

*Questions & Answers*

*regarding the  
care and operation  
of*

**BROOKS  
STEAMER**

*"The Gentle Giant  
of Motion"*



**BROOKS STEAM MOTORS  
LIMITED**

*Executive Offices Toronto, Ontario  
Factory Stratford, Ontario*

(C) 2014 The Virtual Steam Car Museum, Inc.

QUESTIONS AND ANSWERS  
REGARDING THE CARE & OPERATION OF  
**BROOKS STEAMER**  
THE GENTLE GIANT OF MOTION

45. *What causes the burner to whistle?*

The whistling usually occurs when the burner is cold and, after the car has been driven a little distance and the burner gets hot, the whistling usually disappears. While the whistling burner does no harm, in order to eliminate the whistle turn the main burner valve down to a point where the whistling ceases.

NOTE: If you will look at the Duplex Pressure Gauge located on the Instrument Board you will see that with the main burner on and the car standing still, the hand on the Duplex Pressure Gauge which denotes your fuel pressure is receding. It is therefore necessary while steaming up the car and getting up steam pressure sufficient to start the car to work the pump stick in order to keep your main fuel pressure over ninety pounds.

46. *How much steam should you have preparatory to starting the car?*

If starting on level ground 150 to 200 lbs. and if starting on an up grade 200 to 300 lbs. according to the grade.

47. *When the car is steamed up, are there any other points to check up in order to have everything working right?*

A most important point is to be sure that you have sufficient oil in the cylinder lubricator.

48. *Where is the cylinder lubricator located?*

On cars Serial Numbers 24001 to 24050 inclusive, the cylinder lubricator is located under the toe board next to the dash.

On cars Serial Numbers 26051 and over the cylinder lubricator is located under the right side front seat cushion.

49. *How often should the cylinder lubricator be filled with oil?*

The Cylinder Lubricator should be checked every 500 miles and cylinder oil put in if less than  $\frac{1}{2}$  full. Use only ATLANTIC 20th CENTURY CYLINDER OIL, made by Atlantic Refining Co., Philadelphia, Pa. Use no substitute. Atlantic 20th Century Cylinder Oil is available at the Brooks Factory and Brooks Branches.

50. *How can you tell when driving whether or not the engine is getting sufficient lubrication?*

The Cylinder Oil Gauge on the dash is a dial with a hand following a semi-circular line, a portion of which is marked "Off" and the remainder "On." When the engine is getting sufficient lubrication the hand on the Cylinder Oil Gauge should be working forward and back over the Section marked "On" intermittently. It is well if the car has been standing for a period of two weeks or over, or after shipping, to give the hand crank on the cylinder lubricator ten or twelve turns, to put extra oil in the main steam line before starting to drive.

## Important Items—Re care and operation —in order to obtain most efficient performance of the Brooks Steamer

1. After steaming up a car open one at a time both try cocks on the boiler water level indicator column for about five seconds.
2. If any restrictions in connections from boiler to water level indicator column either top or bottom, shut off top valve and open try cocks on the boiler water level indicator column, which will clean out the bottom connection. Then open the top valve, shut the bottom valve and again open both try cocks on the water level indicator column which will clean out the top connections. Then open the bottom valve. At all times when driving the car be sure that both top and bottom valves that connect the boiler to the boiler water level indicator column are open.
3. After steaming up a car from cold, always open the main blow off valve connecting to the Regulators. The Regulators are connected up in the same manner as the Water Level Indicator Column with a valve in the top connection and a valve in the bottom connection and in case of restrictions in connections the same procedure will be followed as outlined in Item "2".
4. The two Main Blow Off Valves do not connect to any regulators of the Boiler and are to be used for cleaning out the boiler every one thousand to three thousand miles.
5. Before a boiler is blown down it is very advisable to connect a blow off hose, using hose connection that is furnished with the car, and connecting the other end of the hose to a sewer or rain conductor pipe. (This is the connection usually used in Service Stations). A customer can have the same connection put in his private garage with very little expense.
6. Before the boiler is blown off be sure to shut off both burner and pilot valves.
7. If blow off Valve is closed after boiler is blown down to 100 pounds and the car let stand over night with the hand by-pass valve shut, and water in the water tank, the boiler will completely cool off and syphon itself full of water ready to steam up the following morning.
8. When the water in the boiler gets below the regulator, the expansion tube is so adjusted that it closes the regulator valve, which prevents the flow of water to the water tank, thereby turning the supply of water into the boiler until such time as the water in the boiler rises above the regulator and the water being cooler, cools the expansion tube which then contracts and opens the regulator valve until such time as the water in the boiler again becomes sufficiently low to cause the expansion tube to again close the valve. If the regulator should fail to work or function properly this is indicated on the Boiler Water Level gauge on the Instrument Board. If the Boiler Water

