



Gold Wing Maintenance Workshop

When: 0900 - ?? 14 Nov 2009

Where: Bob Fennel's garage: 17500
Madison Ave, Hamilton, VA 20158



Agenda (1 of 2)

- Presentation – 30 - 45 minutes
 - Intro
 - Why do your own maintenance?
 - Why do a “Maintenance Day” workshop?
 - Cost Savings Matrix
 - Zen and the Art of Motorcycle Maintenance
 - Maintenance Schedule (3 slides)
 - Tools
 - Procedures
 - Tips and Tricks
 - “Did you Know?”
 - Challenges/Mistakes/Gotchas
 - Questions/Comments



Agenda (2 of 3)

- Show and Tell
 - Quick briefing on Service Manual
 - quick look at Matt's Maint. Log
 - Review of special tools (such as fork oil level tool)
 - Torque Wrench Review
 - Workshop "inventory" – fluids, lubricants, etc



Agenda (3 of 3)

- Demo:
 - Removal of top shelter ('01 to '05 Wing) – Matt's bike
 - Removal of top shelter ('06 to '09 Wing) – Dave Sopsick's bike
 - Remove and replace Air Filter (Dave S bike)
 - Rear Differential Oil replace (Bob Sturm's bike)
 - Removal of Front Wheel (Matt's bike)
 - Brake Pad Inspection (Front and Rear) with discussion of brake pad change (Matt's bike)
 - Brake Fluid and Clutch Fluid bleed discussion (Matt's bike)
 - Removal of Rear Wheel (Matt's bike)
 - Cruise Control adjustment (Matt's bike)
 - Reverse Switch 'gotcha'
 - Other procedures as requested

Matt's 'workshop'



i.e. If I can do it here, you can certainly do it in a 'real' garage!





Intro

- Used bike, baseline maintenance
- Proper Hazmat handling/disposal
 - Advanced Auto will take used oil
 - Jiffy Lube will take used oil and used coolant
- Intervals based on “average” use. Shorter interval if dusty, wet, high throttle, etc.
- Order parts well in advance – have extras in your own ‘personal inventory’ to avoid frustration (fuses, bolts, pop-pins, disc rotor bolts, etc)



Why do your own Maintenance?

- Cost (cost matrix)
- You will do a better job
 - Who is gonna treat your bike better???
 - ‘Clean as you go’ (insides of panels, etc)
 - Torque values
- Sense of satisfaction/fun
- Know your bike – things you discover while doing maintenance

Why Do a Workshop?



- Share knowledge and experience
 - Understand what other Ch Y'ers have done so you can ask them about it
 - We've all done *something* to our bikes, but none of us have done *everything!*
 - Know what special tools (e.g. rotor deglazer, fork oil level tool, Mity Vac, Torque wrenches, etc) that others have that you could borrow
- Learn from the mistakes of others
- Reduce 'Turn your own wrench' apprehension (once you see it it's not so mysterious/hard)
- Touches all three aspects of GWRRA motto: Fun, Safety, Knowledge



Cost Savings

Loudoun Motorsports				
No parts, just labor				
Item	Cost		Total	notes
Brake Pads	\$ 79.00	per caliber	\$ 237.00	brake fluid replace comp'd
Clutch Fluid Replace	\$ 30.00		\$ 30.00	
Coolant Flush	\$ 68.00		\$ 68.00	
Rear Drive				comp'd with other items
Fork Oil Replace	\$ 296.00		\$ 296.00	
Air Filter	\$ 120.00		\$ 120.00	
Oil Change	\$ 50.00		\$ 50.00	
Spark Plugs	\$ 50.00		\$ 50.00	
		Total:	\$ 851.00	

Zen and the Art of Motorcycle Maintenance



- Be patient and take your time
- Never force anything-if it feels wrong it probably is
- Be organized – take notes, pictures, use labels/storage bin
- ‘Clean as you go’



Maintenance Schedule (1 of 3)

Goldwing Maintenance Intervals										
Legend:										
AR = As Required										
C = Clean										
I = Inspect and clean, adjust, lubricate, replace if necessary										
A = Adjust										
L = Lubricate										
R = Replace										
Item	Maintenance Code	Service Interval		Relevant Torque Values			Parts/Materials		Remarks/Notes	
		Date (mos)	Mileage	in-lbs	ft-lbs	N-M				
Crankcase Breather Tube	C	n/a	every 4K miles	n/a	n/a	n/a	none	none		
Brake Pads - Front	I	n/a	every 4K miles							Lube caliber pins Deglaze rotors
- brake caliber bolts						33				
Brake Pads - Rear	I	n/a	every 4K miles			33				Lube caliber pins Deglaze rotors
caliber mounting bolts						33				
rear wheel lug nuts						80				
brake pad pin						18				
Coolant	I and/or R		I every 8K R every 24K							



