crosby12

Joined: 09 Jun 2004
Posts: 1

Posted: Wed Jun 09, 2004 11:10 pm Post subject: petroil mix

I am about to commission my 1929 TT Rep after 15 years on-again/off-again restoration. What is the optimum petrol/oil mix, and what octane petrol and what grade of oil? NZ only has 91 & 96 octane petrol available.
Is it necessary to maintain use of the Pilgrim in order to lubricate the bottom end, or is petroil sufficient?

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al perry

Joined: 31 May 2004
Posts: 12

Posted: Thu Jun 10, 2004 10:53 am Post subject: petroil

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in order to use petroil as your primary oil supply , your engine must be modified for it use, this involves some lower end modifications, cross over pipes etc. more learned members can elaboate! however if your pilgrem pump is functioning , you can set it to about 6 drips per minute with 30 or 40 weight oil (most modern 2 stroke oil is to thin to work reliably in a pilgrem) and include a light 50 :1 twostroke oil mix in your petrol this acts as a "belt and braces" and upper cylinder lube.
my best suggestion is to have your pump converted to a dripper (gerry Howard) and use two stroke oil through it for the mains, and a light mix in the petrol, however use oil sparingly as two much oil lowers the octane of the fuel to where poor perfomance can result
almost any gas (petrol) is fine!
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best regards
Al Perry N.Y.

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Shaun Matthews

Joined: 31 May 2004
Posts: 29
Location: lincoln
Posted: Sat Jun 12, 2004 10:59 am Post subject:

I followed Al's advice for my 1930 Replica and have just done over 300 fast and trouble free miles round the Isle of Man. - Initially I had starting problems due to too much oil in the crankcases but duriung the week I sequentially cut it back and by the end she would always start 2nd or 3rd kick warm, 5th or 6th cold.

The only problems I have found with Gerry Howard's dripper conversion are over

oiling in heavy traffic (If you can trust your memory turn the oil tap off if your going to be stuck for a few minutes) and it flows more oil when warm so you do have to regulate it on a daily basis. The solution works but you do have to think about it.

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Jan Buchwald

Joined: 31 May 2004
Posts: 64
Location: Danmark
Posted: Sun Jun 13, 2004 8:07 pm Post subject:

I run my Brum on octane 95 with 1% two stroke oil, plus 6 drips a minute from the pump (also two stroke oil), but; two stroke oil is not just two stroke oil, there are different types, depending on the temperature of the engine. Too high, and you will have oil in your exhaust, too low, and you won't have oiling in the top.
As I find the radiator only to be a little more than hand warm, and I can stand with the plugs in my bare hands, I use outboard two stroke oil, as this has a lower working temperature.
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1956 Birmingham Scott, frame no. S 1060

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Mark Scott

Joined: 02 Jun 2004
Posts: 20
Location: Texas, USA
Posted: Tue Jun 22, 2004 1:57 am Post subject:

Al and Jan,
6 drips a minute? Is that at idle, I suppose? Seems less than I thought it should be. I have been running Amzoil 100:1 in the gas, with Belray 2 stroke in the oil tank at about 20 drips per minute. I have been too afraid to back it off! I don't seem to have too much smoke and the plugs look fine.
What is Gerry Howard's dripper conversion?
Thanks,
Mark
_____
1927 Flying Squirrel

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al perry

Joined: 31 May 2004
Posts: 12

Posted: Tue Jun 22, 2004 8:29 pm Post subject: petroil mix

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hi mark;
the gerry howard dripper conversion is: a pilgrem pump modified into a dripper, with no moving parts, the beauty of it is, it looks stock and can be set with the engine not running at all (with line disconected) it works by gravity, although some crankcase suction occurs and the motor tends to suck oil as it needs it, as far as how many drips per minute, each engine is a little different with a 50 ;1 mix in the tank, my engine works well with one large drip about each 10 seconds (on each side) very little smoke, a few more drips per minute are ok, as long as you dont over oil, you can judge by the exhaust smoke, and how your engine "picks up" too much oil
and the fuel octane is affected and poor "pick up" and four stoking occur
i would think that 20 drips per minute would be too much, but if your engine is happy, it must be ok!

_____
best regards
Al Perry N.Y.

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Roger Moss

Joined: 31 May 2004
Posts: 242
Location: Leicester UK
Posted: Tue Jun 22, 2004 10:23 pm Post subject: Alfred used petroil! Roger Moss

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Hi All. Just for interest, if you look at John Underhill's 1913 TT bike with the rotary valve, there is no provision for lubricating the valve. It follows that he must have used petroil. With a racer, you need lubrication to be in relation to the load and speed and petroil delivers this. I use a modern oil at about 50:1 but with drippers to lubricate the synthetic seals I use. I notice one thing though, unlike historic castor based oils that tended to remain on the surfaces, the thinner modern oils tend to drain down into the bottom of the crankcase quite quickly. When you go to start again, the oil rich liquid has a tendency to drown the plug. If you try just draining the wells before you start, I think you will find it starts very much more easily. With petroil, it gets oil as soon as it gets fuel, so it will not suffer. Kind Regards Roger

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Rebuilding and upgrading of Scott and Silk power and transmission units. New enhanced replica Scott engines. Special manufacture Scott technical info at our website www.mossengineering.co.uk

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Colin Hough

Joined: 10 Sep 2004
Posts: 35
Location: Amersham, Bucks
Posted: Tue Sep 14, 2004 10:23 am Post subject:

Guys,

I am soon to face the decision of how to set up the oil supply to my re-assembled '59 model, hence reading this post and also looking at the Technicalities (which only leads to confusion!!!!)