Level gauge shows the water in the boiler to be low, and the steam pressure is also low when driving, close the hand by-pass valve until such time as the hand on the Boiler Water Level gauge indicates "Normal" or close to "High Water." Then open hand by-pass valve. The hand by-pass valve is used only in cases of emergency.

9. The Low Water Regulator is located directly under the Water Level Regulator on the right hand side of the boiler. If the water in the boiler gets extremely low the low water regulator will shut off the main burner. This regulator rarely has occasion to function, but if it does, the water level in the boiler can be restored by closing the hand by-pass valve and driving on level road where you will notice after driving possibly half a mile in this way the main burner will come on again. However, should you be on a road where it is hard going it would be necessary to jack up one rear wheel of the car, close the hand by-pass valve and run the engine long enough to get sufficient water in the boiler before proceeding. Under such conditions the engine should be run slowly.
10. The Steam Pressure Regulator is adjusted to shut off the main burner when the steam pressure reaches 500 to 550 lbs. Just as soon as the steam pressure is pulled below the point at which the steam pressure regulator is adjusted the main burner automatically comes on again—thus the burner is on and off automatically, while driving.
11. The Main Fuel Pressure Regulator on Cars Serial Numbers 24001 to 24050 inclusive is located on the right hand side, fastened to the side frame member under the rear foot boards. On cars Serial Numbers 26051 and over the location is under the front right hand seat cushion. This regulator keeps the main fuel pressure up to 140 pounds.
12. Information in detail with reference to the lubrication of the car outside of the Cylinder Lubrication can be had by referring to the Lubrication Chart on Page 15 of the Company's Instruction Book on "Care and Operation of a Brooks Steamer."
13. Also refer to the Lubrication Chart on Page 15 of the Instruction Book for information as to how often it is necessary to blow off the different valves attached to the boiler.

## Driving the Brooks Steamer

Preparatory to starting to drive the car make sure that the engine is unhooked by pressing down on the small round pedal button projecting through the Reverse Pedal—Release the Hand Brake—Providing you have sufficient steam up—

**TO START**—Unlock and Open the Throttle and the car will move forward.

With steam pressure up, providing it has not reached the point at which the Steam Pressure Regulator shuts off the main burner, namely 500 to 550 lbs., turn on the Main Burner Valve 1-16 to 1-8 turn. Then increase gradually until the Main Burner Valve is opened just below the whistling point.

If the car has been standing for any length of time, before turning on

the main burner valve, it is well to turn on the Warming Up Valve for a minute. Then shut off the Warming Up Valve and turn on the main burner valve, for the reason that if the main vaporizer is cold when the car has been standing and you do not first put on the warming up valve you are liable to flood the burner. This condition will be indicated by vaporized fuel escaping all around the front of the car. In case you flood the burner, immediately shut off the main burner valve and in a minute or so when the fuel has had time to evaporate put on the main burner valve again. There is no damage done through flooding the burner outside of the fact that it may cause an occasional back-fire and there will be a fuel odor in and around the car for two or three hours.

In case you forget to turn on the main burner valve when driving, the car will slow down or not respond to the throttle as usual when your steam pressure has been sufficiently reduced.

In shutting off a valve, turn until the valve is against the seat. Do not, however, try to turn it beyond that point.

When driving, the throttle should be opened steadily at all times and not with a jerk. After coasting down grade, slowing down, or coming to a stop open the throttle steadily to pick up speed. Opening the throttle with a jerk is very poor practice as you do not get the desired smooth steam car performance and apart from this it does no good to either the engine or the car.

Directly in front of the driver's seat, projecting through the floor boards there is a foot button which, when pressed down, opens the cylinder drain valve on the engine.

