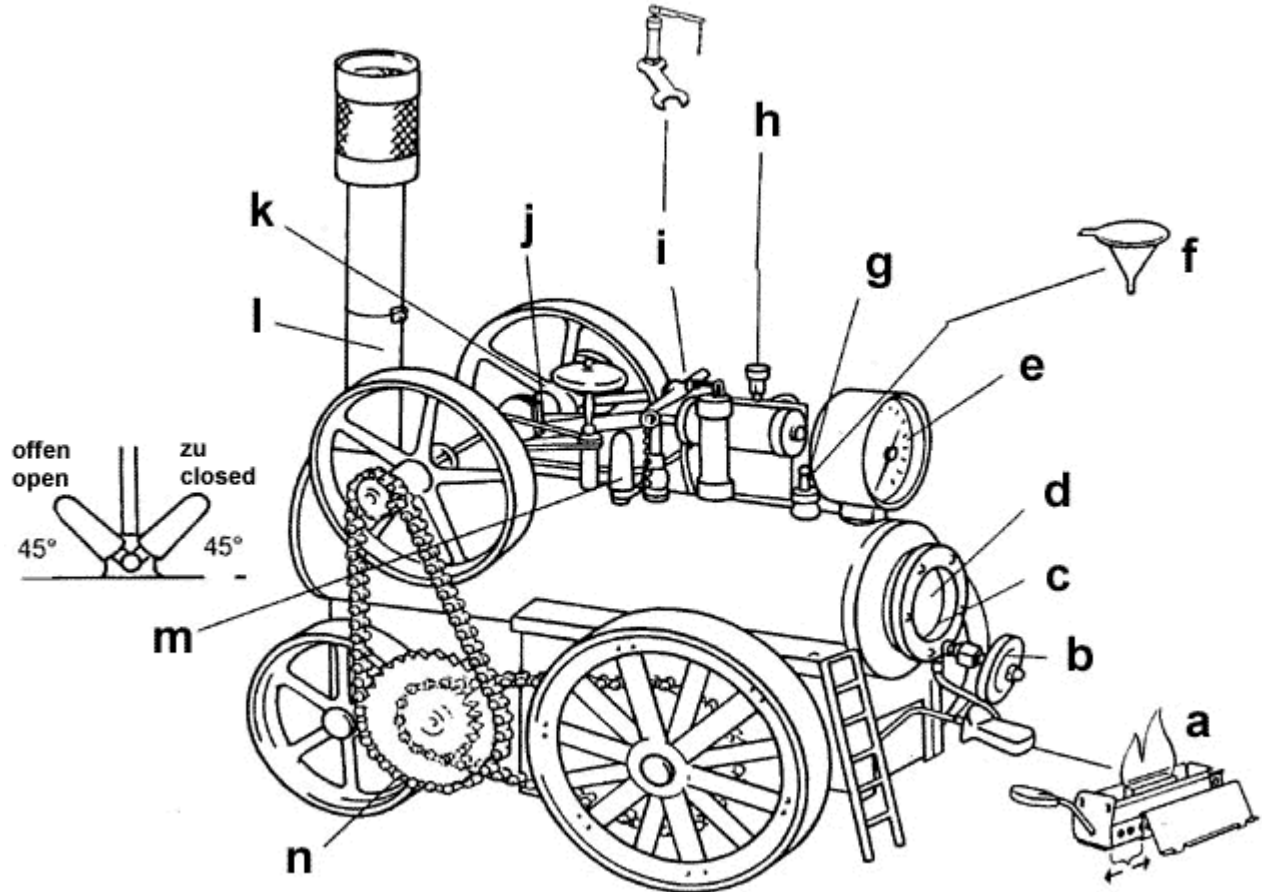


## Wilesco D 430 operating Instructions



- |                        |   |                                     |
|------------------------|---|-------------------------------------|
| a) Burner slide        | f) Funnel                                   | k) Centrifugal governor             |
| b) Water stop valve    | g) Safety valve (filter cap)                | l) Condensation tray in the chimney |
| c) Minimum water level | h) Oil cap                                  | m) Cutout valve                     |
| d) Sight glass         | i) Steam whistle, only tighten with spanner | n) Chaindrive                       |
| e) Manometer           | j) Lubricate                                |                                     |



**Important:** Never operate the machine without safety valve! Only use Wilesco steam engine oil. Only use Esbit fuel tablets.

