

THE VELOBANJO GENT

A SITE FOR VELOCETTE MATERIAL, OTHER OCCASIONAL MOTORCYCLE, BANJO AND JAZZ RELATED STUFF AND MOTORCYCLE AND AUTOMOTIVE INSTRUMENT INFORMATION.

Showing posts with label **Motometer**. [Show all posts](#)

FRIDAY, MAY 4, 2012

BMW Motometer instruments...the R45, R80ST, R65 and R65LS.... this is likely my last posting for Motometer instruments, perhaps one more for BMW with VDO instruments to come....



I've featured Motometer and their instruments used on BMW motorcycles to date....see over to the RHS in the search area and type in Motometer for these previous posts.....

This post will be my last on BMW with Motometer instruments and I'll do one more in the future on the so called "Earles Forked" BMW with VDO instruments. So this post features the R45, R65 and R65LS instruments which were 100mm diameter nominal with a black anodised bezel rim rolled in place to seal the instruments.

The speedometer generally had the trip reset up into the glass of the speedo with a small rubber boot trapped in place by a capped plastic sleeve with a thread and nut....funnily I never measured this.

some early ones had the reset at the back of the instrument and used a plain glass...this was a better arrangement as the small rubber boot over the reset eventually splits and lets water into the speedometer. Internally most metal parts are unplated and so rust.....

The tachometer was electronic and used the same movement as the BMW/7 series although the circuit board differed in that it was round, nominally about

ACKNOWLEDGEMENT OF ITEMS USED IN THIS BLOG FROM MY ARCHIVE...

I often feature items from older Motorcycle magazines, including photographs and other drawings, cartoons etc in my Blog. Where possible I acknowledge their source. These items are often from "MotorCycle" and "MotorCycling", and the current copyright holders are Mortons Motor Cycle Media. I thank them for their use.

Where other sources are used such as *Fox Photos*, *Keystone Press* and other now defunct press agencies from the UK and elsewhere I attempt to acknowledge their source.

You are free to use any item from my Blog, but PLEASE give credit to the source.

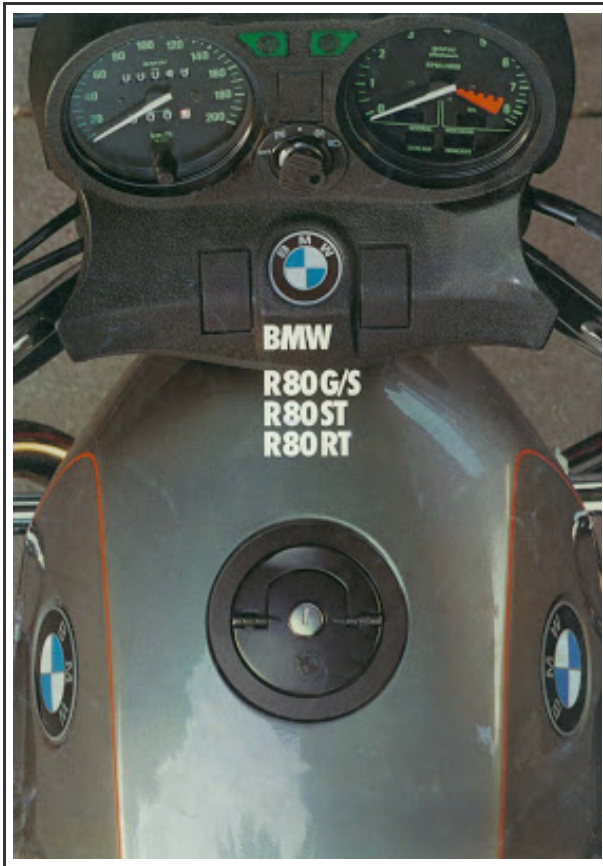
SEARCH THIS BLOG

A PHOTO I LIKE....!



BMS in 1961 aboard a road test
Velocette Venom Clubman Veeline

100mm in diameter, external and secured by a plastic cover held in place by three PK type screws.



Despite the note on the photo from a BMW catalogue above..the binnacle is the same for the R45, and R65 variants.

The speedometer was in 120mph or 200kph dial scales, but 180kph for the R45 and the rear final drive ratio dictated the calibration factor which is displayed on the dial face as w=xxxx.

There were special 85mph dials made for the US market during the Reagan era oil crisis knee jerk reaction when all new cars and motorcycles had to have only an 85mph speedometer...the thought was you'd drive slower and save fuel....

STAT. COUNTER- VIEWERS TO DATE

81213476

NEED TO CONTACT ME?

I can be contacted on....
vegavoxbanjo@gmail.com
or
editor@velocette.org.au

DQS THRUXTON IN THE 1971
CASTROL 6 HOUR RACE, AMAROO
PARK, SYDNEY.



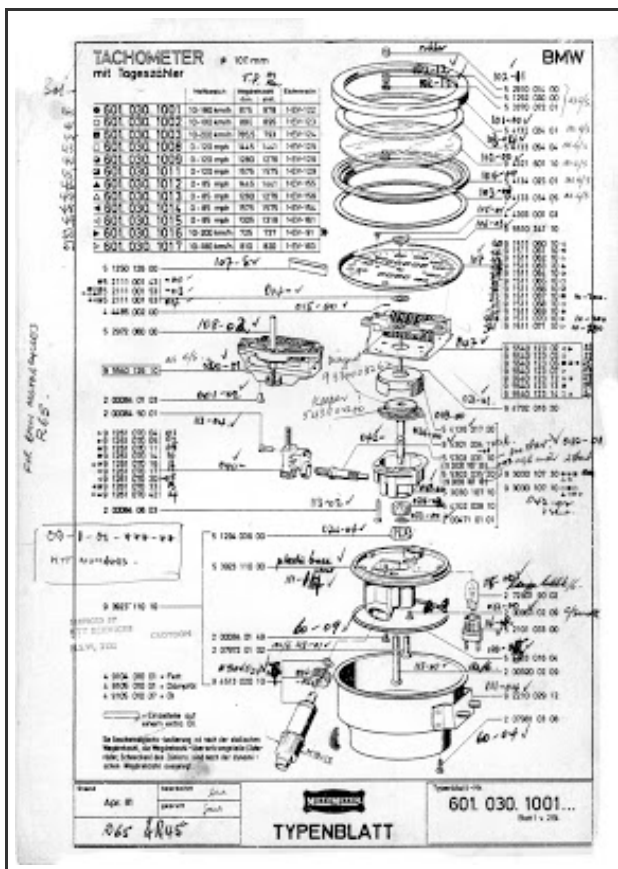
My co-rider, Dennis Fry, looking the consummate racer, probably the last to use a pudding basin helmet in competition...

DQS THRUXTON IN THE 1971
CASTROL 6 HOUR RACE, AMAROO
PARK, SYDNEY.

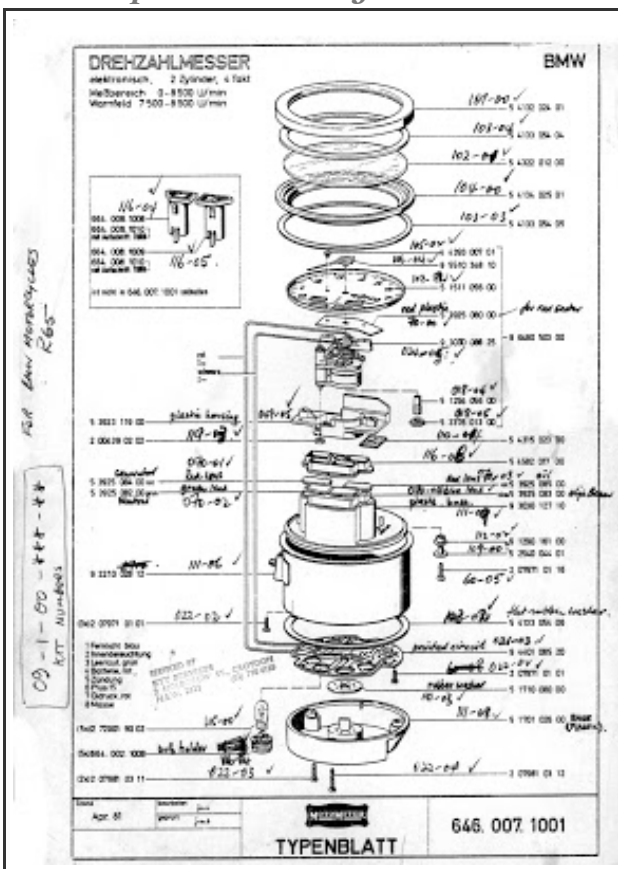


DQ aboard his VMT during the first 2 hour stint, pictured in Brabham loop

VMT458 AT THE 2012
AUSTRALIAN VELOCETTE OWNERS
CLUB NATIONAL RALLY AT
BUNDANOON, NSW.



Speedometer exploded drawing....



Electronic tachometer exploded view....