When starting the car with a cold engine and the cylinders full of condensation you will notice the car acts very sluggish. To relieve this condition run slowly for several hundred feet until such time as the engine has cleared itself of the condensation, or if you feel that the engine is full of water, push down the foot control button which opens the cylinder drain valve on the engine for half a minute at a time.

Also use the foot control button if at any time when pushing down the reverse pedal it is held there, due to steam chest pressure.

The double pedal on the left hand side of steering column is the Reverse and Hook Up Pedal.

The pedal on the right hand side of steering column is the Service Brake.

When travelling at a speed over eight miles per hour it is well to hook-up the engine.

**TO STOP**—In order to stop the car close the throttle and apply the service brake.

Before starting the car again unhook the engine. Do not start car with engine in hook-up.

If you wish to leave the car, shut off the main burner valve, apply the hand brake, lock the throttle and take the key with you.

**TO REVERSE**—Place your foot on the Reverse Pedal, covering the small round pedal button and push both pedals all the way down. Open the throttle slowly and just as soon as the car begins to move close the throttle and repeat this operation if necessary.

The Reverse speed of the car is the same as forward in unhooked position and if you were not accustomed to backing up at that speed you might possibly have an accident by leaving the throttle open during the reversing operation. Hence, it is well to open and close the throttle during reversing.

**TO LEAVE CAR OVER NIGHT**—If you wish to keep steam up over night leave the pilot burning. This is customary if you are driving the car every day.

Make sure that you have sufficient pilot fuel and pilot pressure. (The pilot pressure usually carried is between ten and thirty pounds. For further information on the pilot refer to Page 8 of the Company's Instruction Book on Care and Operation of a Brooks Steamer).

**NOTE:** It is well for the Instructor to have the Party learning to drive **START, STOP and REVERSE** the car frequently during the first hours of driving.

### Conditions that may be experienced while driving, through lack of care on the part of the driver

If at any time when driving along or using the fuel hand pump you notice the black hand on the Duplex Fuel Pressure gauge moving back and forth corresponding to the impulses of either hand or power fuel pumps, this will indicate that the air cushion in the main fuel pressure tank has become exhausted and you will have to replenish this air in the following manner:—

Drain the fuel out of the pressure tank by opening Fuel Pressure Drain Valve which is located under front right seat cushion directly above pump box and fastened to inside frame member. After Pressure gauge indicates "Zero" admit air into the Fuel Pressure Tank from Air Storage Tank on car, or by power or foot air pump. Repeat this operation until you hear the air coming out of the filler cap of the main fuel supply tank. Then proceed by putting 80 to 90 lbs. of air in the pressure tank and hand pump fuel pressure up to 120 to 140 lbs., the same as when steaming up a car.

It is necessary to replenish the air in the main fuel pressure tank about once a week when doing steady driving.

In case the Pilot light goes out while driving and the main burner comes on, you will notice vaporized fuel coming out around the hood. You must immediately shut the main burner valve, drive to some convenient place, close the pilot valve, raise the hood and lift the boiler lid to allow fumes to evaporate. Make sure the fumes are all evaporated by throwing in a lighted match. If the fumes have not all evaporated there will be a pop.

When you are sure there are no fumes left in the boiler, turn on the pilot valve and light the pilot. In most cases you will find the pilot hot enough to light without heating up the pilot branch. If, however, the pilot will not light without re-heating, close the pilot valve and again make a test with the match to be sure that there are no fumes left in the boiler. Then heat the pilot branch by means of the electric pilot heater or with the Presto-Lite torch, then turn on the pilot valve and light the pilot.

