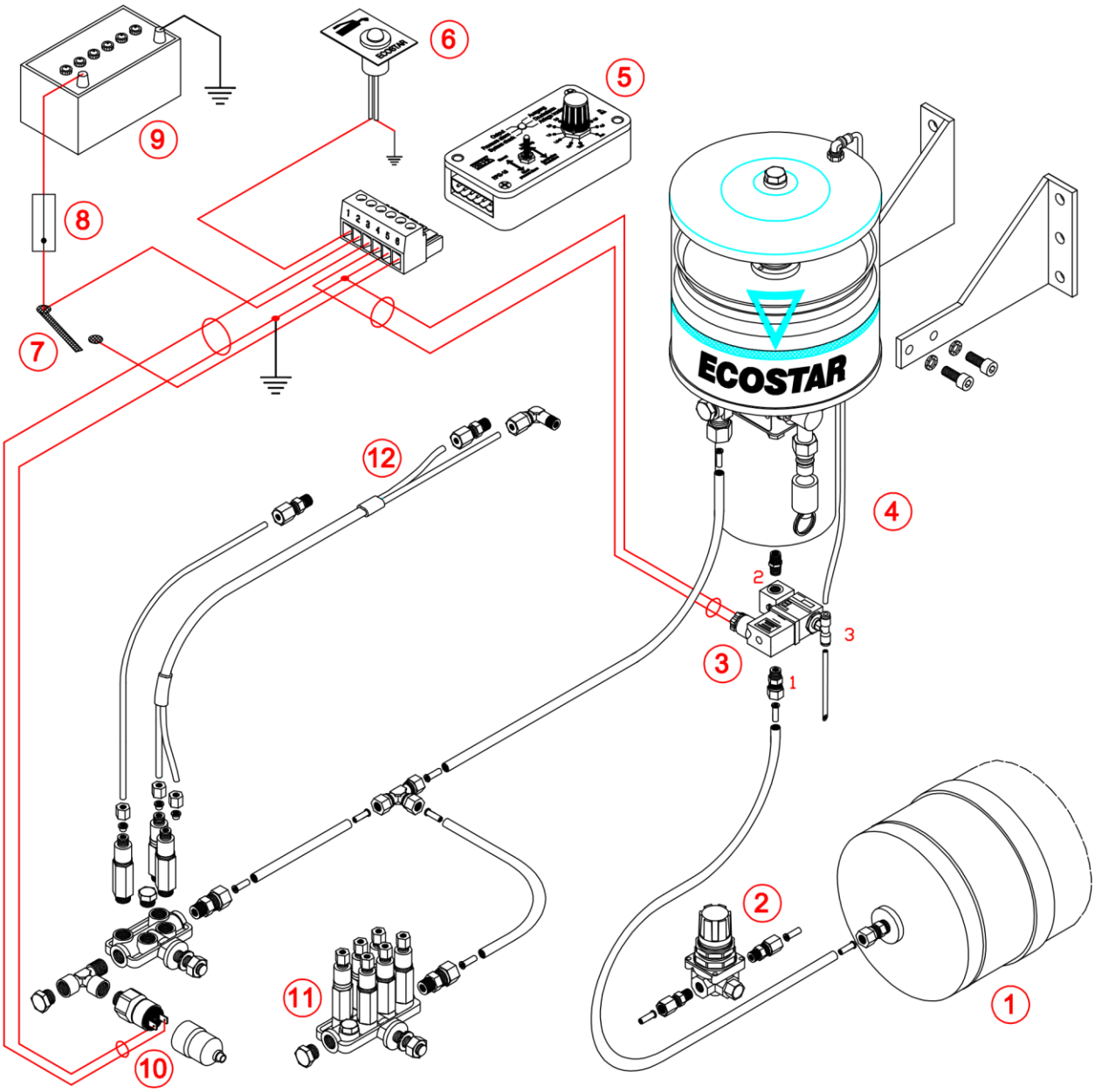
Operating Principle of the Truck System with an Ecostar PVP Grease Pump



1. (Air-ride) Air Tank
2. Pressure Reducing Valve
3. Solenoid Valve
4. Grease Pump
5. Timer
6. Indicator Light on dashboard
7. Ignition Switch
8. Fuse (min. 3 Amp)
9. Battery
10. Pressure Switch
11. (Bronze) Manifold with Meters
12. Grease Points

(from Ecostar Manual produced by STERK Technisch Adviesbureau, Ed 12/12)

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When the ignition of the truck is turned on (7), the grease pump (4) is activated by the timer (5) mounted in the cab and the solenoid (3) fitted under the pump.

The pressure in the pump will rise (visible if there is a pressure gauge mounted on the pump) to approximately 1000 psi when the air-ride system pressure (1) is between 110-140 psi.

The light on the truck dash (6) will glow red for +/- 3 minutes while the pump is under pressure and then it will go out. If it stays on, there is a fault (leak) in the system.

The timer measures time for as long as the ignition is on. The timer is usually SET at 2.5 hours. When that SET time is reached, the timer sends a signal to the solenoid valve. The solenoid valve opens increasing the air pressure in the grease pump, which will press grease into the main tubing (5/16" or hydraulic line), manifolds and meters (11), through the secondary tubing (3/16") to the grease points (12). After +/-3 minutes, the solenoid valve closes, the air in the grease pump is released and the grease pump pressure falls away. The indicator light on the dash goes out until the next cycle.

Operating Principle of the Trailer System with an Ecostar PVP Grease Pump

The operating principle of the trailer system is similar to above truck system, but the timer is different. The timer is mounted with the solenoid, under the pump. The light is on the timer itself.

There is no pressure switch on a trailer system.

Notes:

The air-controlled grease pump is largely made from stainless steel and equipped with a support piston in the grease container that provides a clear indication of the grease level.

The meters are largely the same size externally, but have different size chambers internally. The size of the meter is chosen to deliver the right amount of grease, based on the type of point being greased.

If the supplied air pressure is higher than +/- 174 psi, a pressure reducing valve must be employed (2).

The pressure switch (10) is related to the dash light. There is no pressure switch on a trailer system.

EP00 or EP0 grease must be used. Other greases will clog the lines and meters.