## **Scooter Service Bulletin - Baron 250-PM**

Page 1 of 3

SSB-BA250PM-01222007 REV1.0

## Coolant Types

Use a silicant-free coolant designed for engines with an aluminum block. Several manufacturers make this type of coolant. I currently use Honda HP 50/50 coolant with excellent results.



### Topic: Coolant Change.

**Applies to**: Baron 250-PM and similar "touring" type scooters using the CFMoto 172MM/250cc engine. May also applies to the Baron VIP Fashion and the V3 and V5 automatic motorcycles.

Keywords: coolant, cooling system.

Service Description: Drain old coolant and replace with fresh.

**Recommended Service Interval**: Every two years or more often if desired.

**CAUTION**: The engine and cooling system must be cool. **Never** remove the cap from a hot radiator without proper protection.

**Items Needed**: 2 quarts of Silicate-free coolant approved for aluminum block engines or aluminum motorcycle engines. You will not need all of it but will need more than one quart. A 50/50 premix is most convenient otherwise follow the manufacturer's instructions.

**Tools Needed**: 8mm or 5/16" socket wrench or box/open end wrench. Container to catch coolant as it drains. Rubber gloves are advisable when handling engine coolant.

#### Level of Difficulty: Easy

**CAUTION**: Do NOT assume that if the reserve bottle is at its proper level that the coolant in the system is at the proper level. Always check both the reserve bottle AND the radiator.

**CAUTION**: Engine coolant is poisonous. Coolant has a sweet smell and taste. Do not dump it on the ground or leave open containers where children or animals may get into it. Return it to the empty coolant bottles and dispose of it at a recycling location. Clean up spills in the work area. Do not ingest coolant. If you get coolant on your hands, wash them immediately.

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# **Scooter Service Bulletin - Baron 250-PM**

Page 2 of 3

SSB-BA250PM-01222007 REV1.0



3. Remove radiator cap



5. Coolant drain bolt



Drain coolant into pan

### Procedure:

- 1. Place the scooter on the center stand.
- 2. Remove the maintenance cover under the seat.
- 3. Remove the radiator cap. Engine should be cool.
- 4. Place a drain pan under the water pump.
- 5. Remove the drain bolt and drain the old coolant into the drain pan. Set the drain pan aside--you will later pour the spent coolant into the empty bottle(s) from the new coolant. Replace the drain bolt.
- 6. Slowly fill the radiator with new coolant until it is full almost to the top of the filler neck. A funnel is handy but can block your view of the filler neck. Fill slowly and check the level often.
- 7. Bleed air from the cooling system. With the radiator cap off, start the engine and run it for a few minutes. The coolant level will usually drop as coolant is drawn into the engine.
- 8. Stop the engine and add more coolant to bring it back up to just below the top of the filler neck. Run the engine again. When you see no air bubbles visible in the coolant at the filler neck, turn the engine off and replace the radiator cap. Be sure the cap is tight. The system is meant to be pressurized when in use. Replace the maintenance cover.
- 9. Remove the service panel to gain access to the overflow bottle, top the bottle up to the top line with coolant. Replace the cap on the overflow bottle and replace the service panel.

**NOTE**: Check the coolant level in the filler neck before and after your next ride. Also check for coolant under the scooter (other than spillage from the coolant service procedure) that may indicate a leak.

## Comments about my first coolant change on Baron 250PM

My 250PM had always registered very high on the temp gauge. When I performed a coolant change at 5,900 kilometers (indicated), I noticed several things.

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**Scooter Service Bulletin - Baron 250-PM** 

Page 3 of 3

The amount of old coolant that drained from the system was 26 ounces. When I refilled the system, it took 40 ounces of new coolant. I had never really removed the radiator cap to check the coolant level but rather assumed that keeping the reserve bottle at the proper level meant that the system was adequately filled just as with my truck.

I have since learned that there are two types of cooling systems. One type does indeed operate just like the one in my truck. You always top up coolant through the reserve bottle and not through the radiator cap. In the other type, the reserve bottle is used to accommodate the additional volume of coolant as it heats and expands. It draws the coolant back into the system as it cools and contracts. The 250PM uses this type of cooling system. Therefore, your system can be low on coolant and the reserve bottle can still read between the high and low marks on the side of the bottle.

With the proper level of coolant in both the radiator and the reserve bottle, my engine temperature gauge now reads normal or just a bit above no matter how hard or fast I ride. Riding this Summer in warmer temperatures should indicate whether this has truly been a major cause of apparent overheating.

So, along with the other safety checks you perform on a regular basis, check the level of coolant in BOTH the reserve bottle AND the radiator filler neck.

Additionally, I would recommend doing your first coolant change as soon as convenient after receiving your 250PM. We cannot be sure of the quality of lubricants and coolant in our scooters unless we do it ourselves.

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