



# **STANDARD OPERATION PROSEDURE FOR PUMPING SYSTEM (VEHICLE MOUNTED)**



## **Engage PTO system from cabin**

1. Apply parking brake
2. Engine at idling RPM.
3. Shift gear to natural position,
4. Press EXT switch.
5. Unlock the PTO switch lock and switch on, now the PTO system are engage.

## **Disengage PTO system from cabin**

1. Reduce engine RPM to idling
2. Switch off the PTO switch .
3. Now the PTO are disengage.

## Engage PTO system from rear control panel



1. Apply parking brake
2. Make sure engine at idling RPM (600).
3. Press the foot paddle brake than shift gear to natural position.
4. Switch on EXT system by pressing EXT switch.
5. Steep down from the cabin than go to the rear control panel.
6. Switch on the PTO ON switch **(B)** by pressing the PTO switch.
7. The PTO switch lamp indicator **(D)** will on when the PTO engage.

## Disengage PTO system from rear control panel.



1. Reduce engine RPM (**G**) to idling RPM by turn anti clock wise the RPM THROTTLE knob (**K**).
2. Switch off the PTO switch by pressing the PTO OFF (**C**) switch.
3. The PTO lamp indicator will off, now the PTO system is disengage.

### PTO system safety measures

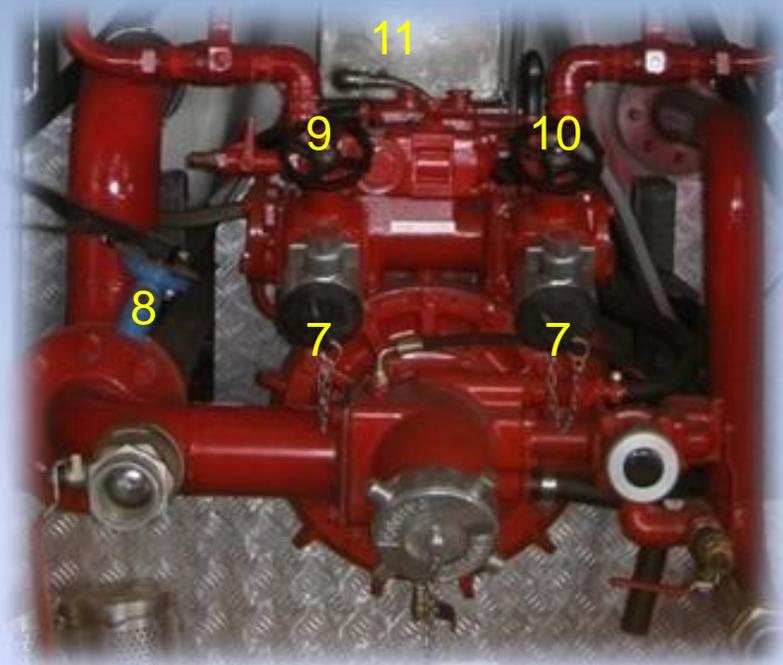
1. Make sure apply the parking brake before engage PTO system. It mean pumping system only can operate when vehicle is in stationery position.
2. In pumping system operation, the PTO system **automatically disengage** when the parking brake is release/off.

