



910 S 199<sup>th</sup> Ln  
 Buckeye, AZ 85326  
 386-299-6929

LightningMotorsportsAZ.com  
 lightningmotorsportsaz@gmail.com

**Customer: Will Cooper**

**Machine: 05 VT600 Deluxe**

Quantity	Description	Unit Price	Amount
1	Fork Oil Maxima 15w		
1	Fork Oil Seals		
1	Petcock		
1	Coolant		
3	Quart of 10w 40 Castrol Full Synthetic Motorcycle Oil		
1	Hi Flo 303 Oil Filter		
1	Shop Supplies - Crush washers, zip ties, carb cleaner, brake fl		
4	DPR9EA-9 NGK Spark Plugs		
1	All Balls 46-4022 Air Cut Off Valve Rebuild Kit		
1	Fuel Tank Cleaning Supplies		
1	Honda 16970-mz8-g23 Fuel Auto Valve		
1	Honda Choke Cable 16046-MZ8-H00		
1	4 Gallons of Gas		
1	POR 15 Tank Liner		
1	Fuel Tank Liner Prep Supplies		
		Sub Total	
		Tax	
	Labor/hr		
		Total Due	

\* Labor estimate includes engine oil and filter change, fork seal replacement and oil change, Initial Carb clean, clutch and throttle cables lubed and adjusted, rear brake adjusted (if necessary and I'm assuming shoes have plenty of life left in them), Air filter cleaned, Fuel tank cleaning, compression test, plugs replaced, front brakes bled, front brake caliper disassembled

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and cleaned, battery charged, install OEM choke cable, replace fuel auto valve, clean turn signal control contacts for improved function, remove and clean fuel tank to treat with POR 15 liner.

I will have to discuss tires with you. Do you want to just replace the rear? That can be from about \$100 to \$200 depending on what tire you want. I can get a matching set of Dunlop K404 for \$170 – that is what comes on the bike from the factory.

### **Initial Inspection:**

1. The oil doesn't look bad (visually), do you know the last time it was changed? Do you want me to change it? If yes, synthetic or non-synthetic?
2. Fork Seals are a definite. Fork Oil is a definite. Do you want me to replace the dust seals? They are cracked – but it is not necessary to replace them.
3. Front Brake Pads have plenty of meat on them. I plan to bleed the front brakes with fresh DOT 4 synthetic.
4. I plan to lube and adjust the cables. Clutch cable definitely needs to be lubed. I haven't looked at the throttle cable yet, but it's natural to lube it once you take it off the carb for carb service.
5. I haven't disassembled anything yet, but I'm thinking the fuel leak is coming from the petcock... I will have more info on this later.
6. I definitely recommend a carb cleaning – I'm almost certain this will be necessary for it to start/run correctly. A carb repair kit for this bike is \$36. I suggest getting one and replacing all of the gaskets considering that the bike is a 2005 and assuming that they have never been replaced.
7. I will let you know the battery condition when I pull it tomorrow and put it on the charger. If it requires replacement, it is a YTZ10S – unfortunately this is a \$110 battery through YUASA. I only recommend YUASA batteries – it's the only battery that I haven't had issues with.
8. The rear tire needs to be replaced – I would not ride this bike to PRESCOTT with the current rear tire. It has multiple signs of dry rot and cracking. The price of the rear can range from \$100 to \$200 depending on what you want.
9. The front tire is not original – someone replaced it with a Shinko. This is odd to me that someone replaced the front tire on a bike that only had 6k miles. Not sure if the last person that worked on this bike recommended it to the previous owner a bit early to increase the bill or what... but based on the tread remaining on the rear tire, I can't imagine that the bike needed a new front tire – UNLESS the front tire was pierced, punctured, damaged, etc.
10. The fuel tank is going to be an expense. There are significant signs of rust in the fuel tank. Unfortunately, I recommend all work be performed with this fuel tank – acid wash and re-lining. Please see attached pictures. If we don't fix the tank properly – you will

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continue to have fuel system issues and me rebuilding the carburetor will be a waste. As soon as debris clogs the jet(s) in the carb, it has to be removed and cleaned again.