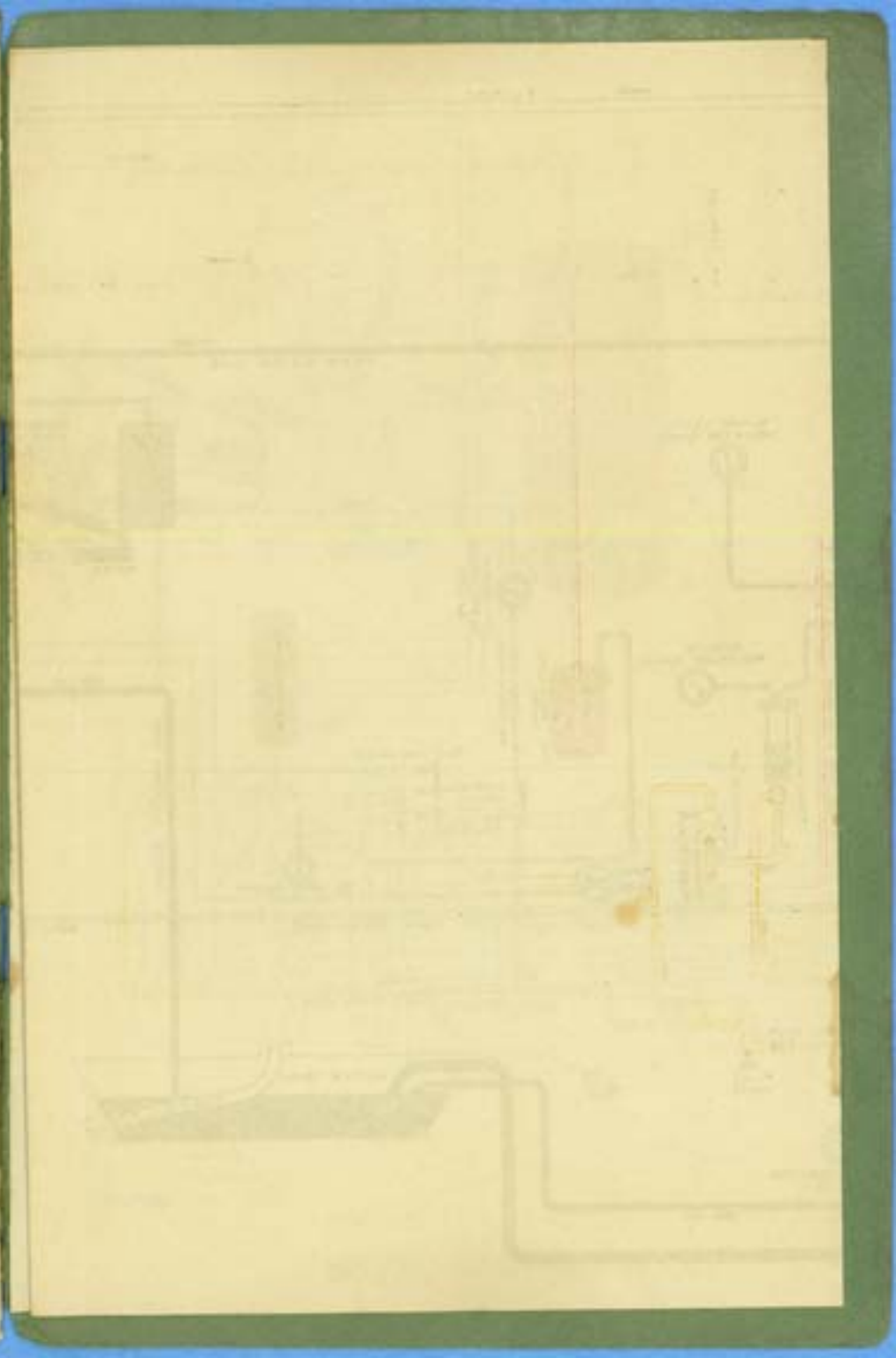
The cause of pilot going out on the road may be lack of fuel, low pilot pressure or a dirty pilot needle. These points should be carefully watched for by the driver.