## Filling water tank from hydrant



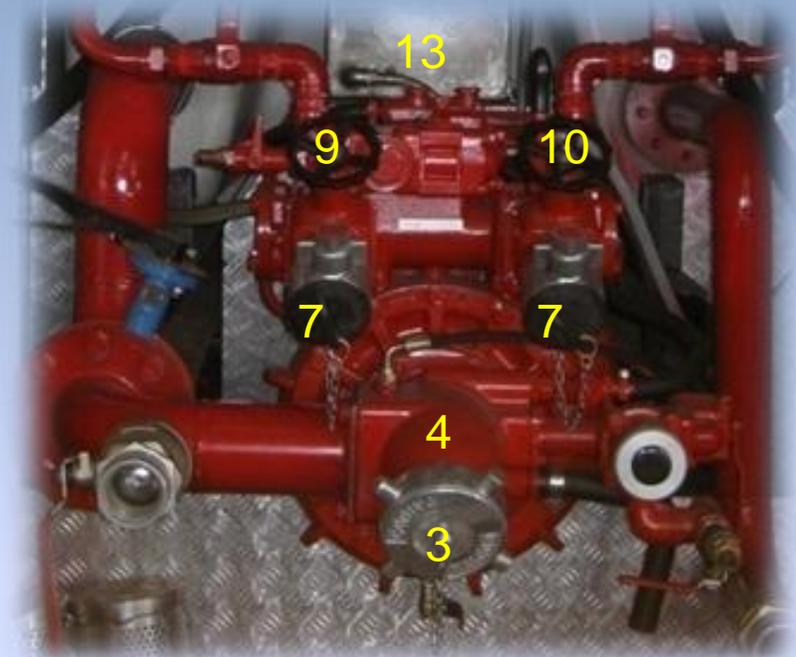
1. Remove the hydrant dust coupling than open hydrant valve with hydrant key.
2. Briefly flush the hydrant beforehand.
3. Remove the dust cap from the hydrant coupling than fitted the suction adaptor.
4. Remove the dust cap (**1**) from the filling line pipe. Connect the delivery hose from hydrant to the filling line coupling (**2**)
5. Open the hydrant. For sufficient flow the hydrant pressure is **4 bar**.
6. During filling continuously monitor the level indicator
7. The water will flow from over flow valve when the water tank is full.
8. Close the hydrant valve.
9. Reduce the pressure in delivery hose.
10. Disconnect the delivery hose.
11. Plug in the dust cap to the filling line.

## Operating pumping system from water tank



1. Apply the parking brake.
2. Shift the gear to natural position.
3. Switch on EXT system.
4. Prepare the delivery hose (2 1/2" or 1 3/4") and hose nozzle .
5. Remove the cap fire hose coupling (6) from the pump outlet (7)
6. Connect the delivery hose to the pump outlet (7)
7. Open the tank outlet butterfly valve (8)
8. Open the priming water supply ball valve (11)
9. Engage the PTO system by press the PTO ON switch (B)
10. Increase the engine rpm by turn clockwise the RPM THROTTLE knob (K) click by click to **2000 rpm**.
11. Monitor vacuum pressure (H) and low pressure (I) at control panel gauge.
12. Open the pump outlet ball valve (9 & 10) slowly until to the end, than monitor the low pressure gauge.
13. To achieve delivery pressure at 7 bar increase the engine rpm to 2400 rpm.

## Operating pumping system from open water/open source



1. Apply the parking brake.
2. Shift the gear to natural position.
3. Switch on the EXT system.
4. Prepare hard suction hose, connect the suction line
5. Attach the metal strainer and the filter basket to male end of the suction hose than tie up with the suction line.
6. Remove the dust cap **(3)** of the suction line coupling **(4)** than couple/connect the suction hose to the pump suction line.
7. Secure all the coupling with 4" universal suction wrench.
8. Place the suction hose into the water supply than engage the PTO system.
9. Prepare the delivery hose & nozzle than connect to the delivery outlet **(7)**
10. Open the ball valve **(13)** for priming water supply. Increase engine rpm click by click to 2100 rpm.
11. Monitor the vacuum pressure gauge **(H)**, normally the pressure - **0.25 to - 0.3 bar**.
12. Slowly open the delivery outlet valve **(9&10)** for delivery hose.
13. The priming system will cut off automatically when optimum suctioning is achieved.
14. After fire fighting work done, decrease the engine rpm to idling rpm.
15. Disengage the PTO system. Reduce the pressure inside delivery hose

## Rapid intervention equip/First aid/Hose reel



On the occasion of the first intervention it is advisable to operate the rapid intervention equipment via tank and open source.

1. Release the turbo jet nozzle from the lock. Pull the delivery hose from the reel to the desired length.
2. Open the ball valve **(11 or 12)** for delivery outlet.
3. Select the water flow at the turbo jet nozzle (fog pattern or straight stream pattern).
4. Select the pressure deliver between Low pressure and High pressure by push the pressure lever.