DQ reunited with VMT458 after 32 years

VMT458 AT THE 2012 NATIONAL VELOCETTE OWNERS CLUB RALLY AT BUNDANOON, NSW



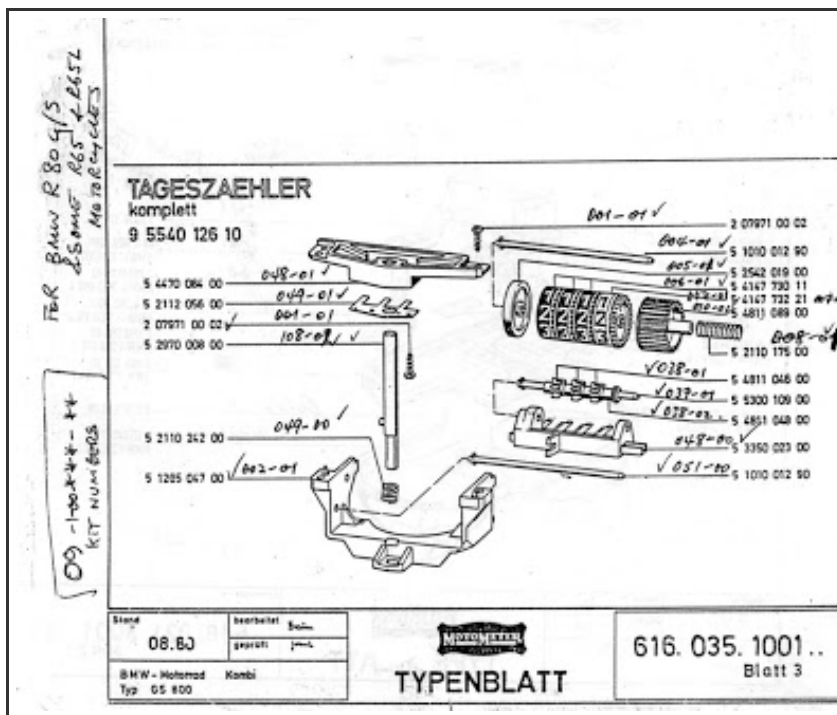
Dennis Fry re-united with VMT458, DQs co-rider in the 1971 Castrol 6 hour race

READY FOR ANOTHER US VELO RIDE



My 1962/1948 KSS/Scrambler Velo road bike, built in Canada in 1976 and imported into Sydney, Australia, May 2012 for use in local Australian Velo events.....

DQ ON HIS VELO SPECIAL



Trip reset exploded view....



BMW R65LS....



View of R65 and R65LS instrument cluster.

The calibration factor is w=773.

This means the speedometer cable rotates 773 times for every kilometer travelled.

So if the cable rotates at 773 times per minute, the speedometer will read 60kph.



Riding in the Napa, Cal. area May 2010

VELO THRUXTON AT SPEED



North American Velo OC logo used for one of the Club's annual rally and rides

ABOUT ME



THE VELOBANJOENT

I've motorcycled since the early 1960s...both in Australia, the USA,NZ and UK to where my long suffering wife and I rode a 1972 BMW R50/5 motorcycle via the overland route through Asia in 1974. Careers in Animal Physiology and Automotive Instruments and now finally semi retired into music...as a banjoist in Trad./Dixieland Jazz bands. Life for me is very interesting.....

[VIEW MY COMPLETE PROFILE](#)

OTHER LIKE MINDED SITES TO VISIT.....

Club Ashfield...home of the Bridge City Jazz Band

Greg Summerton's JAP site....

John Jennings Oz Vintage Racer blog site

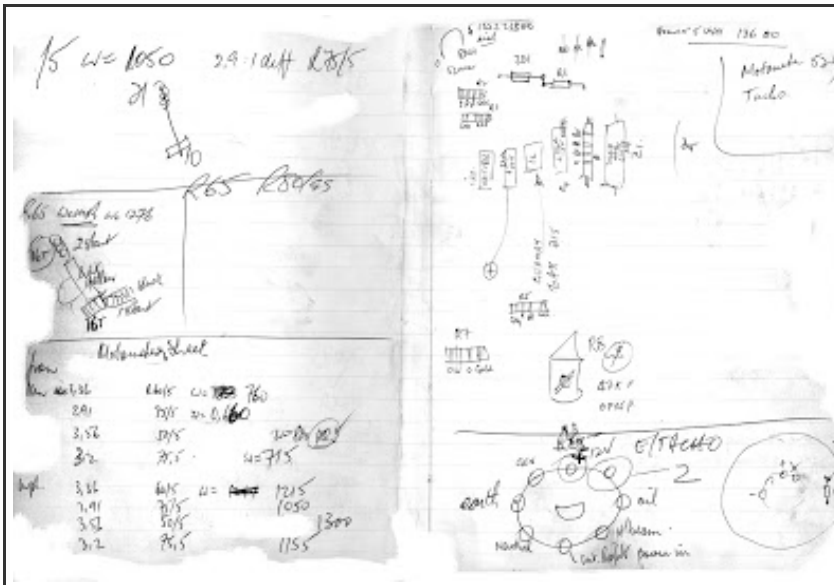
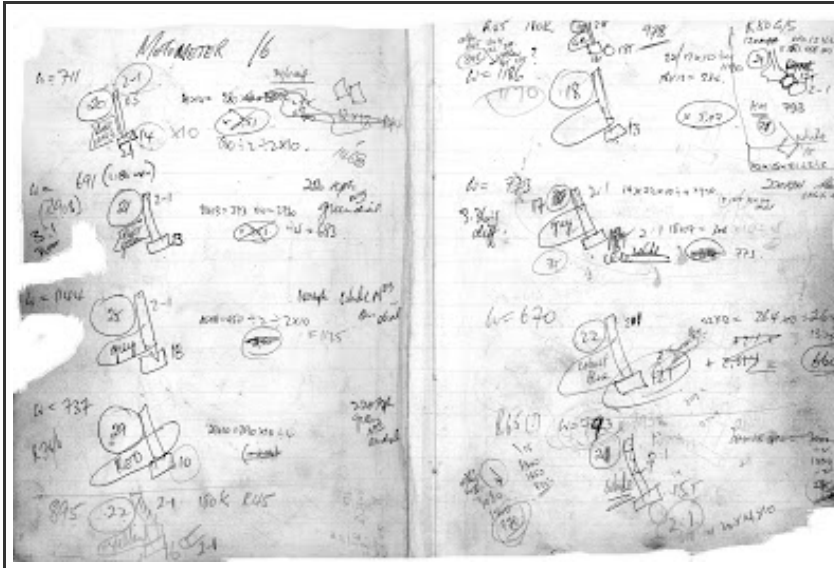
John Stanley's motorcycles

John de Kruij's Vintage Norton Motorcycles

Jorge Pullin's "My Royal Enfields"

So if you use a tester, the speed of the input cable is 773tpm inute to show 60kph on the dial face...

Below are some notes from my days in business and photos, used elsewhere in other Motometer posts by me, but relevant to these instruments...



Ken and Mollie Craven...well known for their Partitour years ago...

Paul d'Orleans Vintagent blog site

Pete Young and Occhiolungo

Sidecar Racing...it's never to late to have a happy childhood

Silverdragons..some Motorcycle sport in the UK

Speed Track Tales

Sydney Banjo Club

The Beezagent

The Bridge City Jazz Band

Worlds Fastest Velocette

BLOG ARCHIVE

► 2014 (12)

► 2013 (20)

▼ 2012 (37)

► December 2012 (3)

► November 2012 (2)

► October 2012 (2)

► September 2012 (3)

► August 2012 (3)

► July 2012 (4)

► June 2012 (2)

▼ May 2012 (4)

Harry Beanham...I've now done several posts on pho...

A miscellania of motorcycling photos from my archi...

Following earlier posts of Artur Fenzlau and his c...

BMW Motometer instruments...the R45, R80ST,R65 and...

► April 2012 (4)

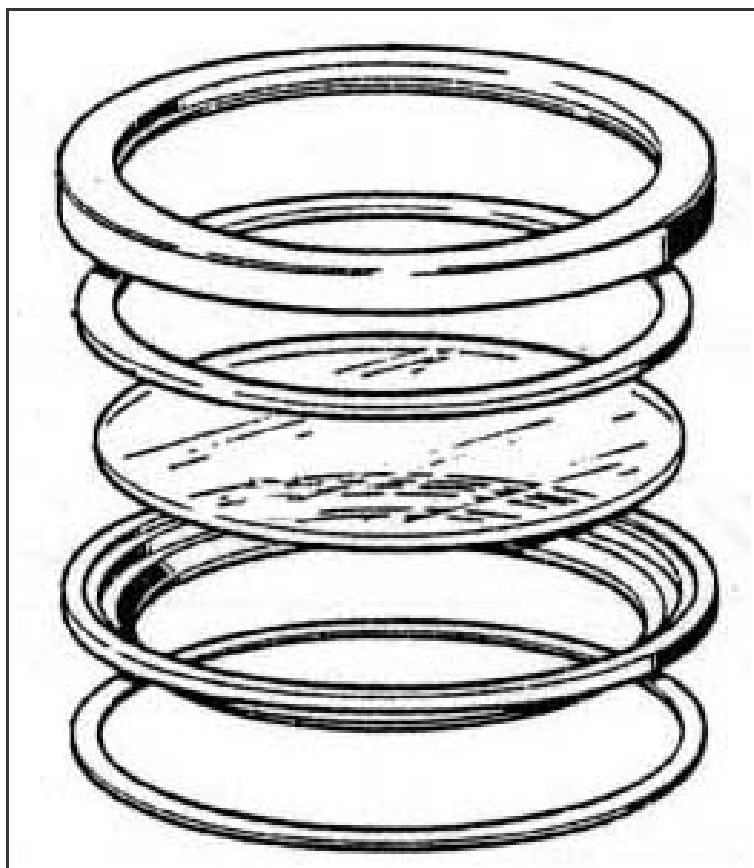
► March 2012 (3)

► February 2012 (4)

► January 2012 (3)

► 2011 (46)

► 2010 (63)



- ▶ 2009 (71)
- ▶ 2008 (111)

