

Matchy's

TECH TIPS

G'DAY. My mate, The Don, rang me the other day

and mumbled something about cleaning the filter for the hydraulic cam followers so I figured I'd pass it on to you.

One of the first things you notice on an Evo motor is the absence of an outside oil feed for the top end.

At first I wondered how they did it and figured HD used the same internal type system as my Matchless but then someone told me the oil went through the pushrods.

"Bullshit!" says me, the sceptic, and looked it up. Not only does it work but it's so bloody efficient that bugged cam followers are a thing of the past.

One of the problems the Shovels had was failure of the followers and I remember my 80/80 Low rider spitting the dummy

in 1981 and making all sorts of severe rattling noises.

I sorted it out by going straight to solid lifters -- which

means I fitted cam followers which are a solid unit, not hydraulic -- and adjustable pushrods.

You have to be able to adjust the length of the pushrods because the hydraulic followers aren't there to do it for you.

The Evo's design sorted all that crap out by making the cam follower part of the oil feed to the top end. The oil filling the follower is actually on its way to the top end under pressure (See diagram #1).

As you can imagine, the holes in the follower etc are bloody small so any garbage which may be in the oil **MUST** be removed before it reaches the follower block.

The standard oil filtration system works very efficiently but you just don't know when the tiniest bit of shit may sneak into the top-end oil feed so HD fitted a mini-filter.

This filter is easy to find

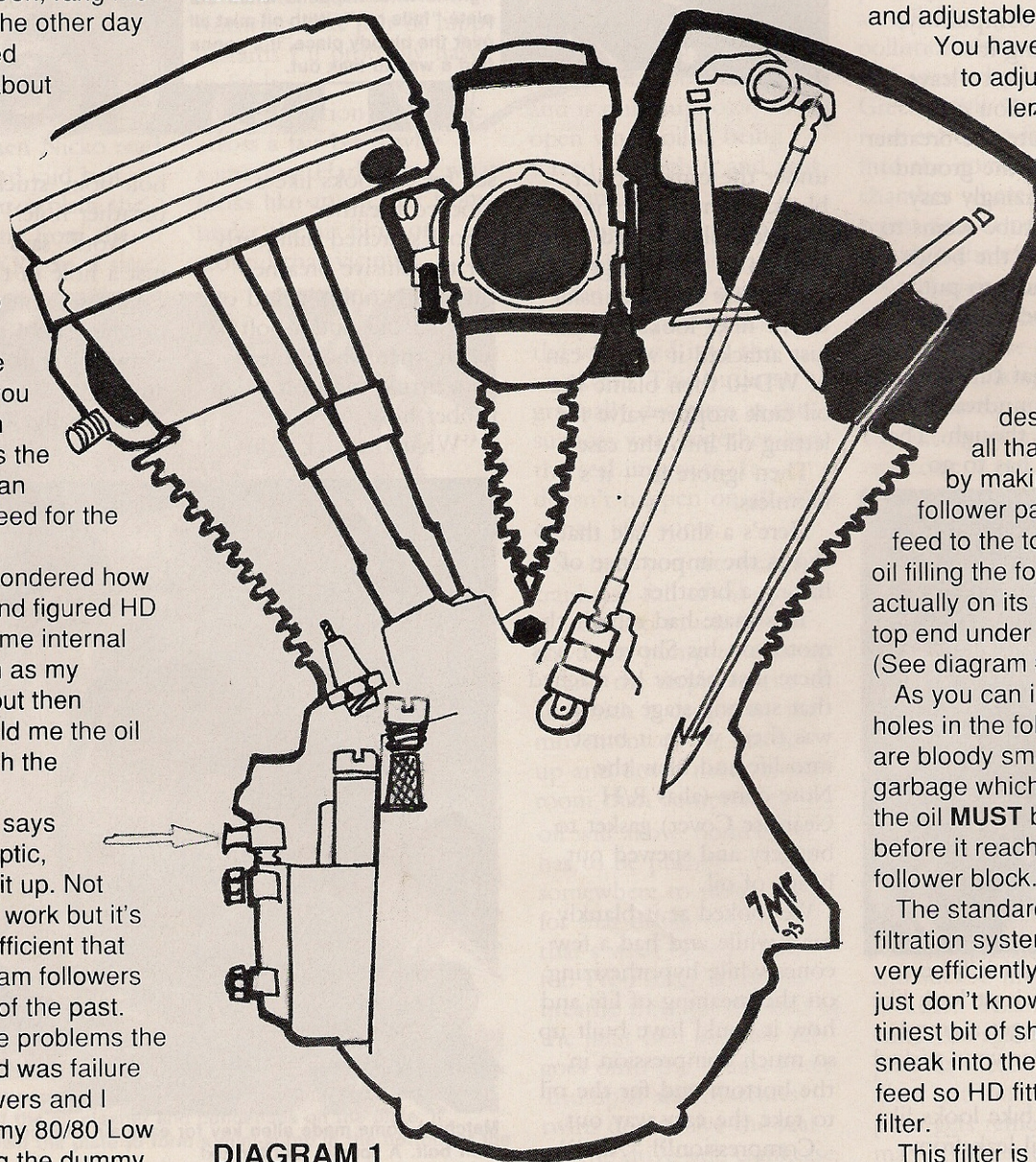


DIAGRAM 1

because it's the only one of the large alloy screw-heads actually screwed into the crankcase. The others go into the oil pump.

