

Category

Equipment

Question

My methanol pumps into the premix tank with no resistance and drains immediately.

Answer

Your methanol spray nozzle inside your premix lid assembly may be loose or missing altogether. Call the factory for a FREE spray nozzle. It's simple to install.

Category

Equipment

Question

How can I make priming the system easier?

Answer

Raising the oil supply barrel on a small (eg-water heater) platform will make it easier to prime the system. The oil draw tube will stay primed after the first system prime so long as you don't drain the oil barrel dry.

Category

Equipment

Question

What can I do if the plastic fittings on my mist wash ring start to deteriorate?

Answer

Contact us for a FREE replacement. You may have an older design.

Category

Equipment

Question

The blue system pump is sucking bubbles from somewhere.

Answer

Check the gasket under the hex screwhead on the pump. If it had deteriorated, use a liberal amount of teflon tape on the screw threads and request a FREE replacement pump gasket kit.

Category

Equipment

Question

My new green pump doesn't prime. What can I do?

Answer

Squirt a few ounces of methanol into the output of the pump and crank (be sure to wear your goggles)

Category	Equipment
Question	I have a yellow pump that keeps leaking despite my efforts to lubricate the seals.
Answer	Call the factory and request one of the newer (green) pumps as a replacement

Category	Equipment
Question	My blue system pump refuses to prime
Answer	Check that the hexagonal screw on the lower-left facing side is snug (not too tight) and that all hose clamps are tight.

Category	Equipment
Question	My methanol pump is leaking at the shaft.
Answer	Methanol will dry your pump seal. Just spray a little vegetable cooking spray where the shaft meets the body of the pump to keep the gasket lubricated.

Category	Equipment
Question	My pump hums but does not spin
Answer	UNPLUG THE PUMP. The pump is jammed. Remove the cap, spin the fan and replace the cap. If the fan still won't spin, the pump is still jammed. Try removing the 3 screws on the pump itself and rotating the blades by hand to free it.

Category	Equipment
Question	What can I do to clean the tank walls of sticky soaps?
Answer	After draining the reaction tank thoroughly, you can wipe down or scrape the inside walls of the tank to remove the sticky soaps. Then wash down with water, let drain and dry thoroughly. Don't use alcohol because of fumes when cleaning the tank.

Category	Equipment
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Question When priming the system the pump moves oil for a few seconds and then stalls.

Answer You have air trapped in the pump housing. Use the primer bulb until all the bubbles are removed and try the pump again.

Category Mini Batch

Question How do I make methoxide premix concentrate?

Answer Add 50 grams of lye to 1000mL of methanol and dissolve all the lye. This is a 5% concentration.

Category Mini Batch

Question How much 5% strength premix concentrate should I use to get X grams of lye for a mini-batch?

Answer Multiply the grams you want by 20, and that is the volume in mL of premix concentrate that you need. For example, to get 4.3 grams of lye, measure 86mL of concentrate and top off with 114mL of fresh methanol, then you're ready to mix with 1 liter of oil.

Category Mini Batch

Question My mini-batch turned to solid soap. Is there any way I can use this oil?

Answer Probably. You will have to do one or more "caustic strips" on the oil to turn the FFAs to soap BEFORE trying to make biodiesel out of it. See the FuelMeister Appendix for the procedure.

Category Premix

Question I notice caked lye in the bottom of my premix tank.

Answer This is probably due to flooding the hopper with too much methanol at once and flushing lye out of the hopper. Vent thoroughly and wipUse only 3 short strokes and allow at least 10 seconds for the hopper to empty of its premix before adding more methanol.

Category Premix

Question Methanol is backing up into my vapor return hose.

Answer When making premix, use only 3 short strokes after methanol starts to flow to the tank. Allow at least 10 seconds for the hopper to empty of its premix before adding more methanol.

Category Premix

Question I noticed that there is still lye in my premix hopper.

Answer When making premix, use only 3 short strokes after methanol starts to flow to the tank. Allow at least 10 seconds for the hopper to empty of its premix before adding more methanol.

Category Premix

Question When I'm pulling premix into my oil, the mixture backs up into the premix tank.

Answer Ask us how to tell if you need a FREE a "check valve" in your premix input system. Otherwise, close down the recirculation valve just a bit more to place more suction on the premix input. Do not stall the pump.

Category Premix

Question How can I make sure all my lye gets dissolved in the methanol?

Answer When making premix, use only 3 short strokes after methanol starts to flow to the tank. Allow at least 10 seconds for the hopper to empty of its premix before adding more methanol.

Category Processing

Question The pump stalled when sucking air during premix input

Answer Shut off the pump. Close the premix input valve and open the recirculation valve fully. Turn the pump back on and let it catch its prime again. Open the Premix Input valve and close the Recirculation valve no more than 45 degrees. Premix will flow.

Category Processing

Question I see a layer or chunks of soapy stuff in my biodiesel.

Answer There either was excessive water in the oil, or a faulty titration cause you to use too much lye. Use a strainer to remove as much soap as possible and continue with the process as normal. Expect the wash process to take longer to remove dissolved soaps.

Category Processing

Question How do I get the last bit of glycerin out of the reaction tank?

Answer You will need to use a bit of biodiesel to flush the last glycerin out. You can catch this in a clean bucket and drain the biodiesel off the top and add it back into the tank.

Category Processing

Question I only got less than 6 gallons of glycerin out. What do I do now?

Answer Not enough lye in your premix. Drain all the glycerin, estimate the missing lye, add this amount plus a proportional amount of methanol, re-process the biodiesel as though it was oil. Check that you got the missing glycerin plus the additional methanol.

Category Processing

Question My oil temperature is too high.