Maintenance Schedule (2 of 3)

Goldwing Maintenance Intervals									
Legend:									
AR = As Required									
C = Clean									
I = Inspect and clean, adjust, lubricate, replace if necessary									
A = Adjust									
L = Lubricate									
R = Replace									
Item	Maintenance Code	Service Interval		Relevant Torque Values			Parts/Materials	Remarks/Notes	
		Date (mos)	Mileage	in-lbs	ft-lbs	N-M			
Rear Drive Oil	I and/or R		I every 8K R every 24K				Hypoid SAE -80	only takes 4.1 oz	
- Rear Drive Drain Plug						15			
- Rear Drive Fill Plug						9			
SparkPlugs	R		every 16K			13		bike must be TOTALLY cold (allow to sit overnite)- aluminum head - very easy to damage/crosstread if bike is even at all warm. 1/2 turn past finger tight seating (if installing new plugs)	
Fork Oil Change	None specified - see remark							no service interval given. Recommendation: flush every 20K miles	
- upper fork bolt						17			
- lower fork (drain) bolts						14			

Tools (1 of 2)



- Zip ties
- Electrical connectors
- Mag finger/other mag tools
- Torque wrenches
 - Hi torque
 - Low torque



Tools (2 of 2)

- Fork Oil Level setting 'tool'
- Clear tubing
- Mity Vac
- Voltmeter
- Nice to have on hand
 - Extra pop pins
 - Aftermarket extended seat bolts
 - Extra grommets
 - Assorted fuses
 - Magnetic 'finger'
 - Magnetic tray/dish
 - Magnetic flexible rod



Procedures – what I've done (1 of 3)

- Top Shelter Removal
- Removed tow package hardware
- Air Filter change
- Fork Oil change
 - Remove front wheel
- Spark Plugs
- Clutch fluid flush/bleed
 - Greased clutch pivot pin and bearing
- Crankcase breather tube



Procedures – what I've done (2 of 3)

- Coolant Flush
- Rear Drive Fluid Change
- Oil Change
- Reverse Switch Check
- Brake Pads Front and Rear
 - Deglazed rotors
 - Greased pins
 - Greased brake lever pivot pin and bearing
- Brake Fluid Bleed



Procedures – what I've done (3 of 3)

- Installations/Additions:
 - Traxxion Suspension Upgrade
 - Zumo 550 Install with Kennedy Electronics “Cell Set”
 - CB Radio Install with Sierra Electronics Antenna
 - Kury Passenger Arm Rests
 - New Lower Cowl lights
 - Sync Zumo to bluetooth phone
 - Centramatic Wheel Balancers
 - Kury ISO grips
 - Various ‘Bling’ Items

Procedures – what I will do (this winter)



- Valve clearance check/adjust
- Wheel bearings
- Steering Head bearings/adjustment
- Cruise Control Adjust



Tips and Tricks

- Fred Harmon DVDs
- Painters Tape
- Removing backrest makes removing/re-installing seat much easier
- Portable DVD player
- Bag over clutch and brake
- Zip tying grommets

Tips and Tricks



- Poor man's jack
- Torques
 - N-m/ft-lbs/in-lbs
 - Be careful when determining correct torque (e.g. a brake caliper mounting bolt is NOT the same as a brake caliper assembly bolt)
- 'measure twice cut once'
- Tubing to fill Rear Drive
- Clean instrument cluster with plexus when you have the instrument panel cover off the bike (such as any time you need to remove the top shelter)





Did you know?

- Brake fluid is hydroscopic
- Changing spark plugs when the bike is not completely cool (i.e. has sat overnight), can damage your engine head? (by cross threading spark plug threads). GL1800 engine is aluminum.
- Performing your own maintenance does NOT void your warranty?



Challenges/Mistakes/Gotchas

- Zen and the Art of Motorcycle Maintenance
- Using torque wrenches at the limit of their scales – shearing a brake caliper bolt
- Lower fork bolts and impact air wrenches
- Brittle coolant reservoir tank hoses (use mity vac)?



Comments/Questions/Suggestions

- Hands On Portion
- Suggestions – how do we make the next “maintenance Day” and even greater success?



To Bring

- Harmon DVDs and DVD player
- Special tools – fork filler, tubes, etc
- Lubes, fluids
- Torque wrenches
- zip ties
- ‘traveling’ jack
- Rotor deglazer
- Drill
- Mity vac