

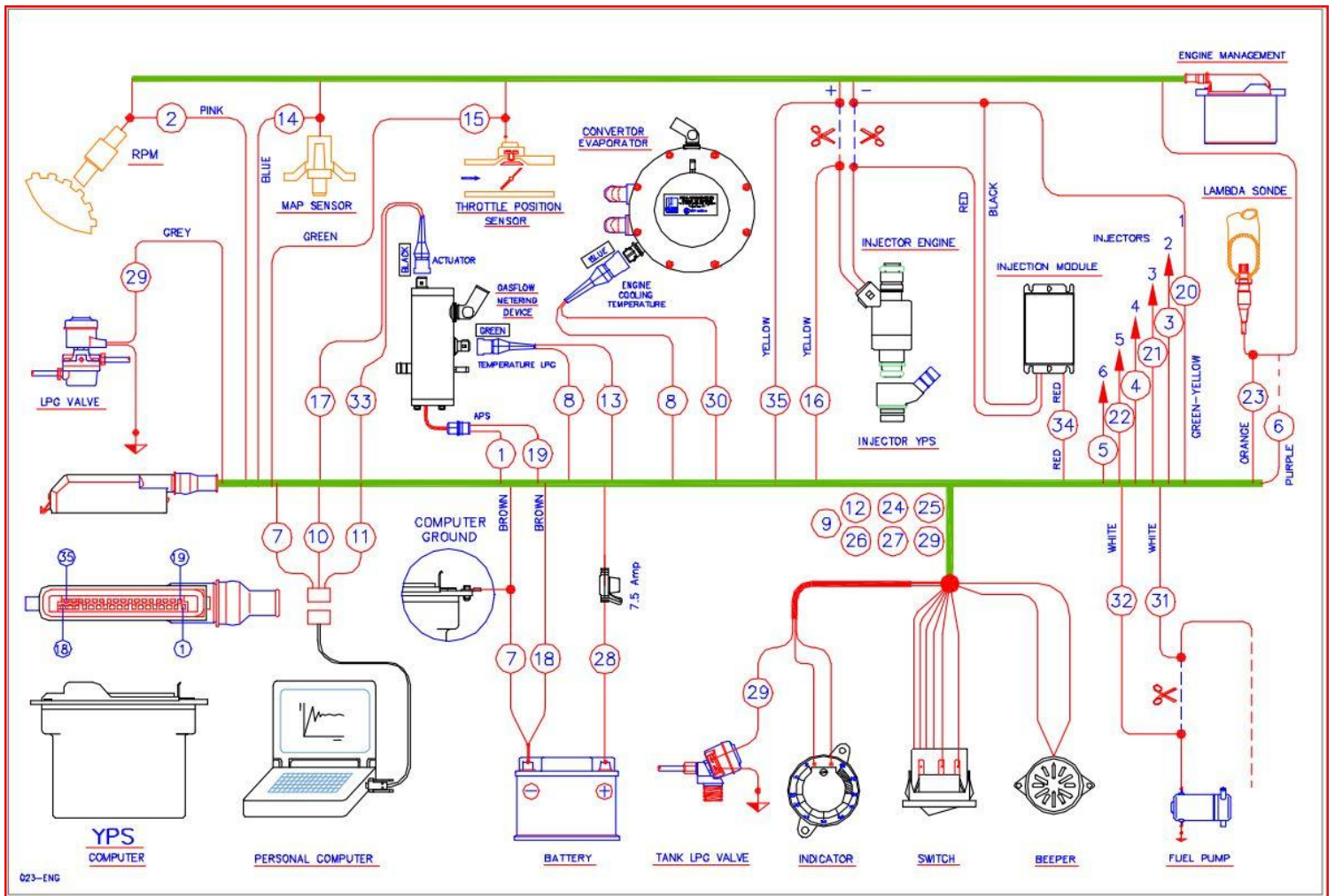
YPS description

(Only for internal use)

Short description:

YPS is the precursor of VSI. The system measures all the fuel injectors and injection signal has to link to. On this basis, through a kenveln an opening stand of the dosing determined. The dosage unit provides a constant gas flow. So not the opening but the opening stand determined the amount of gas the engine gets.

