

Usage instructions

Tank renovation

with the 4-part tank renovation kit,
item no.: 88042-00S

Safety information

Make sure that you store tank cleaning and derusting agents, sealing wax, and reactants under lock and key and out of the reach of children.

Wear suitable protective clothing, rubber gloves, and protective goggles when carrying out all work. Keep away from any sources of ignition and do not eat, drink, or smoke. There are health risks associated with breathing in these agents or allowing them to come into contact with your skin and eyes. There is a danger of chemical burns!

If these agents come into contact with your skin, carefully wash all exposed parts of the body using water and soap. If these agents come into contact with your eyes, thoroughly rinse your eyes with water and consult a doctor. You should always consult a doctor if you have an accident or begin to feel unwell!

Information on disposal

Oil chemicals constitute hazardous waste and may not be allowed to enter into the sewerage system or the ground.

When disposing of these agents, use the appropriate disposal services in your region.

Sealing wax and reactants must be disposed of in accordance with legislation on waste paint, lacquer, and sludge.

Cleaning lye and derusting acid may be disposed of via the sewerage system provided that they are diluted. Use a ratio of 1:200 on the basis of the quantity of pellets used (for example, dilute 500 g of pellets with 100 l of water). Place the empty plastic containers in your yellow refuse bag or in the bin provided for such waste.

Preparation

- Empty the tank and rinse out with water. Then remove the fuel tap.

- Close the tank apertures with cork, rubber plugs, or suitable bolts, or seal with sealing material.

- The following items are required:

To prepare/warm the fluids:
Buckets, stirring rods, travel immersion heating devices, thermometer

To dry the tank: Hairdryer, towels, or similar

To empty/store the fluids used:
cans

To protect the external finish of the tank: Towels, film, adhesive tape, corrugated paper

A corrugated cardboard box provides good protection for the external finish. Simply cut out an opening for the tank filler spout and place the cardboard over the tank. This enables you to see immediately if lye or acid is leaking or splashing out, and prevents damage to the finish.

Cleaning and removing rust

1. Work step: Cleaning steel

The cleaning/degreasing agent is concentrated power that is dissolved in warm water. 40 g of powder makes around 1 l of cleaning solution.

- Place 570 g of powder in a bucket and add around 2 – 3 litres of warm water. Stir to dissolve. Use a funnel to pour this mixture into the tank. Then use hot water to fill the tank up to the brim.

Note: Dissolve 1070 g powder with 4 – 5 litres of warm water.

- Allow the cleaning agent (lye) to take effect for 30 minutes (longer for high levels of dirt). In the case of greasy, tarry deposits (2-strokes), allow the cleaning agent to take effect for around 4 hours.

- The temperature of the fluid must be between 50 °C and 60 °C during the reaction time. To ensure this, place immersion heating devices (for example, small travel immersion heaters) in the tank or use a suitable external heat source to keep the tank at the right temperature. Use a thermometer to check the temperature.

- Empty the tank after the reaction period.

Depending on how dirty each tank is, the cleaning fluid can be reused for between 5 and 10 tanks.

- Rinse out the empty tank several times with water.

If the tank is still not sufficiently clean, repeat the cleaning process.

2. Work step: Rust removal and neutralization

The rust removal agent consists of concentrated salt pellets that are dissolved in warm water. 40 g of pellets makes around 1 l of cleaning solution.

- Place 570 g of pellets in a bucket, add around 2 – 3 litres of warm water, and stir to dissolve. Use a funnel to pour this mixture into the tank. Then use hot water to fill the tank up to the brim. Note: Dissolve 1070 g of pellets with 4 – 5 litres of warm water.

- Allow the rust removal agent (acid) to take effect for 30 minutes (longer for high levels of rust). In the case of tanks that are very rusty, allow the rust removal agent to take effect for around 4 hours.

- The temperature of the fluid must be between 50 °C and 60 °C during the reaction time. To ensure this, place immersion heating devices (for example, small travel immersion heaters) in the tank or use a suitable external heat source to keep the tank at the right temperature. Use a thermometer to check the temperature.

- Empty the tank after the reaction period. Depending on how rusty each tank is, the rust removal fluid can be reused for up to 5 tanks.