11. I will replace the fuel line and add an in-line fuel filter.
12. The chain shows signs of wear. I haven't checked the stretch tolerance – but there are some signs of aging and rust on it. I will give you more info after I get the bike running and lube/adjust/clean the chain. However, if you are going to be going to Prescott on it, I recommend replacement.
13. I haven't pulled the air filter yet – but based on only having 6k miles, it should just take a compressed air blowout and it should be good to go.
14. I will pull the spark plugs and sent you a picture. If you would like me to replace them, they should be about \$4 each x2.
15. I will send you the compression test results – should have about 170-180 psi. Anything greater than that value is good. If the compression check is good to go, I don't plan on checking the valve clearances. A bike with 6k miles should not need a valve clearance adjustment as long as all other signs are positive.

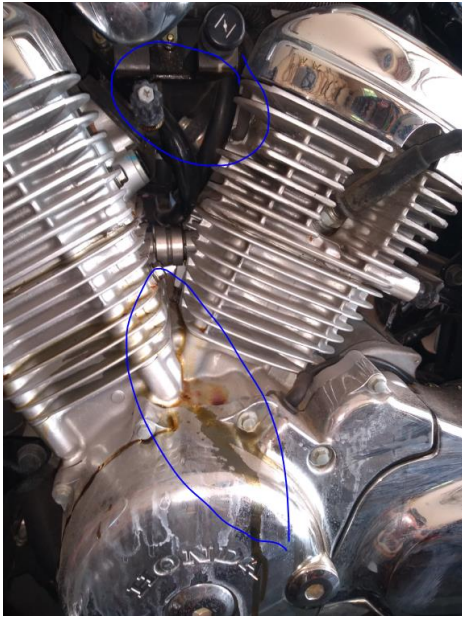


Forks show signs of leakage and oil residue on speedo



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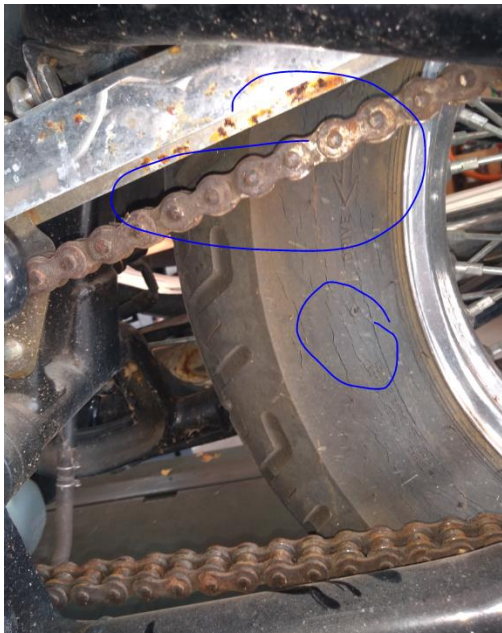
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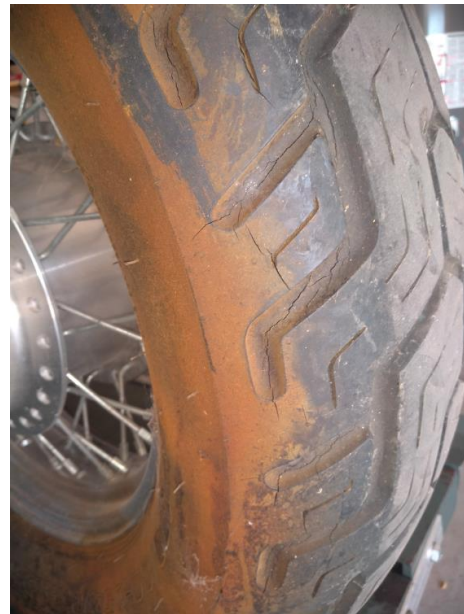
The bike is leaking fuel



Fuel auto valve suspect



Chain shows signs of rust



Rear tire is dry rotted

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Fuel Tank is rusted



Requires acid wash and re-lining

## Update:

- The carburetor has been cleaned. Every jet was clogged and the needle had debris on it. However, all else seems ok after the cleaning. The only thing i have to check after assembly is the accelerator pump. I cleared the passages and it all seemed OK. I don't think we're going to need to spend the \$37 on a carburetor rebuild kit.
- The battery appears to be taking a charge. It was at 12.1 volts when i put it on the charger... a good battery should have 12.6. The charger is reading 13.x right now... so we may be OK on saving the \$110 on a new battery.
- The gas that came out of that tank was not good/very bad. There were significant pieces of rust flake that i got out/off throughout the acid wash. The inside of the tank is now in significantly better condition and i'm soaking it in a solution overnight to draw out any remaining rust.
- I blew the air filter out – I do not think it is necessary to spend the \$ on a new one. I will re-install existing filter.
- The fuel lines were clogged. I thought we were going to have to order a new petcock - it was very plugged up... to the point where i wasn't sure if i was going to be able to unplug it. It is now passing air/carb cleaner freely. I think this contributed to the fuel leak that was evident.
- I recommend a coolant flush/change. I saw the coolant that came out when i pulled the carb and it was a bit "milky" for lack of a better term.
- The turn signal control is a bit sticky when you push the button in to cancel the indicators. I can open the control and sand/clean the contacts if you would like me to. Please let me know.
- Rear cylinder pushed ~200 PSI of compression. The Battery died before I could test the front cylinder for compression. I performed a leak down test on the front cylinder and I showed excellent results at 5% loss.