SUBJECT LISTINGS IN MY BLOG

- "Best" oil pumps (1)
- "Motor Cycling in NSW" (1)
- 149cc Velocette LE (2)
- 1914 Veloce; 1914 Veloce catalogue (1)
- 1930 motorcycle racing (1)
- 1938 ISDT (1)
- 1939; Omodei's accessories (1)
- 1976 Castrol 6 Hour race (1)
- 2003 Cape to Cape Velocette Rally (1)
- 2005 Australian Centenary Velocette Rally (2)
- 2009 Australian Velocette Rally (2)
- 2010 Australian Velocette Rally (3)
- 2011 Australian Velocette Rally (1)
- 2012 Back to Bundanoon Australian Velocette Owners Club Rally (2)
- 24 April 2011 (1)
- 74 and 75 IOM TT races (1)
- a visit to "Fellside Cottage2 (3)
- A.T. speedometers (1)
- A.T.instruments (1)
- A.T.tachometers (1)
- Allan Schafers correspondence and photos (9)
- Allen Burt photos (4)
- Alpha bearings-Velocette (1)
- Amal Carburettors (2)
- Ariel motorcycle info 1938 and 1939 (1)
- Army motorcycles (2)
- Artur Fenzlau-photographer (5)
- AUCTION (1)
- Aviation (1)
- Banjoes (2)
- Bathurst motorcycle races (1)
- bearing info etc (2)
- Benton & Stone Ltd (1)
- Bertie Goodman (2)
- blog problems (1)

*Motometer, mainshaft for BMW/6 and /7 with keyplates illustrated.
Wear occurs in the keyplate area and should be removed by
carefully pressing the magnet to close up the distance
to a small amount of freeplay.
You should make up support pieces to avoid pressure
on the magnet and cracking it.*



***Motometer BMW/6 tachometer mainshaft**
note no worm for the odometer drive.
The speedometer mainshaft is below and can
be used as a tachometer mainshaft.
Wear can occur in the small bush in the end
of the mainshaft and while difficult, can
be re-bushed. See a clock making supplier
for possible Bergeon bushes.*



*The two upper speedcup
bushes, threaded
4mm x 0.35mm
can wear and again
can be re-bushed.*

- BMW (3)
- BMW R69S (1)
- BMW R90S racing (2)
- Bonhams auction (1)
- Bonneville Record Breaking (1)
- Book Review (30)
- Book Review- Circus Life by Don Cox (2)
- Book Review- Clymer's reprint of UK 'Motorcycling' WD service sheets (1)
- Book Review- Ferodo Record Braking 1938 (1)
- Broadford 2014 (1)
- Brooklands in 1974 (1)
- BSA 1938 (1)
- Carl Drees (1)
- Cartoons (4)
- Castrol 6 hour (2)
- Castrol 6 Hour re-enactment (1)
- catalogue info (1)
- chain oilers (1)
- Christmas 2008 a photo montage.. (1)
- Christmas 2012 a photo montage.. (1)
- Circus Life by Don Cox (2)
- crankcase relief valve (1)
- Craven luggage equipment (1)
- Dan Smith (1)
- death of a motorcycling friend (1)
- DKW Racing Motorcycles (1)
- DQs early motorcycling (2)
- DQs early negatives (2)
- DQs miscellaneous small sized pic selection (1)
- DQs rider interviews- stars of the past (1)
- Drive gearboxes- tachometer type (1)
- dynamometers (2)
- Earls Court Motorcycle Show (1)
- Early Australian motorcycling (4)
- early motorcycling photos (2)
- EARLY SPEEDWAY BIKES (1)

Motometer BMW/6 and 7 mainshaft assembly, mainshaft and helical gears. The speedometer has right hand helical..RHH..gears, that is the angle of the gear goes up from left to right.

The mechanical tachometer on the BMW/6 uses LHH, left hand helical gears.

Note the light rust on the mainshaft.....a common problem which usually causes a screaming noise in operation.

Clean and lightly grease.



There should be a small amount of end play when assembled. Remove excess by pressing the brass collar.

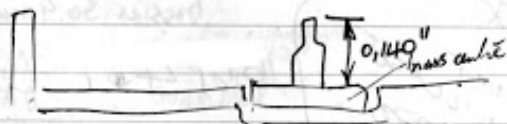
These helical gears wear check the sides are parallel with no wear.

Motometer speedcups....note broken pivot on RH one. A not uncommon problem.

These wear on their end against a keystone plate in the end of the mainshaft into which they pivot in a bush. The distance from the face of the brass bush in the speedcup to the end of the shaft is ideally about 0.140" but the range 0.125"-0.140" should be OK.



MOTOMETER SPEEDCUP



engine testing (1)

Enots (1)

Europe Velo Trip Sept.2013 (4)

factors catalogue (1)

Fagan Park (1)

Family (1)

Fuel taps (1)

Gert Boll (1)

go fast goodies (1)

Happy New Year for 2010 (1)

Harold Willis..Velocette engineer (2)

Heinz Limbers (1)

immed.post WW2; Omodei's accessories (1)

IOM 1975 (2)

Ivan Rhodes (4)

Ivan Rhodes home (3)

Jack Saunders (1)

Jim Day (1)

Jim Guthrie (1)

KDT Velocette (1)

Keith Bryen racing photographs (17)

Kesso's Velocette Auction (1)

KTT Mk.6 Velocette (1)

KTT Services. (1)

KTT Velocette (6)

Last for 2008 from The Velobanjogent (1)

Les Slaughter photos (1)

Lockheed Super Constellation (1)

M.I.R.A (1)

Magazine review-Export Trader (1)

Magnetos...Tim Thearle (1)

Manx Norton (1)

March 2013 (1)

MECHANICAL STROBOSCOPE (1)

miscellaneous racing photos (1)

ML magnetos and the 1929 IOM TT (1)

Model O (3)

Motometer (7)

Motorcycle (13)

Motorcycle advertising (1)

Motorcycle and Car accessory shops (3)





Recommend this on Google

LABELS: MOTOMETER

WEDNESDAY, AUGUST 24, 2011

K100..BMW Motometer instruments the German motorcycle industry goes electronic for its instruments....



With the introduction of the K series 4 cylinder 1000cc BMW motorcycle in 1983 came the first total use of electronic instruments for BMW motorcycles and it wasn't without its problems.

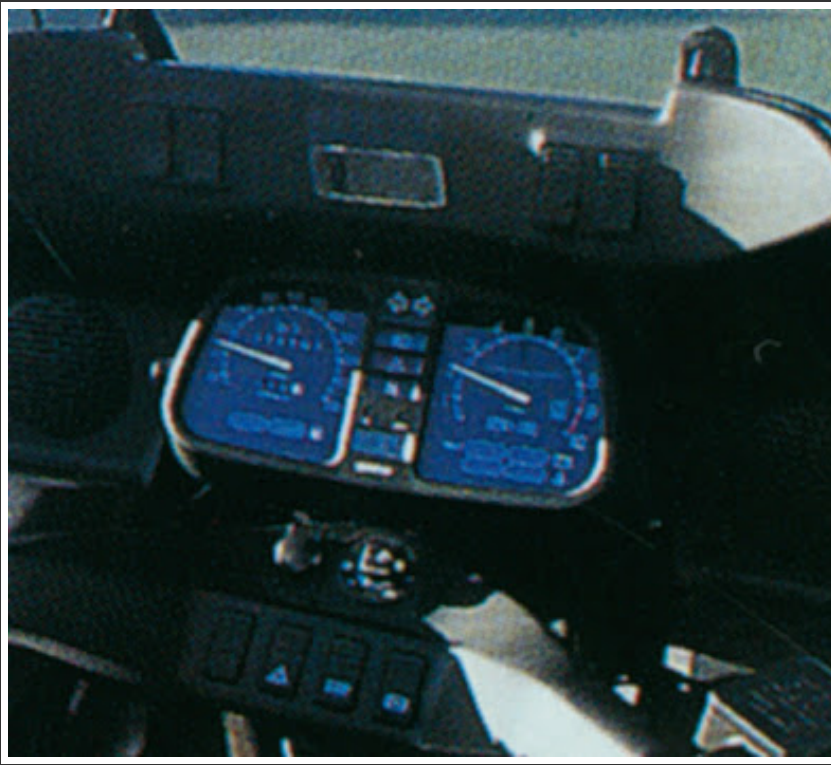
Motometer continued as the instrument supplier for the motorcycle side of BMW and a new large binnacle with speedometer on the left, tachometer on the right and a liquid crystal display quartz clock in the middle.

Left click on the illustrations to enlarge them....



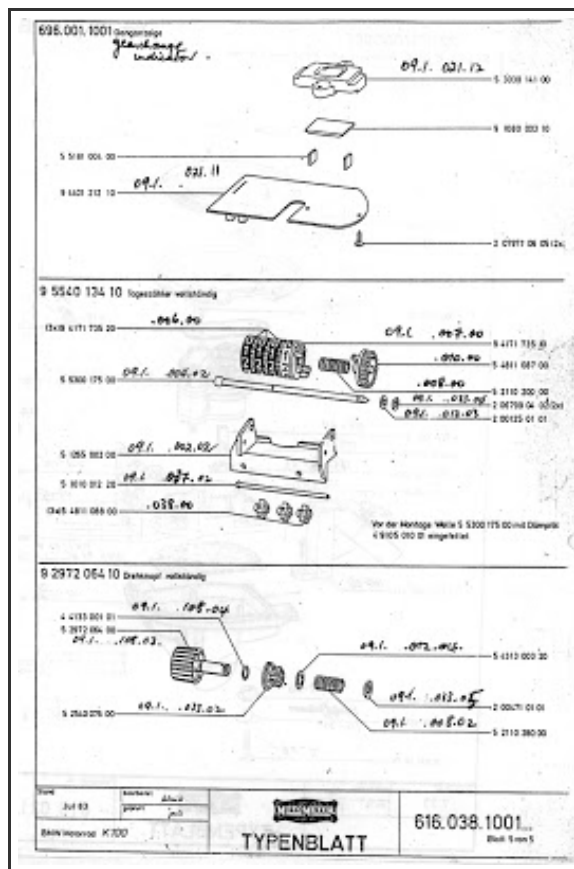
BMW K series....

