edge of timing belt.



Cracked camshaft above #1 cylinder.



*#1 cylinder valve gear
- note displaced shims
and cracked cam-
shaft. Top valve is
only one where
impact damage is evi-
dent on top of piston.
This valve is bent, all
the others appear
OK- this may change
when head is fully
stripped.*

For anyone who may be interested, this engine has done 470,000Km and was on its 5th drive belt with the next replacement due at 500,000Km.