Schedule Overview:



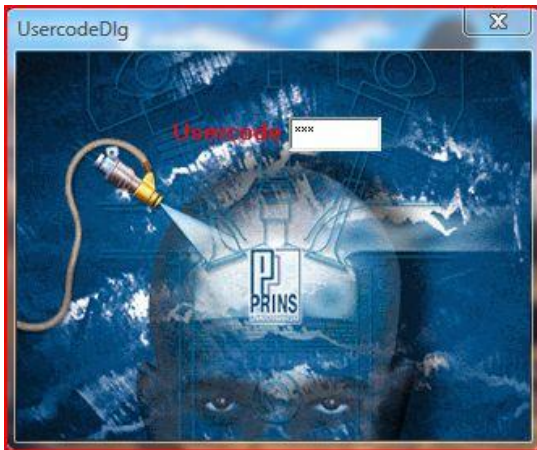
Short description elements:

- **Injector nipples:** NOTE: these have a way of 2.6mm and **are** not interchangeable with VSI! Placing just like to VSI as close to intake valve. Plastic between pieces (between fuel injector and manifold) were also frequently used. There have to be placed in a brass calibration.
- **Evaporator:** 1 stage evaporator adjusted to + / -0.4 a 0.45 bar. However, this pressure is the influence of the pressure control valve and the calibrated injector nipples. Stationary Pressure: + / -0.5 bar. Press during full load at high revs to + /-0.8bar pressure. This is offset by the tube which is connected to the dosing. Because the injector nipples indicate a resistance to a higher flow, a pressure in the dosing and hence the evaporating pressure. The evaporator is based on the first stage of the Poli Auto C4/C5 evaporator. (Siphon principle) Evaporator is almost never break .
- **Dosing:** The dosage unit is a plunger (which is often described as a bullet because of its shape). The 8mm plunger can be moved, the farther it is open the greater the passage and the more gas it goes to the engine. Plunger is closed by a spring and pushed open (against the spring pressure) by an electromagnetic coil. (top cap). There is also a measuring coil (bottom cap), which measures the position and take this back to a computer. (800 measuring positions, 0 is closed, stationary in a Hyundai Accent is + / -100 ~ 120 on a Voyager + / -150, full load goes to + / -800) **dosage units is sensitive to pollution and the advice to him in any maintenance and / or repair clean. (what man does not!)**
- **Pressure control valve:** function: Splitting of the gas cylinders and 4 "nuldrukklep. (stopping the pressure from the manifold, the gas should not be sucked out of the dosage unit.) Testing: If the 12mm from the lamp blows should feel pressure but it can blow through. sucking effect should be blocked . Pressure control valve is basically no problems.
- **Injection Module:** 091/0145 with interruption of the fuel injectors by YPS + ECM.
- **YPS computer:** Black plastic computer, but same housing as AFS Pin assignment (and force) is different.

Diagnostic Program:

YPS has its own diagnostic program and cable. The program is written for Windows 98 and a handy man gets (sometimes) but on XP officially under way but that does not. It is the forerunner of VSI and the operation is also substantially the same. Program has only COM port 1 & 2. Conduct USB cables work so only if enough computer nerd who is to be set to COM 1 or 2.

When starting the program code **543** to enter parameters to change. (2 stars, enough for mixture to set.)



The program:

Numeriek en grafisch	
1 VarList1	empty
2 VarList2	empty
3 VarList3	empty
4 VarList4	empty

Numeriek	
5 VarList5	empty
6 VarList6	empty
7 VarList7	empty
8 VarList8	empty

Foutcodes: 0, Uitlezen

Status COM[x]: COM1: (green), COM2: (white), Geen YPS data

Legend: LineFast1, LineFast2, LineFast3, LineFast4

Cable Diagnostics:

There is a special diagnostic YPS cable, it looks like a black box without VSI cable and a 3 pin connector (instead of 4 VSI) on the side YPS.

Key parameters:

DCY: measure of the benz petrol. Comp. to inject. (equivalent to DCY_petrol of VSI)

ACW: AC stands for actuator (the dosing) and w wish for. The value of the dosing so desire. DCY and determined the specific car kenvel.

Normal values: idle on a Hyundai Accent is + / -100 ~ 120 on a Voyager + / -150 (without air conditioning), full load goes up to + / -800.

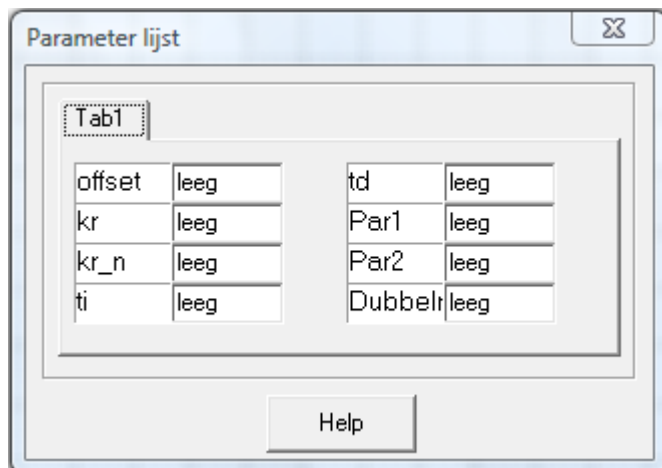
ACM: The position measured value of the dosage unit. At 0 benz in theory into practice (by measuring deviations) is between -35 and 35 is acceptable. ACW on gas must follow.