### Operating Instructions D 430

Congratulations on becoming the owner of a WILESCO steam-powered Locomobile! The long tradition of high-quality products from WILESCO is your guarantee that great care was taken during manufacturing. The real-life Locomobile was used for threshing and plowing on farms around the turn of the century. It was pulled by horses, but also it could move under its own power at speeds of two to three miles per hour. Full steam ahead! • In order that you can get the maximum enjoyment from your Locomobile, please read the operating instructions carefully. Any fault caused by misuse in operation can lead to damage and possible danger to your safety.




**Important information and safety precautions!**

1. **For safety reasons, children (recommended age: 8 years and above) should only use the Steam Engine under adult supervision.** (Because of steam pressure, hot boiler, hot steam pipes and flames etc.) Do not leave the Steam Engine unattended either during operation or whilst the engine is cooling after operating.
2. If any problem occurs with the Steam Engine, the matter should only be dealt with by a distributor or the WILESCO factory. Attempts to repair by other persons will invalidate the warranty.
3. Any alteration to the Standard specification carried out by persons (other than WILESCO Agents) will also invalidate the warranty.
4. Only WILESCO genuine parts or accessories should be used (boiler, spring-loaded safety valve, etc.) as these have been factory tested. For safety reasons, the spring-loaded safety valve must not be adjusted. It is illegal to operate a steam engine without a spring-loaded safety valve. Always check the valve for correct operation before use.
5.  **High temperatures:** The principles on which your Steam Engine operates mean that the burner tray, the boiler housing, the spring-loaded safety valve, the steam pipes etc. become very hot. Do not touch, in order to avoid the risk of burns!
6. **Safety precautions:** Do not touch - and in particular do not let the children touch - any of the moving parts while the Steam Engine is in operation.
7.  **Do not heat the boiler without sufficient water!** Always ensure that the Steam Engine has sufficient water in the boiler during operations. Also check the water level carefully when adding new dry fuel tablets. The water **must be visible at the lower end of the sight glass (minimum)**. If this instruction is ignored the boiler will be damaged and has to be replaced. **We will not accept any claims whatsoever, including consequential damage, in this matter.** If a leak occurs in the boiler, or any other part, stop using the Steam Engine immediately. Any necessary repairs should only be carried out by trained staff, or at the WILESCO factory.
8. The Steam Engine meets all safety standards and requirements. Every boiler has been submitted to a bursting pressure and water test of 5 bar (approx. 21psi).
9. Please keep the instructions in a safe place!

### Operating instructions:

10. Unscrew the spring-loaded safety valve and, using the funnel, fill the boiler approx. ¾ full (upper level to the sight glass) with hot water if possible. Raise the funnel slightly when pouring in the water so that the air can escape from the boiler. Use boiled water or rain water (low chalk content).
11. Before the steam whistle can be fitted, the boiler and the boiler filler cap have to be unscrewed, using the enclosed spanner. The fitting of the accessories can only be done in the following order: a) steam whistle, b) pressure gauge, c) spring-loaded safety valve, d) boiler and boiler filler cap, e) centrifugal governor.
12. Screw the steam whistle onto the boiler using the spanner provided. Do not tighten by turning the lever, as this will cause damage. When screwing in the steam whistle, the lever with the chain should point outwards (use washers if necessary) so that the chain which operates the whistle does not come into contact with the boiler. Pull the chain gently to operate the whistle. **Note:** The steam whistle can be used to check for any overpressure in the boiler before oiling, to check whether the boiler is still under pressure.
13. Close the steam cut-off valve at the steam pipe on top of the boiler before oiling the cylinder. The valve is closed when the lever is below approx. 45° - pointing backwards (towards sight glass) and open when the lever is below approx. 45° - pointing forwards (towards smoke stack). Now unscrew the oil filler screw and fill with WILESCO steam engine oil or car engine oil while turning the flywheel several times so that the oil is drawn in. Oil frequently so that the piston does not seize. 2-3 drops of oil are sufficient for approx. 10 minutes operating time. **For safety reasons the steam**

**cut-off valve must be closed when oil is being added.** There must not be any steam pressure in the boiler. Lightly oil all the bearings and linkages.