- Motorcycle art (1)
- Motorcycle Auction (1)
- Motorcycle Engineering (3)
- Motorcycle instruments (2)
- Motorcycle pen and ink images (17)
- Motorcycle photograph (5)
- Motorcycle postage stamps (1)
- Motorcycle Record Breaking (2)
- Motorcycle related (5)
- Motorcycle saddles (1)
- motorcycle scrapbooks (1)
- Motorcycle specials (2)
- Motorcycle Threads (1)
- Motorcycle...IOM TT (4)
- My business (1)
- Norton (1)
- Norton pics.. (3)
- NSW Australia (1)
- NZ classic racing (1)
- Omodei data sheets (1)
- Omodei's accessories (1)
- Omodei's motorcycle accessories (3)
- Phil Irving literature (6)
- photo report (1)
- photographs from my archive (10)
- photos by DQ (3)
- pics from DQs personal negatives (5)
- prewar motorcycle race circuits (1)
- Pukekohe 2006 (1)
- Pukekohe 2010 (1)
- Pukekohe 2011 (2)
- Pukekohe 2012 part 1 (1)
- Pukekohe 2012 part 2 (1)
- Race circuits-Blackheath (1)
- Racing circuits-Catalina Park (1)
- Racing Motorcycles (20)
- Rennsport BMW (1)
- ROTOSCOPE (1)
- scanned (1)
- Smiths A.T. instruments (1)
- Smiths instrument drives (1)
- Sorbo's BMW (1)
- Speedometer (10)
- Stanley Woods (2)

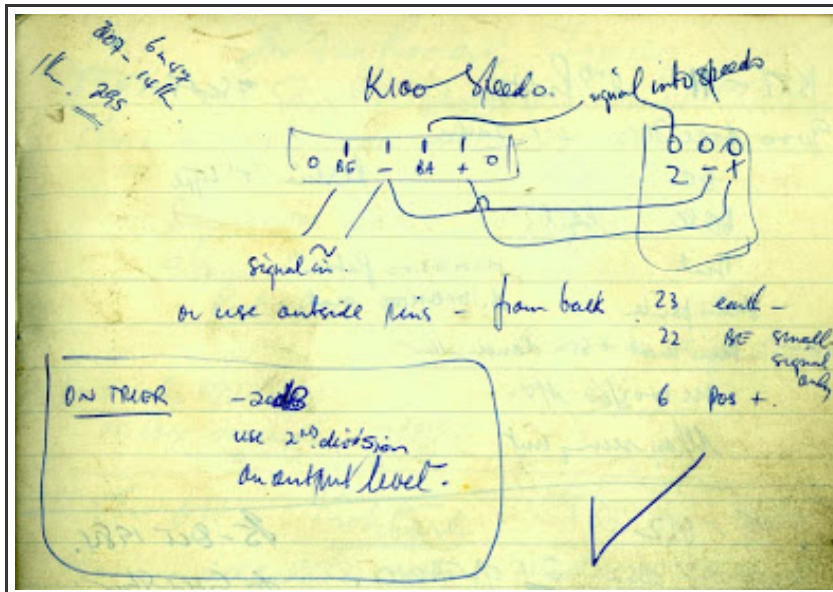


The instrument binnacle and the accessory instrument.

- Steib sidecars (1)
- STROBORAMA (1)
- STROBOSCOPE (1)
- Stuart Hooper (1)
- tachometer (1)
- tachometers (1)
- tank filler caps (1)
- The Castrol six hour race (3)
- The Continental Circus in the 1950s and 60s (1)
- tHE DEATH OF KEITH bRYEN (1)
- The Isle of Man Times...items from (2)
- The new Roarer (1)
- The Velocette factory from 1920's to Feb.1971 and liquidation.. (1)
- Travel (2)
- Unsuccessful 350 record attempt at Montlhéry 1963 (1)
- VDO motorcycle instrumets for BMW pre 1969 (1)
- Velo Show day (1)
- Velocette (5)
- Velocette 4 cylinder (1)
- Velocette Data sheets (6)
- Velocette engine (6)
- Velocette in Speedway (1)
- Velocette model O (3)
- Velocette motorcycle (9)
- Velocette MOV 250 (1)
- Velocette publicity photographs (4)
- Velocette racing motorcycle (6)
- Velocette racing photographs (12)
- Velocette rear suspension (1)
- Velocette VMT (2)
- Velocette- MOV/VMT (1)
- Velocettes at Broadford (1)
- Vincent speedometer information (1)
- vision (1)
- Visiting Velo friends in The Netherlands and Germany (1)
- VMT458 (1)
- Vulcan 1000cc V twin Velocette (2)
- Waycott 600 Velocette (1)
- Webb girder forks (1)



Gearchange indicator and trip odometer and reset detail....





Recommend this on Google

LABELS: MOTOMETER

SUNDAY, JULY 10, 2011

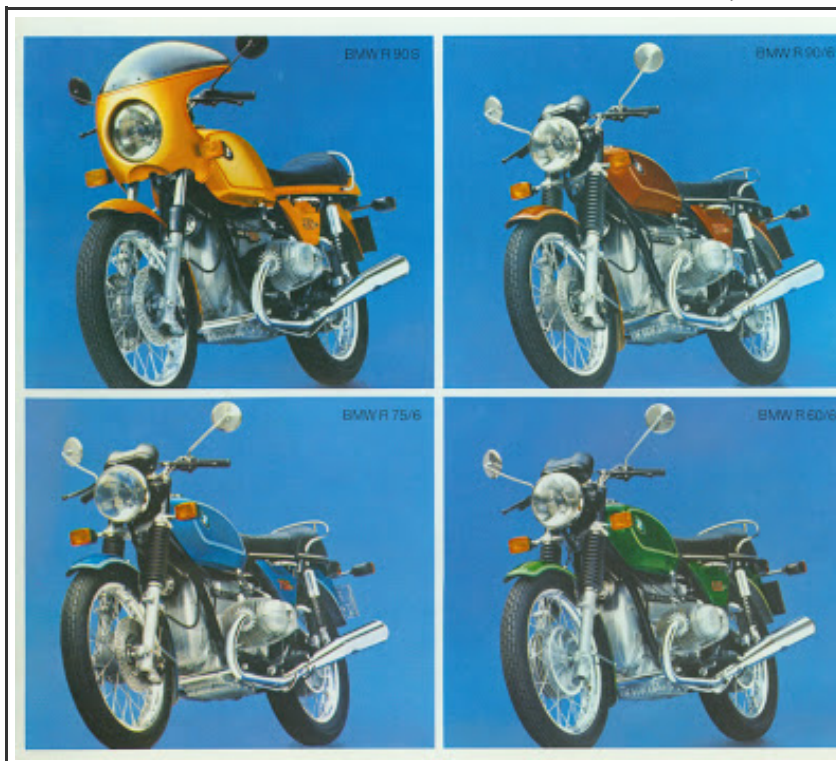
**We're back with Motometer
Instrumentation...information on the BMW
R60/6, R75/6, R90/6, R100, R80 motorcycles....**



I've done several posts in the past on Motometer instruments for BMW motorcycles and there are still one or two more to follow.

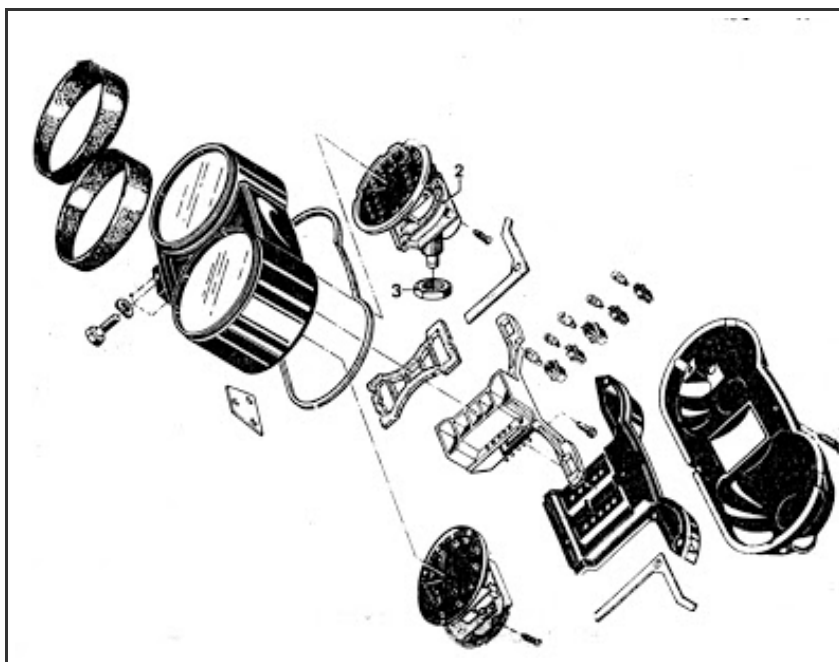
This covers the instruments introduced with the BMW/6 models in late 1973 for the 1974 season.

Initially the R60/6, R75/6, R90/6 it was followed by the R60/7, R75/7 then R80/7, R100/7 and with the introduction on the monoshock rear end the R80, R100.



Left click on the images to enlarge them.

These used the "twin instruments" in a common plastic binnacle with the speedometer on the LHS and tachometer on the RHS.



Initially the tachometer was a cable driven mechanical one of 2-1 ratio. The drive cable is one of the "captive" type favoured by the German speedo manufacturers where the inner cable is captive in the outer and so can't easily be removed to lubricate it. But you can do it and I will cover this in a later blog on speedometer and tachometer drive cables.

Whatever you do, DON'T oil any speedometer or tachometer inner cable..they must be greased. Oil will be transported up the spinning inner and into the mechanism of the instrument.

The mechanical tacho was used from 1974-1977.



Instruments from an R90/6 with additional voltmeter and clock.

Note the colour of the dial...black with white lettering.

The plastic cover is one of three different ones used.

They differed in the position of the warning lights between the speedo and the tacho.

The 1973-77 had the indicator lights at the bottom.

The 1978-81 had the brake warning light at the bottom.

The 1981 onwards had a blue light for the high beam indication at the bottom.

From 1978 an electronic tachometer replaced the mechanical one and this was when the dial faces changed.

While still a black background, the colour of the numbers/text changed from white to green.