I offer the following for information:

1) With my first Scott (also a '59 model) which I bought in the late 1960's there was the original instructions from Geoff Milnes with it (and I still have them so I must have planned to get another Scott someday). This says: "Check the oil pump to see that it gives 15 (fifteen) drops per miniute each side with the engine idling. Add an eggcup full of oil to each gallon of petrol". I don't know what a 'standard' eggcup size is, but I guess this was around 100:1. I used conventional single grade car engine oil and all worked fine for general use around home and trips on 'ordinary' roads. However, holding 70+ mph on the motorway going to the IoM TT races resulted in a big time seize after about an hour. This was ended my Scott ownership at that time!!! There was no comment about turning it up for long distance high speed riding (but then, motorways were not around when this was written).

2) 35 years, a wife and two kids later, I have now returned to Scott ownership and am reading the Technicalities in trepidations of having to set up the oil supply to my 'new' Scott after I (finally) re-assemble it following an engine overhaul by Tim Sharp. The key reference I have found is from Brian Marshall (Yowl V20/9 April 1998 article headed NO SMOKING):

In summary, he recommends a fully synthetic two-stroke oil such as Castrol TTS and Silkolene Pro 2 & Comp 2 and says "personally, I think that a combination of Pro 2 and Comp 2 is the complete answer" to no smoking and good lubrication. "Pro 2 is a self-mixing grade and can safely be used at 40:1 in a petroil lubricated machine. In a more typical Scott with a Pilgrim pump or drippers, I would use it in the perol as an upper cylinder/top-end lubricant cum belt-and-braces [that's belt and suspenders for our American cousins] measure at perhaps 50:1 or 60:1, and then use Comp 2 in the oil tank, at a delivery rate of NO MORE THAN HALF A DOZEN DRIPS PER MINUTE in each side of the engine at a fast tick-over. That is ample to keep the glands and big-ends happy. I cannot over-emphasise that such a low delivery rate is unreliable in a Pilgrim pump unless it is in good condition AND geared down. This combination gives excellant lubrication and very little smoke. Later Scotts (e.g. 1946 onwards) have no oil tap as standard, and as a result oil tends to seep through the pump and flood the sight glasses and crankcase wells".

As my machine is fitted with both a reduction gear and an oil supply on/off tap, I intend following Brian's advice.

However, Glyn Chambers (our local supply source for Silkolene oil) noted back in Jan 1972 (V7/9) when writing about the problems of getting Pilgim pumps to work reliably at the low rates need by Scotts that the "biggest sin you can commit (I know, I did it) is that on finding the pump somewhat unreliable, you turn it down a notch and put some oil in the petrol thinking this is 'belt and braces' technique. Unfortunately, this makes the pump worse. Please don't put oil in the petrol, it doesn't need it. Turn up the pump to the maximum you can get away with without becoming a pollution hazard e.g. one in 5 or 6 for normal running or about one in 3 or 4 for fast work ['drips per spits' - I wish I had had this advice back in the 1960's for motorway riding]. This is far more oil than it will ever need but it keeps a good pump reliable. If you drive in the Metropolis - buy a Honda. If you are a fast bloke - develop an instant left hand".

Remember, this was 1972 so the environmental issue of smoke has moved on!!! Having talked to Glyn when I first got my 'new' Scott, he strongly recommended getting a reduction gear to slow the Pilgim down and hence avoid this problem - it was on his advice that I got this mod. I include this as a warning that simply use a 'half and half' approach may result in the Pilgrim failing to perform - note that both Brian and Glyn advise fitting a reduction gear.

I will discuss again with Glyn when I go over to pick up supplies of Silkolene and see what his current recommendations are.

3) I am also challenged by how to do the initial start-up i.e. with the oil tank full but the pipes empty. My plan is to:

i) Fill the oil wells and then close the doors.

ii) Turn the Pilgrim to max open so the oil runs through fast.
iii) Put in the first fill of perool with a relatively high pertroil mix (say 40:1)
iv) Kick the machine over a number of times with the plugs out to get petroil distributed.
v) Put in the plugs and kick it for real (and pray).
vi) Turn the pilgrim down as soon as I get a lot of smoke coming out (I will warn the neighbours first!!!)

Does anyone have any advice on how better to do this?

Regards,

Colin