Answer Rather than waiting for hours until your oil cools, simply add more cold oil (if you have the room in your barrel).

Category Processing

Question I used too much methanol in my premix

Answer Excess methanol will never hurt the reaction. It will simply come out with the glycerin.

Category Processing

Question What is the absolute maximum temperature I can pre-heat the oil to?

Answer While we recommend 120F-130F, do not bring any oil that is hotter than 140F into the processor tank.

Category Storage

Question What can I do to biodiesel that I want to store for more than 6 months?

Answer Fill up the barrel and displace the air with dry nitrogen from your local welding supply shop. Then cap tight and store in a cool, dry place.

Category Storage

Question What is the residue in the bottom of my biodiesel barrel?

Answer This is most likely a tiny bit of final wash water vapor which has settled out of your biodiesel over time. Drain any remaining biodiesel and remove this material.

Category Storage

Question How long can I store biodiesel with no special preparations?

Answer At least 6 months, especially if you keep the barrels full, sealed and in a cool place.

Category Supplies

Question Are there oils that are better for winter biodiesel?

Answer Yes, in general lighter and thinner oils will make biodiesel which has a lower gelpoint by maybe 10-15 degrees F.

Category Titration

Question How do I make standard titrant from the 10X concentrate?

Answer Measure 50mL of 10X concentrate into the 1000mL beaker. Add 450mL of distilled water and pour into a sealable glass jar or poly bottle. Will last for about 3 months if kept in a cool, dark area.

Category Titration

Question I'm getting a higher than expected titration result on my oil.

Answer Your standard titrant solution can deteriorate with time, temperature and exposure to UV. Replace it monthly with fresh titrant from 10X concentrate

Category Titration

Question How do I make more 10X titrant concentrate?

Answer Using your 1000mL beaker and 1g digital scale, tare out the beaker on the scale and add lye until you JUST reach 10 grams. Then top off with 1000 mL distilled water and dissolve thoroughly.

Category Titration

Question My titration sample pH color goes back towards acidic after a while.

Answer The oil is not fully dissolved in the methanol at first, and will dissolve slowly over time, diluting the pH and bringing it back towards acidic. Just dissolve for a longer period before titrating or use 50/50 isopropanol & toluene instead of methanol.

Category Titration

Question My oil sample for titration solidifies instantly when I add methanol.

Answer The sample oil is probably "creamy", which means it has a very high Free Fatty Acid content and will be difficult to test or process. Find a different oil source.

Category Usage

Question Any recommendations on maintaining my vehicle's fuel system?

Answer Yes, it's a good idea to drain the fuel bowl in your fuel filter every time you fuel up to remove water and sediment.

Category Usage

Question How can I tell if my biodiesel is gelling in my fuel system?

Answer Take a small jar or vial and keep it filled with a sample of your most recent batch of biodiesel. Attach a small refrigerator thermometer to the cap. This will show what the fuel in your vehicle looks like at that temperature.

Category Usage

Question There is glycerin in the bottom of my biodiesel barrel.

Answer You probably did not get all the glycerin out of the biodiesel and did not wash thoroughly enough.

Category Usage

Question Are there types of oil which are better for making biodiesel for colder climates?

Answer Yes, the lighter (thinner) the oil, the lower the biodiesel "gel point" is likely to be. Some people use this oil to make "winter biodiesel".

Category Usage

Question Can I burn biodiesel in my home heating furnace?

Answer Maybe. If your furnace currently pressurizes and atomizes #2 diesel you may be able to use some percentage of biodiesel. Check with your technician or try increasingly higher percentage of biodiesel and monitor performance.

Category Washing

Question It's taking a lot longer to wash than expected.

Answer Either your biodiesel is particularly soapy (high titration or excess water in oil), or your wash water contains a lot of dissolved minerals. Softer, warmer water is preferred. Just wash longer until the wash water is below pH of 8.

Category Washing

Question My biodiesel is very hazy after the mist wash.

Answer That's just a spoonful of water vapor trapped in the biodiesel. Gently warm an open jar of the biodiesel and verify it goes crystal clear, meaning it's water and not contaminants. You can warm or filter the biodiesel in the barrel to remove the water.

Category Washing

Question How will hard wash water affect the wash process?

Answer Hard water (having dissolved minerals) will have less capacity to absorb the dissolved contaminants in your biodiesel. Warmer, softer water aids the washing process.

Category Washing

Question Will washing help separate water from my biodiesel?

Answer Yes, the cleaner (more washed) the biodiesel is, the faster and better it separates from water

Category Washing

Question Can I recover the biodiesel that comes out in my last wash water drain?

Answer Yes, just catch it in a clean bucket, let it settle for a few hours or overnight, then pour off the clean biodiesel off the top and store it with the rest.

Category Washing

Question How will acidic wash water affect the wash process?

Answer While acidic water will neutralize the caustic contaminants in the biodiesel, it may also precipitate out white salts (in flakes) which will have to be drained aggressively to prevent buildup in your tank.

Category Washing

Question How can I check the pH of my wash water

Answer You can check your ingoing or outcoming wash water pH by adding 3 drops of pH indicator solution to 12mL of water in a cup and reading the color on the laminated titration card color chart.

Category Washing

Question My wash water is full of soapy chunks and goop.

Answer The biodiesel is particularly soapy and releasing it liberally in flakes and particles. Scoop out the chunks of glop soap with an ordinary strainer. Drain the water more frequently and vigorously to prevent buildup in the bottom of the tank.

Category Washing

Question Will settling help the wash process?

Answer Only active mist washing will scrub the biodiesel clean. Settle out the water only after misting brings the wash water gets below pH of 8.

Category Washing

Question Do I need to drain all the water out every time I drain during a wash cycle?

Answer No, just make more room in the tank for more water