As well the 52mm dia. clock that was available changed from an impulse type to a quartz type.

So the dial colour is a good dating mark.

The speedometers were 140mph for imperial areas such as the UK, USA and 220kph for all the metric areas.

There were some 85mph speedos made for the USA market during the Reagan era in an attempt to slow vehicles down.

The ratios for the speedometer which relates to the final drive used is marked on the dial as $w=xxxx$. For example with a 32:10 rear drive in a Km speedo it would be $w=0.737$ and $w=1.186$ for mph speedo.

What this means is that for the km. speedo, the inner cable rotates 737 times for one km. travelled.

So if the cable rotated at 737rpm, the speedo would show 1km/minute which is 60km./hour.



1981 onwards instrument cluster fitted to an R80 and has the additional small instruments.

From Mass Spectrometry

$\text{C}_2\text{H}_5\text{S}$	7.0
$\text{C}_2\text{H}_6\text{O}$	7.09
C_2H_4	7.2
$\text{C}_2\text{H}_2\text{O}$	7.46
$\text{C}_2\text{H}_2\text{S}$	7.61

(2.50)



***4

[illegible]

at Fy = Model 10.0000

6/1/72 - 4/1/72 (2 = 7.56)

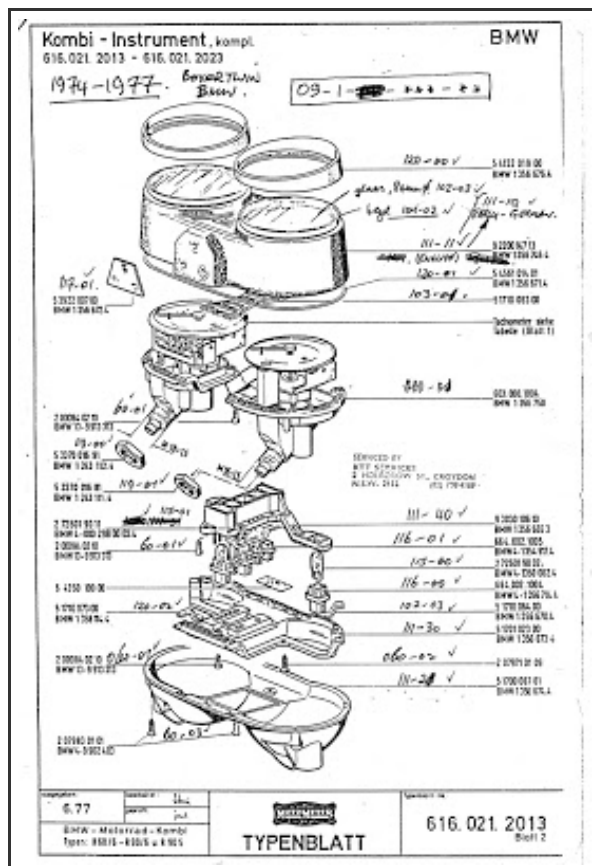
9/1/72 - 6/1/72

8/1/72 - 7/1/72 (6/1/72 for low camp needed)

12/1/72 - 11/1/72

12/1/72 - 11/1/72

12/1/72 - 11/1/72 (all 12/1/72)



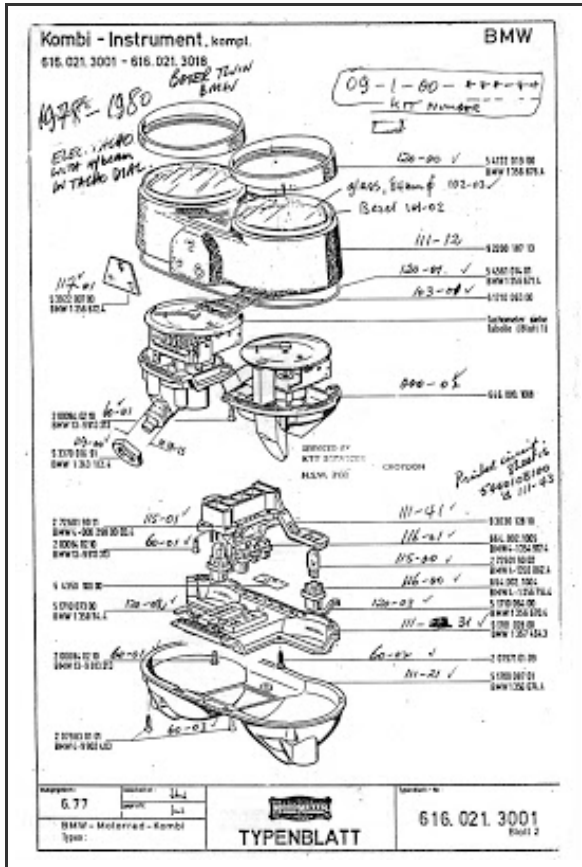
These nuts were designed to lock back down onto the

description: 6.77	location: 1/24 1/24
BMW - Motorrad - Kempten Types: R 1200 - R 1200 G & R 1200	

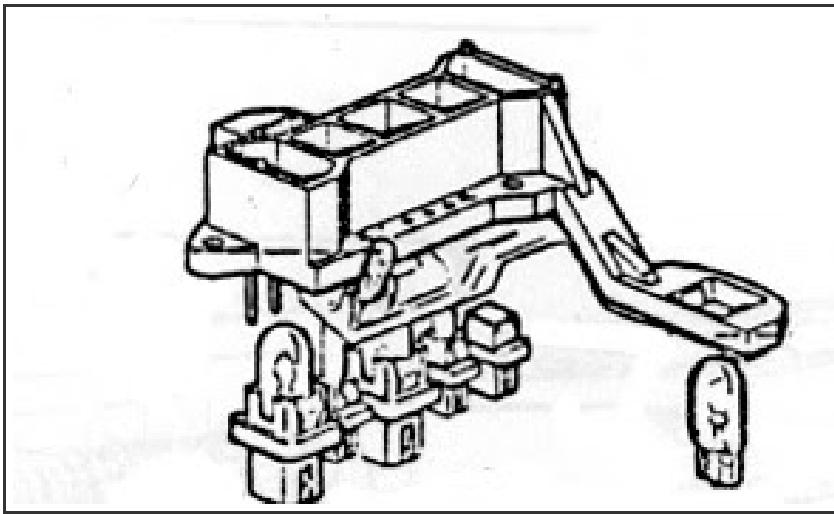
TYPENBLATT

616.021.2013
Bilfi 2

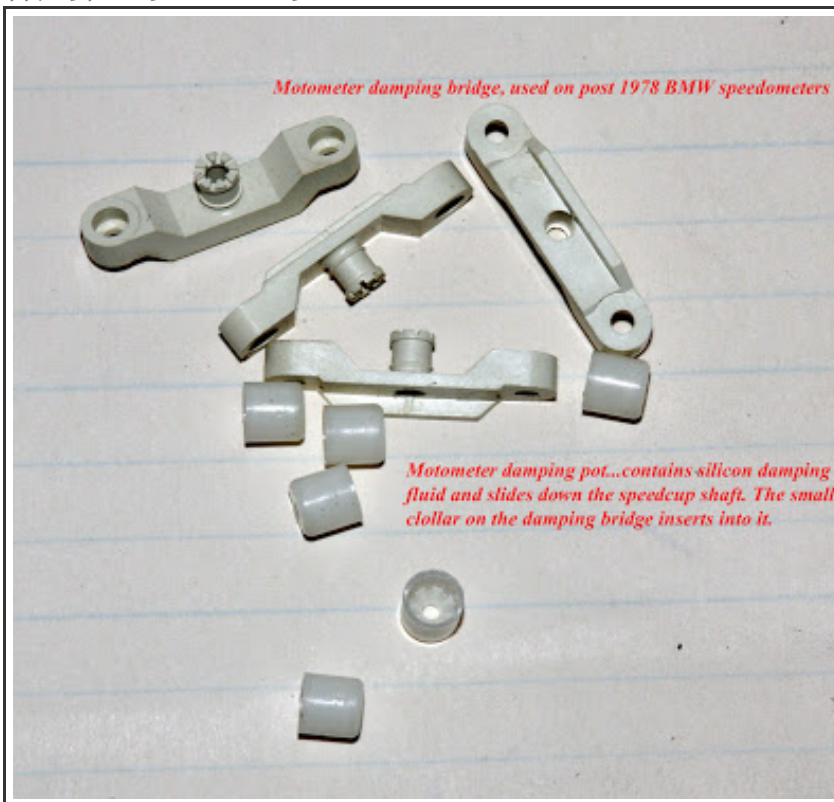
cable nut, presumably to stop the cable nut unscrewing. But in all my years in the instrument trade this was never a problem and in fact causes a problem with these Motometer instruments over time. It becomes difficult to undo them. So my advice is to remove them completely..they are unnecessary....



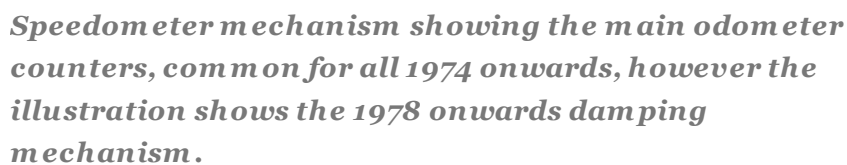
Exploded view of 1977-1981 instrument cluster. Despite the tachometer being now electronic, the high beam indicator is still in the lower part of the tachometer dial.