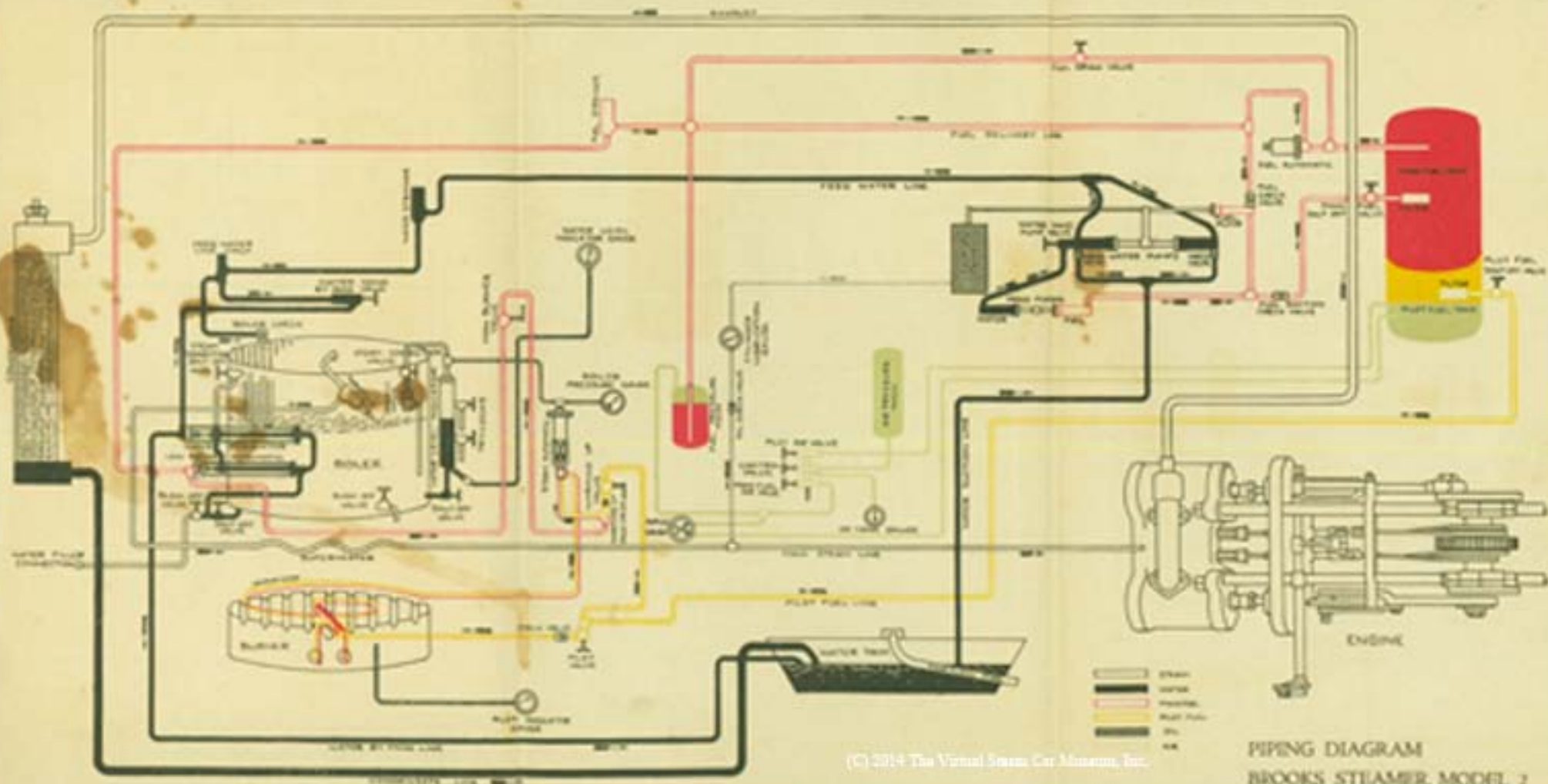
It takes only half a minute to clean the pilot needle and it is good practice to clean it every day, although it may be necessary to clean it only once a week.

The pilot vaporizer should be cleaned every one thousand to five thousand miles. It is good practice, however, to have this cleaned every one thousand to two thousand miles.

If the main burner vaporizer gets dirty you will notice that the burner does not make steam as fast as it should do. This condition can be relieved by taking the nozzle tip cleaner from your tool kit and pulling same into the nozzle tip holes several times, preferably with the main burner on. If this is not sufficient, take out the screen plug and see that it is clean.

It is good practice to have the nozzles, burner tips, and screen cleaned, cable pulled and vaporizer cleaned every 500 to 1,000 miles. This operation takes about thirty minutes time.





(C) 2014 The Virtual Steam Car Museum, Inc.

PIPING DIAGRAM  
BROOKS STEAMER, MODEL 2

*“The  
Gentle Giant  
of  
Motion”*

*Questions & Answers*

*regarding the  
care and operation  
of*

**BROOKS  
STEAMER**

*“The Gentle Giant  
of Motion”*



**BROOKS STEAM MOTORS  
LIMITED**

*Executive Offices      Toronto, Ontario  
Factory Stratford, Ontario*



## Questions and Answers



The following Questions and Answers have been prepared for use by instructors in teaching Brooks car owners how to operate and care for their cars. It seems advisable to have a purchaser start right in with the car drained dry of everything and have him fill and get the car into operation as per these instructions. In the majority of cases after doing this the owner becomes so familiar with the car that he requires very few instructions later on, and will be in position to instruct a garage mechanic or anyone else just how to do these things.