14.  Place two layers of ESBIT fuel tablets in the burner slide, the lower tablets flat and the upper tablets on their sides. Then light the tablets. **Caution: Because of the risk of danger from an open flame, always take the necessary safety precautions.** The burner slide is adjustable. The oxygen supply and the flame height can be adjusted by moving the burner slide in relation to the air holes (see illustration). Before adding new fuel tablets, always check the water level and refill the boiler with water to ensure that the boiler does not run dry. The ration of fuel tablets to the amount of water in the boiler is designed so that the boiler cannot run dry without fuel tablets being added. The fuel slide must be completely pushed in, otherwise the sight glass will be damaged. **Important:** After completing the heating process, **remove the burner slide from the guide whilst it is still hot**, otherwise un-burnt fuel may cause the slide to jam. If the slide becomes jammed, it can be removed by tilting it slightly to the left or right. Widen the guide slightly using a standard pair of flat pliers.



**Note:** ESBIT tablets require plenty of oxygen to burn properly. **This means if used indoors the room should be well ventilated.** To prevent unpleasant smells, the fuel tablets should be allowed to burn out - they should not be blown out. If there is insufficient water in the boiler, place the burner slide on a metal plate until the tablets have burned out completely.

15. First operate the steam engine without the drive to the rear axle of the Locomobile. To do this, remove the chain which links the cog-wheel on the axle of the flywheel with the big gear wheel. Gently press the chain outwards, simultaneously turning the flywheel. When the water starts to boil (approx. 1 bar, 14 psi), open the steam regulator - the lever should point forward at an angle of approx. 45deg. Turn the flywheel by hand to let the condensation in the pipes and the cylinder escape. The steam engine will start to operate. Stop the steam engine by turning the steam regulator about 90 - - the lever should point approx. 45deg backwards. The supply of steam is then cut off. If you wish to drive the Locomobile, fist close the steam regulator and then replace the drive chain. Open the steam regulator and turn the flywheel gently in the required direction of travel. The speed can be adjusted by the steam regulator. Without the drive chain, the Locomobile can be used as a stationary engine to drive the WILESCO accessories (see catalog or illustrated leaflet) by means of the belt drive to the flywheel on the right-hand side.
16. The exhaust steam does not escape through the chimney, collects as water-oil-condensation in the container under the chimney, which is why the steam pipe is not soldered, since no pressure develops in the condensation container (separate from the boiler). After using, remove the chimney and remove the condensation through the chimney hole, by shaking lightly. **Caution:** Hot condensation - beware of scalding!
17. After use, the Locomobile needs servicing. Remove any water left in the boiler by unscrewing the safety valve and letting the water drain out. **Be very careful if the water is still hot!** Any water left in the boiler cannot do any damage, but might leave sediment on the sight glass. Any soot formation on the lower surface of the boiler can be removed with a brush, e.g. an old toothbrush. Finally, dry the model using a clean cloth. The brass parts on the steam engine are treated with a clear varnish to prevent oxidation. The heating process may lead to discoloration on the varnish, in which case it may be necessary to clean and polish the model more frequently. **Never** remove chalk residues on the sight glass with vinegar.

#### Warranty:

18. Finally, a few comments on the warranty. All WILESCO steam models are carefully checked before leaving factory. However, if a problem arises, we will be happy to assist, or carry out repairs. You can return the steam engine directly to WILESCO, or to the distributor. **We are sure you will appreciate fired models cannot be exchanged, but we undertake to repair any fault.**

19. For decoration of the Locomobile we deliver a team of horses with shaft. These items have to be ordered separately, art.-no. **Z431**. The above information has been given for you to obtain the maximum enjoyment from your Locomobile. WILESCO wishes you lots of fun, and full steam ahead!

Text & illustrations: Wilesco Wilhelm Schroder GmbH & Co., Germany