

PS400A INJECTOR CALIBRATOR manual

I. Safety precaution:

Being operated, the INJECTOR CALIBRATOR must be far away from flame or high temperature place. Such as welding and so on.

II. Purpose of the INJECTOR CALIBRATOR:

It is used to adjust and calibrate the injecting pressure, atomizing quality, injecting angle and needle valve seats of diesel engine in order to ensure excellent power and economic performance of diesel engine.

III. Main technical parameter of the INJECTOR CALIBRATOR

No.	Type	Pressure gauge range (Mpa.)	Overall dimensions L×W×H (mm)	Capacity of fuel tank (L)	Largest pressure tested (Mpa.)	Net weight (Kg)
1	PS-400A	0 ~40	160×100×380	1.0	40	6

IV. Performance of the INJECTOR CALIBRATOR

Block the joint where the nozzle is connected. Pump oil to a pressure over 30Mpa. Then stop pump and watch the pressure descending from 30 Mpa. It is less than 2 Mpa within 3 minutes.

V. Operation and adjustment of the INJECTOR CALIBRATOR

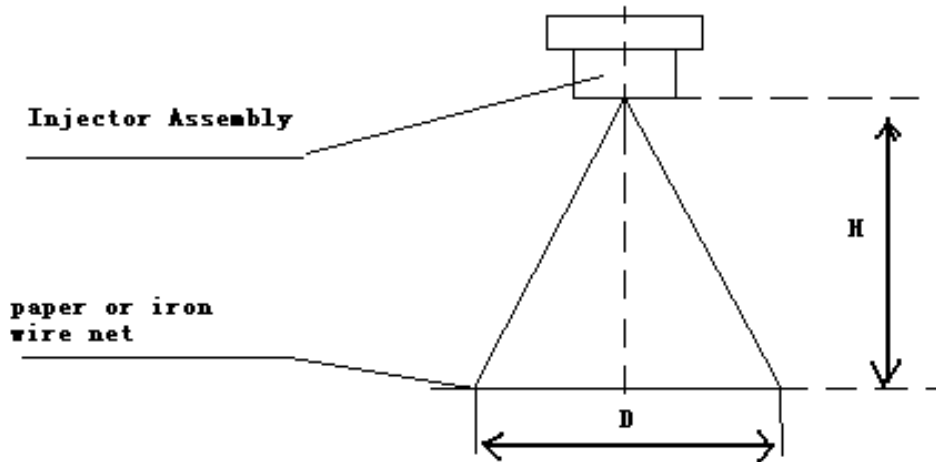
1. Fix the tester on stable work-table by using four bolts of the base-plate.
2. Working environment must be clean, so must operator's hands and clothes must be clean. No operating out of the room is allowed.
3. Precipitate light -10 diesel over hours. Filter it through strainer. Then put the filtered diesel into tank. Don't put into it with unqualified diesel.
4. Testing of injection pressure of injector assembly

Turn the injector assembly tested onto the nozzle joint tightly with high pressure pipe then do

The experiment and adjustment of pumping fuel. When pumping fuel, watch the reading on the pressure gauge at the same time, compare it with the specified pressure range of the injector assembly to see if it is normal. If the pressure is too high or too low, adjust the pressure spring of injector assembly.

5. Adjustment injecting angle.

Test the injecting angle ensure the injecting pressure is adjusted. Put a piece of white paper or a piece of iron-wire net painted with grease under the nozzle in the distance H.



Repeat to pump fuel until you can see clearly a fuel circle or an empty circle in the iron-wire net. Measure height of “H” from the mouth to the net (paper) and diameter of outer circle. Injecting angle may be calculated according to the following formula:

$$\text{Tg } a/2 = D/2H$$

6. Experiment of Atomizing Quality

Watch the atomizing quality of fuel injecting. The fuel grain should be tiny, well distributed. No fuel current (or drop) seen with eye. No obvious fuel stain appears if it is injected on the oil absorbing paper. Color of fuel stain from center to outer circle should become lighter and from well distributed circle. Pumping fuel should be quick. There is no fuel drop or fuel dropping after pumping fuel. Atomizing should be correct. Its taper angle should be within specified range.

VI. Maintenance of the INJECTOR CALIBRATOR

1. Calibrating fuel must be good quality light diesel deposited over 48 hours.
2. When filling fuel, filter it with silk-cloth. Do not fill tank with unfiltered diesel.
3. Cover the tester with anti-dust cover after testing.