This screw is usually a bitch to get at on everything but the FLH's because the cross-flow pipe, where it joins the front and rear exhaust pipes, gets in the way.

One thing to remember is the screw is bound to be tight. (Hmmm... Sigmund Freud would have fun with that one...) so you can't use a screwdriver which is too small for the slot. If you do this it will just twist at an angle and fuck the slot.

Either find a bit of metal exactly the same size as the screw head or maybe use one of those big square-sided screw drivers because you can lean on it, to push it into the screw head, and twist it with a spanner which fits the square part.

Long screwdrivers won't work because they'll hit the tank and won't fit behind the cross-pipe.

The air filter gets in the way too so you might as well remove it first -- gives you a chance to clean this filter out too.

As a side issue, the easiest way to clean the air filter (if you haven't got one of those paper buggers you have to throw away) is to wash it in petrol and wring it out. Do this a couple of times until all the gunk is removed then wring it out severely and just put it back.

Using petrol is safe because if any gets

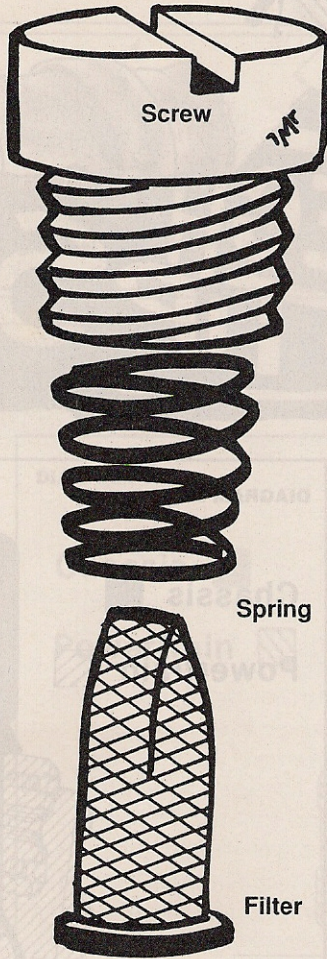


DIAGRAM 2

sucked through it'll just make the mixture a bit rich for an inconsequential (*Big word for the month... Look it up --Freebs*) amount of time and you don't have to squirt any oil on the filter because the breather will do it for you.

If I had one of those paper filters I'd chuck it away and replace it with a foam one I could wash.

So you get the screw out -- probably with a bit of destruction the first time because it is really soft alloy -- and the spring will stick out of the hole (See diagram #2).

Pull the spring out and you can see the top of

the filter.

The hole will gradually fill up with oil and this will slowly run over the top and down the side of the oil pump. Just stick your finger over it or ignore it because not much will come out.

The filter is sometimes a bit of a bitch to remove because it's down the hole but I got around that by using a set of suture clamps like they have in hospitals. Those clamps are really useful to have in your tool kit because there are a lot of things put only just out of reach and the clamps, which look like Diagram #3,

manage to reach 'em. Grab the filter and lift it out; wash it in petrol and blow it out; hold it up to the light and check to make sure all, if any, crap is gone; then reverse the procedure. 'If any' means it's unusual to have any crap in the filter if regular oil changes are done.

Now if you fuck the dreaded screw just replace it with a new one. I've got a new one in stock at home for just that reason. The part number is **26263-80** and they cost, as of April 93, \$4.05 Thanks to **Merv** (aka "**Marv**" when we spelt his name wrong once) at Sy's Harley-Davidson for that.

Clean the hydraulic filter every time you change your oil which should be every five to eight thousand kilometres and the top end oil feed will be

boringly reliable.

It's interesting to notice that the oil gets pumped through the filter **then** to the oil pressure switch which turns the warning light on

Since the switch is mounted after the filter, one of the reasons it may flicker at idle is if the filter is blocking up.

In really hot weather mine flickers but that's because it idles at about 400 rpm. Yeah, I **know** it's a bit too low but shit it sounds good.

Willie Keith, one of Harley-Davidson's TechServ humans, gave me the raised eyebrow treatment one day as I sat next to him at a set of lights and the Bastard then used me as an example, at a Seminar, concerning how low you shouldn't idle a Harley.

Anyway, since I am aware of that idle business, if the light tries to flicker I just raise the



DIAGRAM 3

revs a bit.

(Hey Willie, do ya still remember how to say 'bastard' in Australian?)

I think I'm idling a bit low so my own top end's somewhat dry -- must be a beer round here somewhere... She'll be right.

Faternally,