1. *What is the first thing you should look for when proceeding to steam up a car?*

See if you have sufficient water in the boiler to get up steam.

2. *How do you know when you have sufficient water in the boiler to get up steam?*

Open both try cocks on Boiler Water Level Indicator Column attached to Boiler and if water runs out of the bottom try cock there is sufficient water in the boiler to get up steam.

3. *If water does not run from the bottom try cock on the water level indicator when opened, how do you put sufficient water in the boiler to get up steam?*

There are two ways to fill the boiler, either by pressure water system (where available) or by means of the hand water pump from the Water Tank.

4. *How do you fill the boiler where the pressure water system is available?*

Use the hose connection furnished for the purpose. Attach same, if not already attached, to the bottom blow off valve at the front of the boiler on the right. (Open the blow off valve, connect hose to tap), turn on the tap and let the water run into the boiler until it runs out of the try cocks on the Boiler Water Level Indicator, which you have previously opened to ascertain whether or not there was sufficient water in the boiler to get up steam. You can then shut off the tap, shut off the front bottom blow off valve, close both try cocks on the boiler water level indicator, and disconnect the hose. You have then sufficient water in the boiler to get up steam.

**5. How do you fill the boiler by means of the hand water pump on the water tank?**

First see that you have plenty of water in the water tank. Then open the hand water pump and shut the hand by-pass valve as well as the fuel suction valve located under the main fuel tank on the right hand side. (This valve location is on cars after Serial No. 26051). Then actuate the hand pump handle placed on the hand pump lever. Continue hand pumping until water runs out of the try cocks on the boiler water level indicator which you have previously opened. Then shut off try cocks on the boiler water level indicator, close the water hand pump valve, open the hand by-pass valve also the fuel suction valve. (On cars Serial Numbers 24001 to 24050 inclusive there is no fuel suction valve. The same method of filling the boiler will apply, only you are hand pumping against the fuel pressure. You can, however, open the fuel pressure drain valve and drain the main fuel pressure back into the main supply tank, in which case this valve is left open until sufficient water is in the boiler. Then close the fuel pressure drain valve and the fuel pressure has to be brought back again by control valves and hand pump—see Question 28).

**6. Where is the water hand pump valve located?**

Between the front water power pump and the hand pump.

**7. Where is the hand by-pass valve located?**

Just a little to the right of the steering column under Instrument Board.

**8. What is the hand by-pass valve for?**

When driving the car the power water pumps work continually and either pump the water to the boiler or turn it back to the water tank. When the water pumps back to the water tank it is what is called by-passing. When driving and the water regulator should fail to work for any reason, the water in the boiler will get low. Then by closing the hand by-pass valve the water is prevented from returning to the water tank thereby refilling the boiler, and as soon as the boiler level gauge located on the instrument board shows normal level, the hand by-pass valve should then be opened again, and it will be necessary to repeat this hand operation until such time as the proper adjustment can be made to the Water Level Regulator.

**9. Does the water have to run out of both try cocks to be sufficient in the boiler to steam up the car?**

There is sufficient water in the boiler to get up steam when the water runs out of the bottom try cock on the boiler water level indicator.

NOTE: The above instructions re filling the boiler until the water runs out of the lower try cock on the boiler water level indicator apply to Cars Serial Number 26051 and over.

On Cars Serial Numbers 24001 to 24050 inclusive let the water run into the boiler until it runs out of the Surface Blow Off Valve located at the top, front, left hand side of boiler, which valve should be opened, and the try cocks on the boiler water level indicator left closed. (C) 2014 The Virtual Steam Car Museum

**10. What causes the automatic water regulator to fail and not keep the water to the proper level in the boiler?**

There is a possibility that a small piece of dirt or grit may get under the regulator valve which will cause same to leak by, thereby not getting the full supply of water to the boiler, and causing the water in the boiler to get low. By closing the hand by-pass valve, when the water in the boiler gets up above normal, the regulator valve will open automatically, and the water that is pumped through the valve will wash out any dirt or grit that may have been held under the seat.