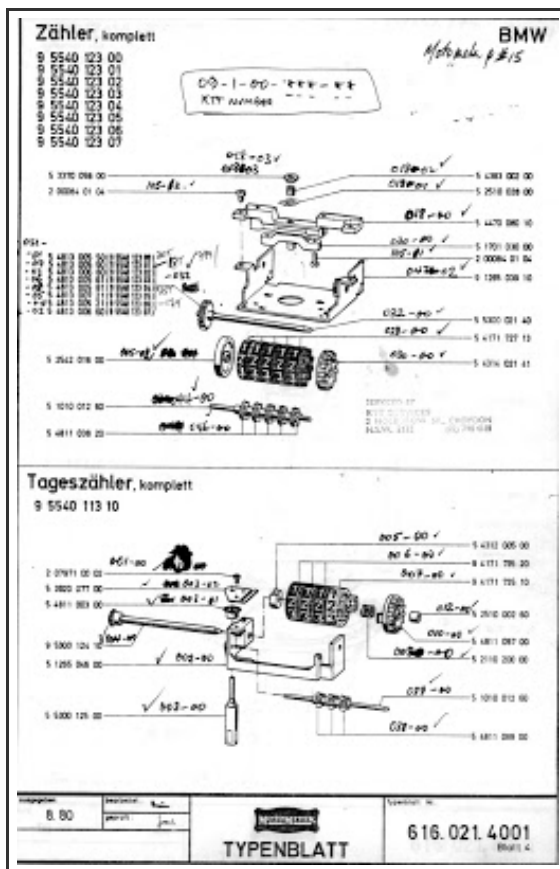


The inner globe holder assembly with a circuit board. There were three versions of this part covering 1974-1977, 1978-1981 and 1981 onwards.



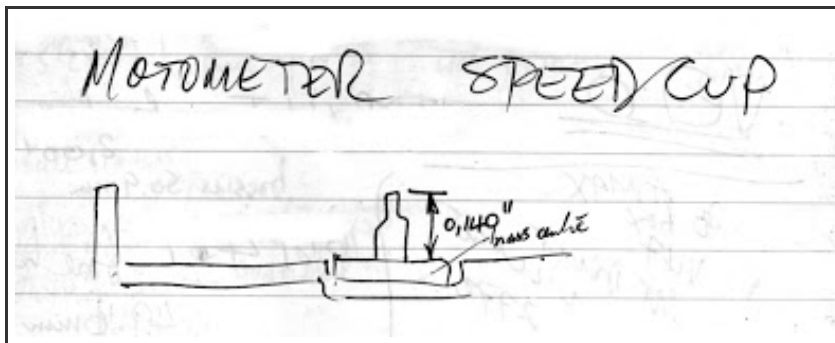
Damping details for the 1978 onwards speedometer. That is the speedo with the green numerals on a black background dial. The mechanical speedo and tacho of the 1974-1977 were not damped and often the pointers oscillate in an arc.





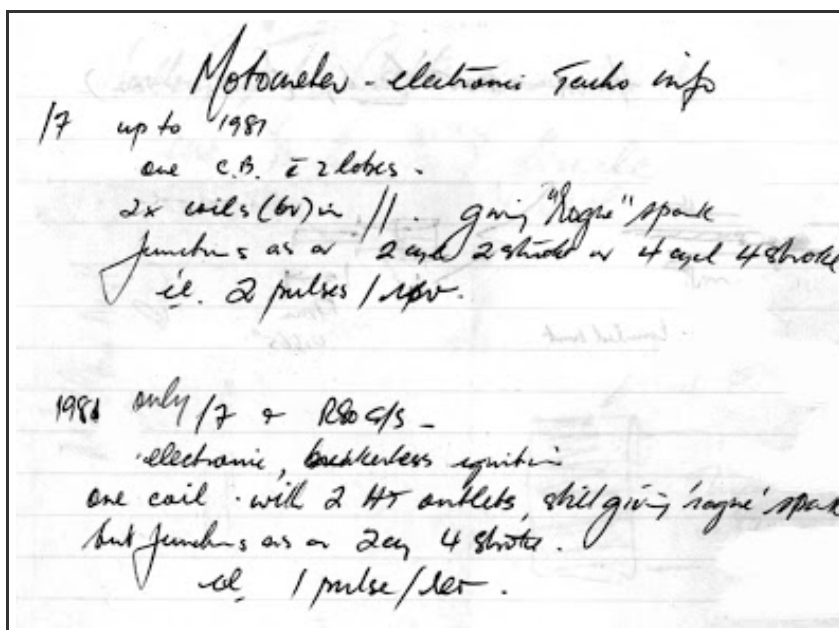
The odometer and trip odometer mechanism for 1974 onwards, but the damper mechanism as mentioned is for the 1978 onwards.

Both the 52mm dia. voltmeter and clocks are covered elsewhere.



Detail of the speedcup shaft bottom pivot length. This wears on the end stone in the bush at the top of the mainshaft and the inside of the aluminium speedcup "poles" on the magnet, eventually destroying it.

You can lightly stone the worn end of the shaft and then tap it though the brass piece in the speedcup to the correct setting...0.140" protruding.



From DQs notebooks...electronic tacho calibration information.

POSTED BY THE VELOBANJOENT AT 10:21 PM 4 COMMENTS: 

 Recommend this on Google

LABELS: MOTOMETER

WEDNESDAY, APRIL 20, 2011

BMW Motometer instruments the "twin instrument" used on BMW/5 motorcycles....1969-1973....



Following the radical change around 1969 by BMW with the introduction of the /5 series...R50/5, R60/5 and R75/5.



BMW introduced instruments made by another German instrument manufacturer...Motometer, rather than VDO who they had obtained speedometers from since the early 1950's.

These were a 100mm diameter "twin instrument", that is they had a speedometer in some 3/4 of the binnacle with a smaller tachometer in the lower half.



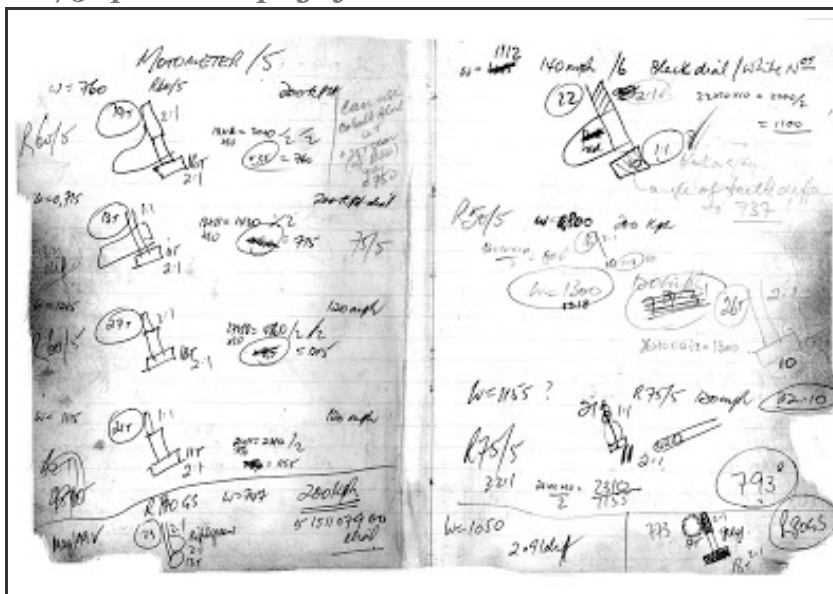
The speedometers were either 120mph non trip or 200kph non trip, using some four speedo ratios depending on the final drive in the motorcycle.

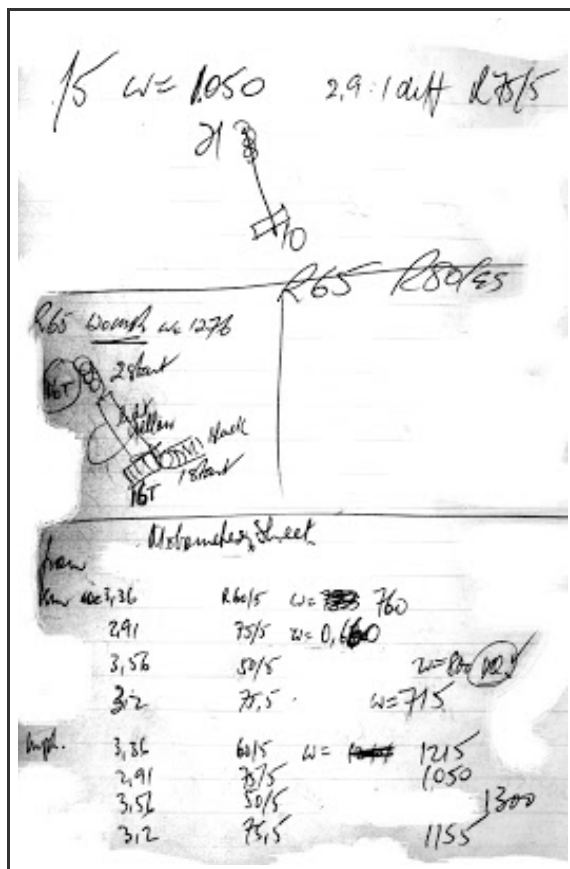
The R50/5 used a $w=800$ for the 200kph dial and $w=1300$ for the 120mph dial with 3.56:1 final drive.

The R60/5 used a $w=760$ for the 200kph dial and $w=1215$ for the 120mph dial with 3.36:1 final drive.

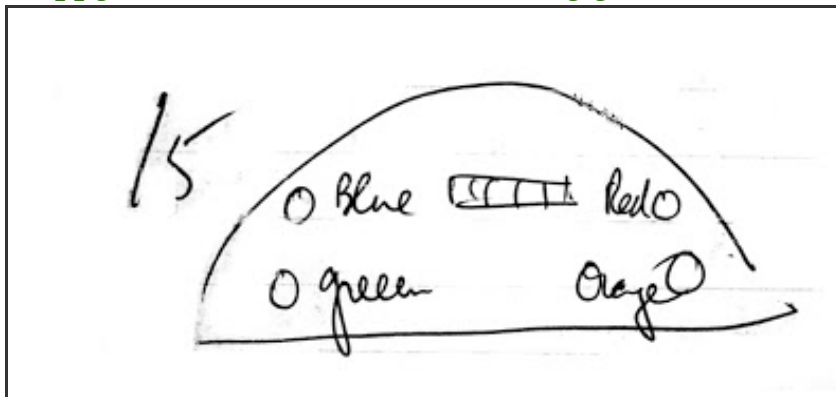
The R75/5 used a $w=660$ for the 200kph dial and $w=$

The R75/5 used a w=715 for the 200kph dial and w= 1155 for the 120mph dial with 3.20:1 final drive.