Learning: As the plunger terms of flow is sensitive to pollution, we can learn for the stationary area. 'Learn' indicates how much is learned. We learn only at idle, not while driving.

L_werk: a ratio value between MAP and injection time. For (small) tax changes (eg air) L_werk not change. If the comp to the benz verijken or poorer L_werk it is changing. This way we can determine we have to learn (so the fuel computer not have to.)

Benz_stationair or **B_idle** (depending on the version of the diagnostic program): what we see as normal L_werk value. This is when gasoline company determined to adjust the car and for the OEMs not to change.

Offset: (adjustable with F2 key from 2 stars) This is all kenvel shifted up or down. (idle to full load) at the same petrol engine is getting more or less gas. **Offset of 80 is standard.** (In Trajet 2.0 standard is 115) Normal values between 60 and 130. If you out there need then usually something wrong.



The above table is the table you see when you press F2.

Only Offset OEMs may change. (Steps of 10 is normal, tuning in steps of 5) All other parameters at default value!

Default values are:

- Kr = 26,
- Kr_n = 26,
- Ti = 5 or 8,
- Td = 16, the rest is auto dependent.

Other self explanatory parameters:

RPM, injection time, position of switch (LPG / benz), lambda, MAP, T_ECT, T_LPG, TPS and still not a lot of interesting parameters.

Tuning

Offset Adjust: driving while using the fuel trim (OBD tool) the offset adjustment. Stationary value to our learning only solution, but at full load, the Ti_max_fac intervention.

80 is the default value for the offset (only 2.0 standard trajet 115), adjustment between 60 and 130.

Steps from 10 to adjust, 5 steps for fine-tuning.

Optional control of learning:

The screen moves: Leather, L_werk and benz_stationair (also known as B_idle)

If learning is gone far away (more than + or -30%) than with first reset fuse.

Then, if T_ECT > 72graden RPM & < 900 engine has been running a few (2?) Minutes then goes YPS L_Werk compare benz_stat. If L_werk lower (> 2) than benz_stat then goes down learning. If L_werk higher up than he teaches. With learning (and thus enrich or impoverish) changes the mixture and thus the L_werk. If L_werk equal to benz_stationair then stop learning.

CAUTION: L_werk moves up and down with the lambda system, the YPS program is therefore an average value of L_werk called 'long term'. Learning begins long term only if 2 is higher or lower than benz_stationair.

Diagnosis:

Car will not switch to:

1. **+ Battery & battery / RPM** -> YPS comp-food needs in the red wire behind the switch set. (middle pin) (in the dashboard switch is clicked and so can be pulled out) -> If not: ECM failure!

Switch to this diet by the yellow line which loops back to the ECM.

2. **RPM >= 1600 & TPS TPS_min & T_ECT => 30 degrees and engine has been running a number of x seconds (30sec cold, warm 5 sec)** In other words, once accelerate and release the engine is warm -> then the ECM switch. If not then try moving. TPS_min is because during fuel cut off be taught.

Auto switches are to turn it off immediately.

1. Check the valves open. (Is almost never wrong)
2. On **petrol (!)** The ACM control. Must lie between -35 and 35 +. Dosage unit is then closed, in theory it should say 0 but is allowed a limited uncertainty. Keep in mind: If ACM on gasoline has bv and -100 indicate the idling ACW is 150 then the engine opening stand of 250. From -100 to 150 is because 250 steps!
3. At time of check conversion ACM from 0 up to the shooting ACW value.

If ACM are still at 0 then there are a number of possible errors:

- a. Plunger dosing is displayed in the closed position. Usually occurs only after dwell of the engine. Solution: clean Dosu
- b. Dosing control in the computer is broken. Control: Open Computer screws, connector top, top left are 3 relays in a row (4^e is lower) in ^{the} 1st ^{and} 2nd relay is a blue capacitor and right below is a black IC with 8 legs. If this fails is usually a small spot fire on the IC to see.

This will break if:

1. Closure of dosage unit is in top cap. (Must be 9.3 Ohm)
2. Plugs and top sides are reversed. (Black has over (control dosu), green side. (T_LPG))
3. In rare cases spontaneously.

Auto switches but runs poorly. (Punches, content)

1. Standard answer: Dosu clean! If that does not even replace.
2. Offset setting control.