**11. Is there a strainer in the water feed line for the valves?**

Yes—but once in a while a very small piece of dirt or grit gets through the strainer.

**12. Does dirt or grit get through the strainer often?**

No—ordinarily you can drive a car many thousand miles without this happening.

**13. What happens if the boiler is full of water?**

When the boiler is cold and full of water and you start to steam up the car you will notice after the fire is on for about half a minute or less, the steam gauge hand will come up very fast to five hundred pounds or more. This is a hydraulic pressure and by opening the throttle and cylinder drain valve or one of the blow off valves, you will notice the pressure drop to zero in less than a second.

**14. What should I do if the boiler is full of water and I want to get up steam?**

The simplest way is to drain a few gallons of water out of the boiler by opening one of the blow off valves, or open the throttle a little and the cylinder drain valve wide. This can be done simultaneously with the fire on.

**15. Will the boiler fill with water when driving if the hand by-pass valve is closed and the driver forgets to open it?**

Yes.

**16. Will it damage the engine if the car is kept running with a hydraulic pressure in the boiler?**

No.

**17. How will the driver know if there is hydraulic pressure in the boiler when operating the car?**

The car will act very sluggish with a wide open throttle, and you can hear the water going through the engine.

**18. How can this condition be overcome?**

Open the hand by-pass valve and keep on driving and after about half a mile it will be alright again.

**19. How can the driver tell if there is water in the water tanks?**

Look at the water tank quantity gauge located in the front floor boards directly in front of the driver's seat.

**20. How do you fill the water tank?**

The same as any automobile—Put the water in the front of the car by removing the filler cap on the condenser.

**21. When you put sufficient water in the boiler to get up steam and water in the water tank, what is the next step in steaming up the car?**

See that there is fuel in the fuel tank.

**22. Where is the main fuel tank?**

At the rear of car, having the opening and quantity gauge at the right hand side of tank.

NOTE: After you have satisfied yourself that you have fuel in the fuel tank, make sure that the hand pump works.

**23. What would prevent the hand pump from working?**

The hand pump may be air bound, in which case loosen the 3-16" tube connection and work the hand pump until the fuel starts to come through, then tighten the 3-16" tube connection again.

NOTE: Then see that the Fuel Pressure Drain Valve is closed.

**24. Where is the fuel pressure drain valve located?**

The fuel pressure drain valve is located in the pump box under the front seat cushion.

NOTE: Now see that you have sufficient air in the air storage tank.

**25. How can you tell how much air you have in the air storage tank?**

Look at the Air Storage Tank Gauge located on the end of the front seat board on the left hand side. This gauge registers the air in the air storage tank.

**26. How do you put air in the air storage tank?**

Attach an air hose to the air inlet valve and open the control valve, admitting the pressure up to 150 lbs. if available.

**27. Where is the air inlet valve?**

Beside the air storage tank gauge on the end of the front seat on the left hand side.

**28. What is the control valve and where is it located?**

Projecting through the front seat heel board on the left hand side near the floor there are three valves. The valve nearest the left hand door of the car is the main pressure valve, the centre one—the Control Valve—and the inner valve the Pilot Pressure Valve.

**29. With 150 lbs. of air in the air storage tank, what is the procedure to follow to get up the fuel pressure?**

Open the Control Valve and the Main Pressure Valve and admit air until the large hand on the Duplex Pressure Gauge located on the instrument board registers eighty pounds pressure. Then close the Control Valve and the Main Pressure Valve and work the pump stick until the gauge shows 140 lbs.

NOTE: Now that the main fuel and fuel pressure is attended to, you must see that you have fuel in the Pilot Tank.

**30. Where is the pilot tank?**

The Pilot Tank is on the left end of the Fuel Tank with the quantity gauge and filler neck. Fill with gas only. Also screw large knurled cap against shoulder before tightening thumb screw in centre of cap.

NOTE: You must now put Air Pressure in the Pilot Tank.

**31. How do you put air pressure in the pilot tank?**

Open the Control Valve and the Pilot Pressure Valve and admit air pressure of from 10 to 15 pounds, which will be indicated by the red figures and small hand on the Duplex Pressure Gauge on the Instrument Board.