Odometer gearing data....ex DQ..sorry about the "scrappy notes"..these were done many years back.



Warning light display.

The tachometer was the same ratio for the R50/5, R60/5 and R75/5.... 2:1

All German vehicles seem to use what we call a "captive" drive cable, that is the inner cable is secured into the outer at the bottom of the cable by a washer that is staked over in four places under the bottom cable ferrule.

The difficulty with this is that you cannot lubricate the inner...so it has to run with only the meager lubricant supplied when the cable was assembled.

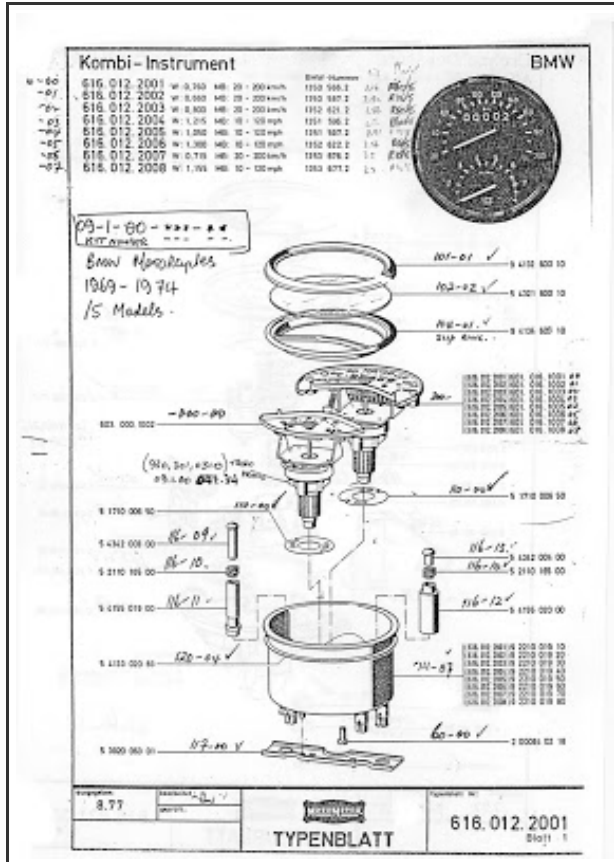
So I hear you say...

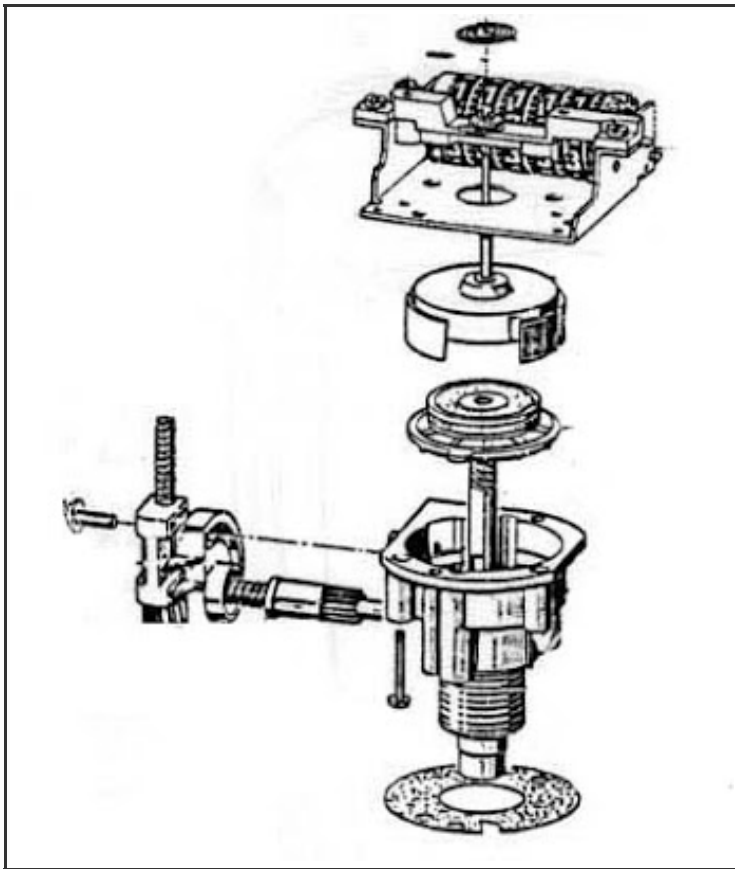
Consider the speedo, say the R60/5.....lets say it has 78000km on the speedo.

The the cable will have rotated 78000 x 760 (the

This equals 59,280,000 rotations..at varying rpm and with the scant lubrication I mentioned previously. This can go part of the way in explaining the pointer "dancing around" when the motorcycle speed is constant.

Left click on the images to enlarge...

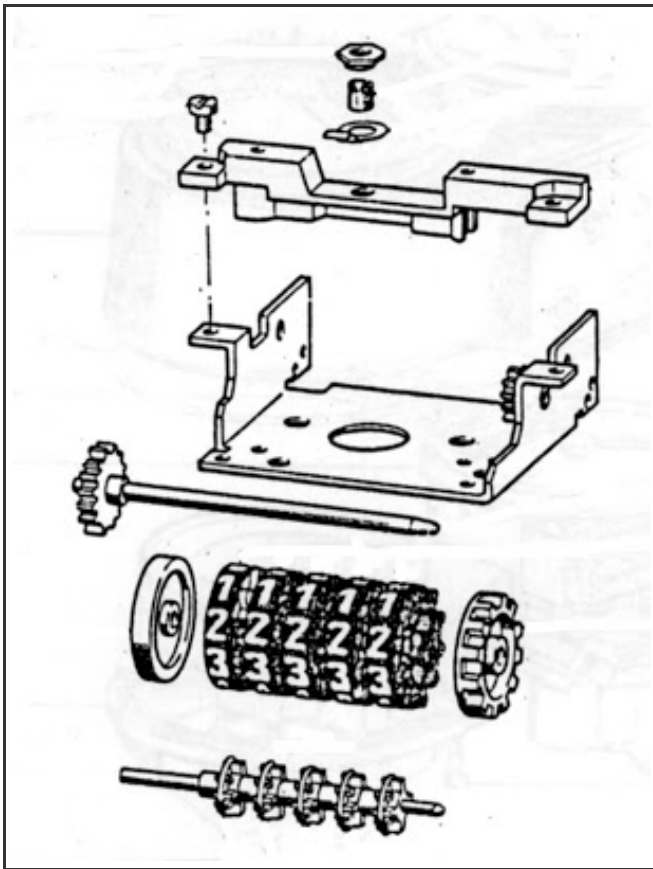




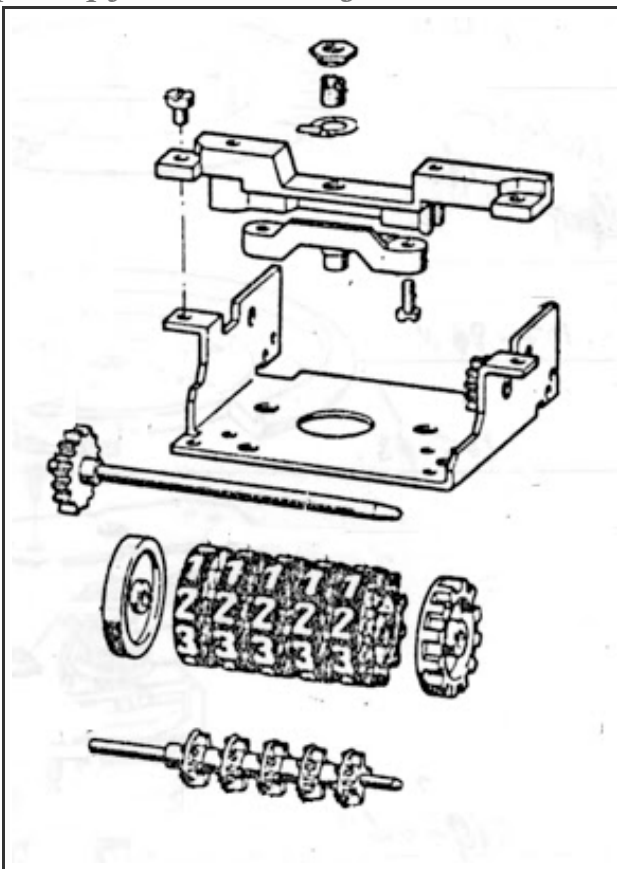
The speedcup mechanism used to indicate the speed was not damped on this instrument, for either the speedometer or tachometer.

This means any slight wear in the top or bottom bush that the speedcup shaft pivots in and or an inner speedo or tacho cable with a "set" in it will cause an unsteady pointer despite a constant road or engine speed.

So it is possible to fit the top frame and the damper pot from the BMW/7 series and use silicon damping fluid...the result is a steady pointer.....



Undamped top frame assembly.