- Rinse out the empty tank several times with cold water and then dry immediately with a hairdryer, fan heater, or hot air gun. If necessary, blast with compressed air.

The rust removal agent removes even heavy rust deposits, giving the derusted subsurface a

green/yellow/brown colour. If there is a loose, dusty, yellowish coating, repeat work steps 1 and 2 or clean the tank manually. To do so, place a handful of sharp-edged screws and a little cold water into the tank and move the tank from side to side. This removes any stubborn particles.

Sealing the tank

3. Work step: Sealing the tank with 2-component sealing wax

Description of material

Colour: Light gray or reddish brown in colour (does not contain formaldehyde)

Base: 2-component epoxide resin primer

For use at: Ambient temperature of between 10 °C and max. 35 °C

Surface: Resilient, smooth surface, resistant to all known fuels, oils, water, diluted lye/acids, alcohol, hydraulic fluid; can be painted over with acrylic and synthetic enamel.

Mixing ratio: 4: 1 by weight (for example, mix 200g of resin with 50 g reactant).

Sealing

After cleaning the tank using the cleaning agent and rust removal agent, allow it to dry for an entire day. The tank must be free from dust and cool before you can seal it.

1. First stir up the content of the tank resin container (remember the 4:1 ratio).

2. Shake up the content of the reactant can (remember the 4:1 ratio).

3. Add the content of the reactant can to the can containing the 2-component sealing wax. Mix the two substances together and stir for several minutes. The sealing wax is now ready for use.

The processing time is between 8 and 12 hours to apply two coats.

a) First sealing process 1

- First close the tank apertures – other than the feed opening – with cork, rubber plugs, or suitable bolts, or wrap with sealing tape.

- Pour the premixed tank sealing wax into the tank. Now seal up the feed opening with good-quality adhesive tape or using an old tank cap. If using the original tank cap, use a film barrier to protect the cap gasket.

- Turn and rotate the tank using rolling motions to evenly disperse the sealing wax.

The mixture must cover all of the interior walls of the tank.

In most cases, you only have to turn the tank for a few minutes. Then put the tank down and leave it for around 10 minutes to allow

any excess sealing wax to collect. Rest the tank in a way that allows the excess mixture to collect near the outlet.

Remove the outlet plug and pour the wax back into its container. Close the wax container and store in a cool place.

- Open the tank feed opening and allow the tank to rest for 3 – 4 hours to let the first coat dry off. The tank will then be ready for the second coat.

Drying

b) Second sealing process

- Pour the sealing wax into the tank again and close the cap to seal the tank for the second time.
- Again, let the tank rest for around 15 minutes in a position that lets any excess wax collect. Pour out the excess wax and repeat this step until no more fluid comes out. To ensure the smoothest possible sealing, turn the tank in the flow direction. This prevents the layer from being too thick and avoids excess accumulations of wax. Fluidity is retained for between 8 and 12 hours following the sealing process.

Drying the tank

Once the applied tank wax has hardened, you can position the tank with its feed opening facing downwards to allow it to dry. Remove the tank cap for this step. The tank will take around 8 days to dry thoroughly, although the exact period depends on the ambient temperature/room temperature and the thickness of the coating applied.

You can speed up the drying process by applying heat (max. 80 °C after 1 hour). However, it is better to let the tank dry naturally to ensure a smooth finish. If possible, aerate the tank every so often during the drying period, since there are hardly any air flows in the cavity. To do so, allow fresh air in.

You can carry out the sealing process a third time if you wish, either within the 8 hour processing time or following the drying period of 8 days. This may be necessary in the case of extreme surface roughness or if you are sealing over a previous sealing layer that has not been completely removed.

Storage of renovated tanks

Only fill with fuel after a drying time of 8 days. Tanks that have been coated correctly can be stored for a longer period of time without being filled.

Tips on removing residue

Some tanks have baffle plates or overlaps that allow too much excess sealing wax to remain in the tank. You can extract this excess sealing wax using a disposable syringe and a suitable petrol hose.

However, even thick sealing layers are effective. Even if cracking occurs, a reliable sealing layer forms directly on the steel plate.