

## Re: JVC VCR HR-S4700U quickly powers down

**Source:** <http://sci.tech-archive.net/Archive/sci.electronics.repair/2004-12/0469.html>

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**Date:** 12/05/04

Date: 4 Dec 2004 21:38:51 -0800

"Mark D. Zacharias" <mzacharias@yis.us> wrote in message news:<31dm7hF39edk8U1@individual.net>...

>

> *I'm not sure I read you correctly. If the idler gear does not switch  
> reliably from the supply hub to the take-up hub, then the problem is bad  
> lubrication on the center shaft of the idler assembly. It's been a while  
> since I've seen one, but there's a slit-washer or some other retainer set in  
> a scored "groove" on the metal shaft. Using a small pick or some such, the  
> retainer can be removed and re-used, but there is a chance that it will be  
> more prone to failing later. For this reason it's important not to damage  
> the retainer. When the retainer comes off, that's when the spring-loaded  
> parts tend to go flying, and then you'll be guessing as to their  
> re-assembly.*

>

> *You shouldn't have to mess with the actual felt clutch portion.*

>

> *Mark Z.*

Alright, I think I have it figured out. The more I looked at it the more it seemed like the problem was the idler assembly (part# PU61246). The clutch had reasonable resistance both directions. I couldn't find anything mechanical to stop the idler assembly from sliding into the takeup reel like it would with the supply reel. You can see a picture of it here:

<http://studiosoundelectronics.com/idlers.htm>

I removed the idler assembly and noticed the mechanism to get the gears to move to the supply and takeup reels was a piece of felt between two nylon parts. The idler assembly has three gears. Two white plastic gears and a black plastic gear. One white gear meshes with the supply reel, the other white gear with the takeup reel. The third gear (black plastic) meshes with the clutch. They are arranged in a triangle with the white gears mounted on a nylon bracket. This bracket pivots about the axis of the black gear. Between the nylon bracket and the black gear is a piece of felt and what looks like a nylon washer that is locked to the black gear.

So, the clutch rotates the black idler gear which rotates the bottom nylon part (washer type piece). The friction between the bottom nylon, felt, and top nylon bracket pivots the two white gears left or right to mesh with the supply or takeup reels. Once meshed then the felt slips on the nylon parts as the tape is in forward or reverse. So what looked to be my problem was the felt didn't provide enough friction to allow the idlers to pivot to the right and mesh with the takeup reel.

I 'fixed' it by squeezing the two nylon parts together to squish the felt and rotated it back and forth to test it out. It now will pivot in both directions. I'm thinking that I should replace the felt. Can I use regular felt from a fabric store?

I still had problems getting the VCR to work as per the service manual when the cassette housing was out of the way. It makes me wonder if I'm ment to manually load a tape or a dummy tape in this setup.

Things look good, Thanks for the help guys.  
burnboy