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- All 4 spark plugs show heavy signs of carbon (rich and/or flooded at some point). I will change all 4 plugs and replace with new ones. I will install DPR9EA-9 – this is the recommended plug for extended high speed riding which you will be doing if you ride the bike to Prescott.



Condition of Air Filter



Rear cylinder Compression Test Results



Cylinder Head – No Issues



Tank – Acid Wash

## Update

- The fork oil seal replacement is complete. The right fork had significant signs of gunk around the oil seal. The bushings need to be replaced at the next fork service. The dust seals have been greased but should also be replaced at the next service. 449cc 15w maxima fork fluid in each fork.

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- I recommend taking off the front brake caliper and cleaning it. There are signs of oil residue all over the caliper from the leaking fork seals. I have wiped off what I can without disassembling the caliper. However, there are signs of oil/gunk on the pads because it shows up on the rotor when the wheel is spun.

### **Follow-up**

- I am just waiting on the petcock to arrive (it is scheduled to be delivered THURS). As soon as it arrives, I will put the tank back on the bike, fill it with gas, and start the bike. I expect everything to run smoothly – will follow up with you thurs/fri.



Fork bushings should be replaced



Right fork tube required extensive cleaning

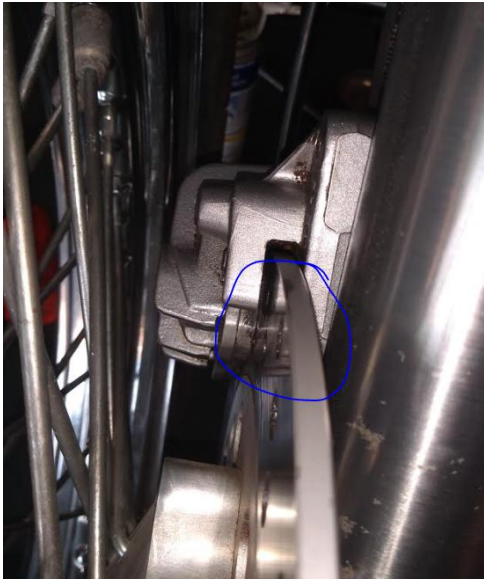
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Oil Seals have been replaced



Ft Brake caliper should be disassembled and cleaned due to leaking fork oil



Before Cleaning

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## Update

- The front brake system has been bled with synthetic DOT 4, all existing brake fluid was drained. I removed, disassembled, and cleaned the front brake caliper at no additional cost – the bike would not have been safe to ride with the front brakes covered in oil.
- The tank has been cleaned and all heavy rust removed. There is evidence of “flash rust” and as a reminder, a liner was not applied to the inside of this tank. If you are going to be riding this bike anywhere but locally, I highly recommend applying a tank liner/sealant.
- The replacement petcock arrived today. I soaked it in cleaner and installed it. Works fine.. \$16 instead of \$45.
- I did not replace the main fuel line. I cleaned it out and re-used it.
- New Oil Filter and Synthetic Oil Change
- The bike starts and the engine runs without issue. The following repairs/replacements are still needed:
  - Rear Tire
  - Chain
  - Fuel Leak from Fuel Auto Valve – this needs to be fixed before riding the bike around, it’s a significant leak
    - There is no rebuild kit for this unfortunately and it is a common issue on these shadows
    - <https://www.hondashadow.net/forum/72-technical-discussion/71024-fuel-auto-valve.html>
    - Option #1: By pass the valve and run a fuel line from the tank directly to the carb – this will put more wear on your float needle and seat
    - Option #2: Replace the valve – the part is \$120
  - Air Cut off Valve requires rebuild
    - The bike requires a small amount of choke to remaining idling and backfires on sharp deceleration. The rebuild kit is \$18.

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## Front Brake Caliper



**Before**



**After**

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