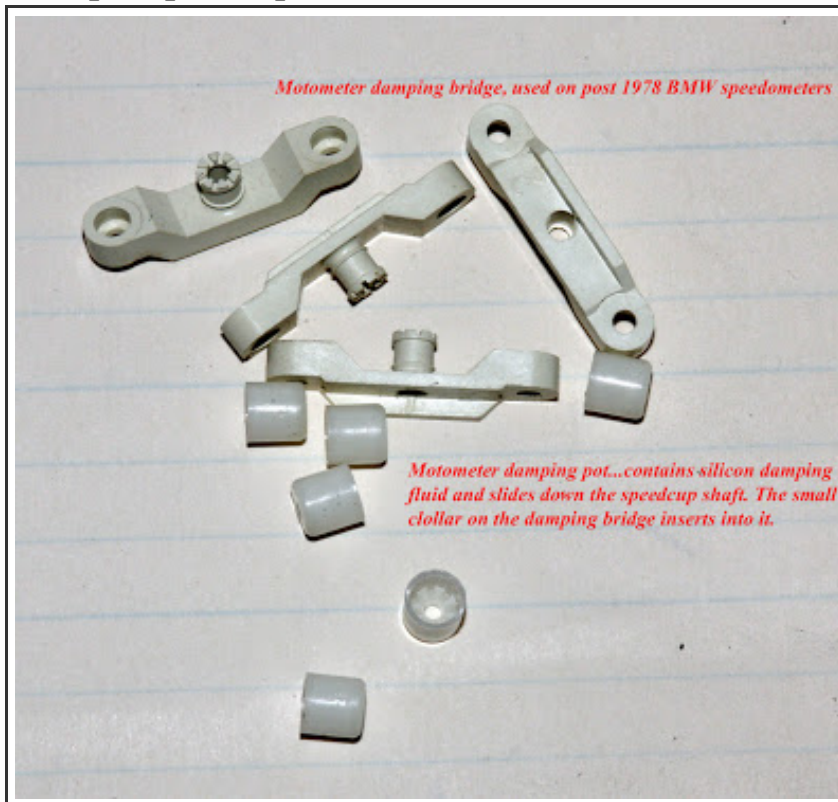


Damped top frame assembly...part of the damping mechanism can be seen rivetted to the top bridge piece. A plastic cup is slid down the speedcap shaft to the top of the speedcap bell and filled with silicon damping fluid. Part of the damping piece fits into the cup when assembled and the speedcap shaft has to rotate through this fluid to indicate the speed and this stops the pointer

oscillating.



Undamped speedcup assemblies.



Damping mechanism...the damper bar and the speedcup plastic cup.



The bezel rim on these instruments is a rolled on/crimped on chromed bezel.

Tricky to remove and replace.

My business, KTT Services made these and they are still available...best rolled on by an instrument repair firm,

but you can do it yourself if you make up the tooling.

Email me see address above.

Illustrated below is a removal method and re-rolling for a Smiths SSM speedo that uses the same principle of crimped on/rolled on bezel. If you've access to a lathe you can make suitable tooling.



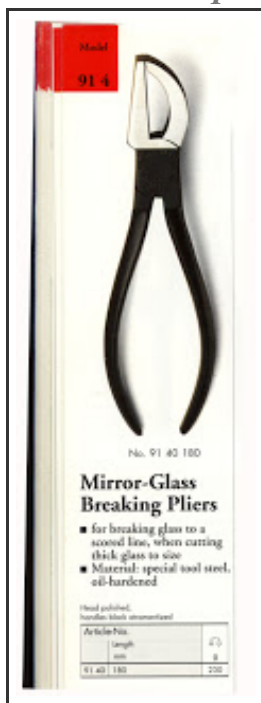
Careful use of a screwdriver going around the bezel several times with an oscillating movement will peel the rim back...my wife does the demo...



You can find a suitable pair of pliers and grind the end to allow you to also peel the rim edge back.



Plier end ground to a suitable shape.



Pliers I used...made by the German company Knipex, although they appear to be no longer available. However they are a glass/mirror breaking set of pliers and the end is suitable to grind to shape.

Friend, Gert Boll has brought to my attention that similar mirror breaking pliers are listed on the Knipex site....they may well be suitable for grinding to the shape needed in my illustration above....

<http://www.knipex.de/index.php?>

[id=1216&L=0&page=group_detail&parentID=1369&groupID=1417](http://www.knipex.de/index.php?id=1216&L=0&page=group_detail&parentID=1369&groupID=1417)

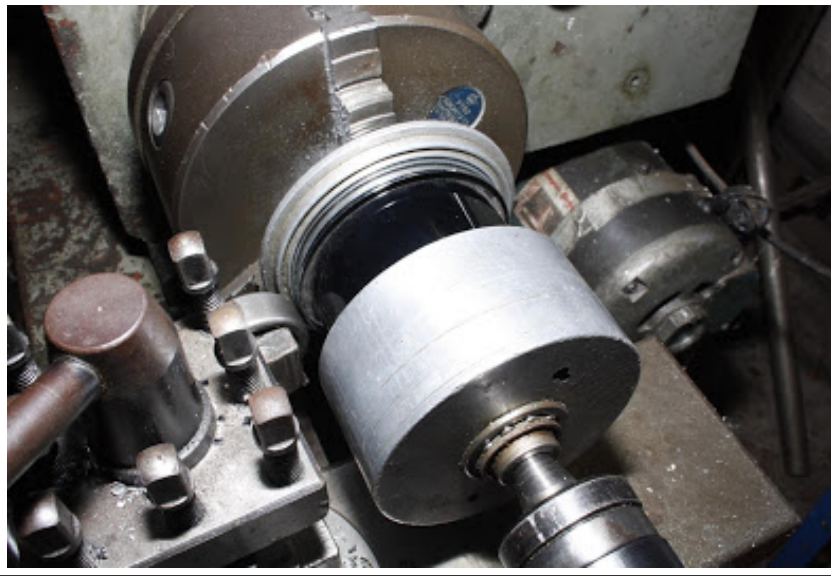


A Smiths bezel rolling on tool to illustrate a re rolling on operation...

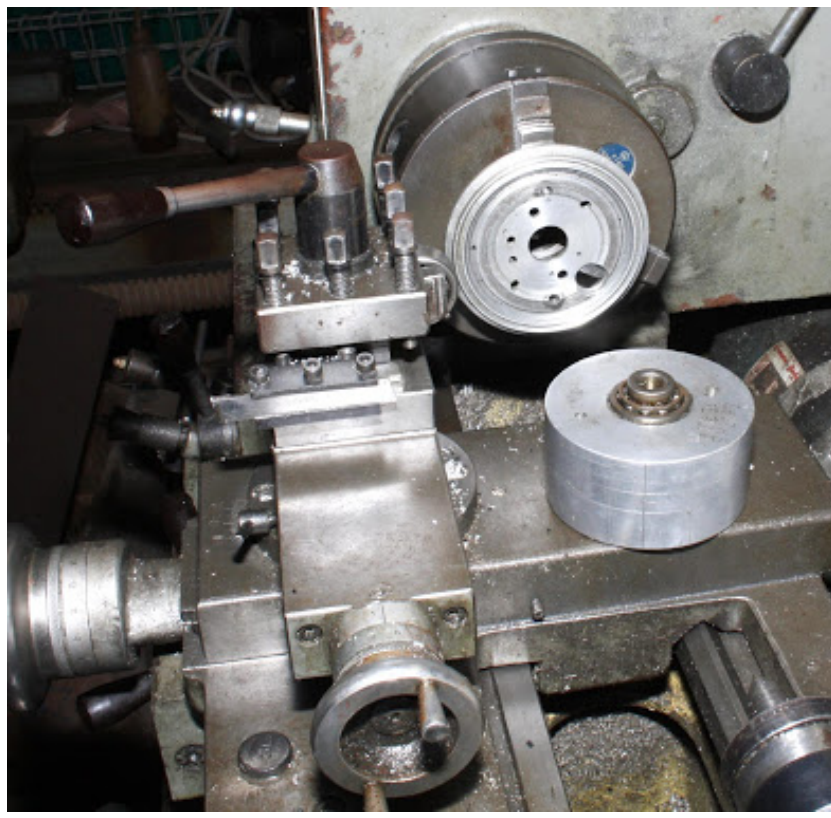


Tooling you can make...a ballrace attached to a bar to do the rolling on...an aluminium plate with a suitable "V" of the correct diameter to lock the assembly while the bezel is rolled over. The large block has holes drilled in it to fit over the back of the speedo and allow you to push against the seals/glass for a water-tight seal as you

roll over the rim.



Rolling the rim over ...you turn the lathe chuck by hand slowly to fold the rim edge over the 90 degrees necessary to seal the instrument.

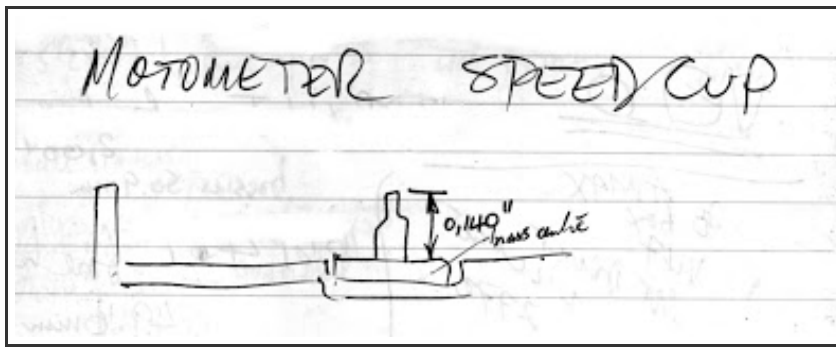


The tooling before use...

You can investigate more the SSM bezel replacement earlier in my blog...use the search facility on the RHS of the blog...type in SSM or bezel...

Or...go to...

<http://velobanjogent.blogspot.com/2010/05/continuation-with-smiths-ssm-and-rsm.html>



Detail of the speedcup shaft bottom pivot length. This wears on the end stone in the bush at the top of the mainshaft and the inside of the aluminium speedcup "poles" on the magnet, eventually destroying it. You can lightly stone the worn end of the shaft and then tap it through the brass piece in the speedcup to the correct setting...0.140" protruding.

POSTED BY THE VELOBANJOENT AT 12:19 AM 5 COMMENTS: 

 Recommend this on Google

LABELS: MOTOMETER

[Home](#)

[Older Posts](#)

Subscribe to: [Posts \(Atom\)](#)