NOTE: If you have not sufficient air in the Air Storage Tank it will be necessary to attach a hand or power air pump to the air inlet valve in the storage tank, and open the pilot air pressure valve and admit air in the pilot tank until the pressure of 10 to 15 pounds is indicated, as above.

**32. Can air be admitted to either one of the fuel pressure tanks without touching the air storage tank?**

Yes—by simply connecting an air hose to the air inlet valve, and opening the air valve to the right, the air pressure will be admitted direct to the pilot pressure. Close the air valve to the right and open the air valve to the left and you will admit the air pressure direct to the main fuel tank.

NOTE: After getting the desired main fuel pressure and pilot pressure, it is well to attach a hand or power air pump to the Air Inlet Valve of the Air Storage Tank, open the centre Control Valve and admit air up to 100 to 150 pounds. This air is held in storage ready at any time to replenish air in either main fuel pressure or pilot fuel pressure.

You are now ready to light the Pilot.

**33. How do you light the pilot?**

Open the door in the left running board shield near the front. Pull out the Pilot needle and make sure that it is clean. Open the peek hole in the side of the burner. You must then heat up the Pilot Branch, which can be done in two ways, either with the Presto-Lite Tank or electrically.

The Electric Pilot Heater is held in a clip on the side of the frame member. Take off the clip and push the spring terminal of the cable on the bottom of the pilot vaporizer branch. Then push the starting switch making contact for approximately twenty to thirty seconds. This is sufficient time to heat the pilot providing the battery is properly charged. Then release starter switch.

Now open the Pilot Valve on the left side of car near the pilot door about half a turn. Light the pilot through the peek hole by means of a match.

To heat the pilot branch with the Presto-Lite Tank, open the Presto-Lite Tank Valve 1-4 turn or more if necessary and light the torch with a match. Then hold the torch against the Pilot Branch for one or two minutes until same is hot enough. Then open the Pilot Valve on the left hand side of the car about half a turn. Light the Pilot through the peek hole by means of the Presto torch.

**34. Are there any points to be especially careful of when lighting the pilot?**

One important point to remember is that you should never open the pilot valve located on the left side of car near the pilot door until you are ready to light the pilot with a match or torch. If you do the boiler will fill with gas and cause a pop when you put in the match or torch.

**35. In case the pilot valve has been turned on what can be done to relieve the situation and prevent the pop?**

Lift the hood of the car and open the smoke box lid or boiler cover lid located in the top of the boiler and all fumes and gas will evaporate. Leave this lid open until there are no more fumes coming out, and to be really sure you can throw in a lighted match. If the fumes have not all evaporated when you throw in a lighted match there will be a pop.

**36. If after lighting the pilot it does not appear to be a strong pilot what would you do to make it strong?**

Take the screw driver and turn the Pilot screw back and forth carefully a few times, or shut the pilot fuel valve, take out the screw and clean the wire.

**37. How can you tell if you have a good pilot?**

The pilot should burn with a vigorous blue flame. If the pilot burns yellow when first lighted it is because the pilot branch is not hot enough. You should turn off the pilot valve, heat the Branch a little more with the Electric Pilot Heater or Presto Torch and then light again.

NOTE: After lighting the Pilot be sure to CLOSE THE PEEK HOLE. Allow Pilot to burn for four or five minutes in order to heat thoroughly the main vaporizer before admitting fuel to the main burner.

You are then ready to turn on the main burner.

**38. How do you start the main burner?**

First open the starting valve or warming up valve.

**39. Where is the warming up valve located?**

It is located to the left of the Steering column under the instrument Board.

**40. What is the starting or warming up valve for?**

To admit gas to enter the main Vaporizer which will accelerate starting the main burner.

**41. How long should the warming up valve be left on?**

Just for a minute or two.

**42. After turning off the warming up valve, what is the next step?**

Open the Main Burner Valve from one sixteenth to an eighth of a turn.

**43. Where is the main burner valve located?**

On the left hand side projecting through the instrument board.

**44. How would you know if the main burner is on properly?**

By the sound of the fuel leaving the nozzle, which is a matter of a little experience. If the fuel is burning properly, turn the main burner on gradually. Best results are obtained if the Main Burner Valve is opened just enough to avoid whistling.