

**INFORMATION - BULLETIN** No. M 332/9

To be recommended.

Sheet: No. 1.

Number of sheets: 2

Object: M 332 engine starting.

Reason: M 332 engine starts badly.

It is recommended: The experience, obtained at the engine running in all climatic zones has shown, that the engine starts easily when keeping the following starting procedure:

1. Prior to engine starting flood the injection pump and the fuel piping with fuel until the fuel pressure gauge shows a pressure of approximately 0,2 - 0,3 atm. At an unsuccessful starting trial repeat always this operation because the fuel pressure after several injection pump revolutions will fall as low as to 0, because the semi-rotary delivery pump will not be able to keep this initial pressure.
2. By means of a board priming pump inject several doses of fuel into the induction manifold. One dose is about 3 - 4 cm³ of fuel. This priming is more effective than the fuel injection by the fuel nozzles, when cranking the engine. It is most effective to carry out the fuel priming simultaneously with the engine starting.
3. Set the main lever /the throttle lever/ in the position corresponding to approximately 1000 R.P.M. of the engine.

Date: Jinonice, 19th December, 1959.

Frano n.p.
Manufacturer

Berevanský n.p.
Supplier's Representative

4. The correction lever is in its basic position - /minus/
i.e. poor mixture. In a hot /tropic/ or a cold weather :
is in the range between - N /minus to normal/. In a very
cold weather only, below +5° C, it is shifted behind the
N /normal/ position by 2 divisions in the position +
/plus, i.e. rich mixture/.
5. These points have been gathered in the tabular summary
for starting.

TABULAR SUMMARY FOR STARTING.

Atmospheric air temperature	Control levers		Fuel priming	Note
	Main lever	Correction lever		
+30°C - above	In the position, corresponding to approximately 1000 R.P.M.	\overline{N} /Normal/	3 - 4 priming pump strokes	At overflooding do not rotate back, keep the constant flooding of the injection pump of 0,2 - 0,3 atm.
+30° to 20°C		- /minus/	2 - 3 priming pump strokes	
+20° to +5°C		- /minus/ \overline{N} /Normal/	2 - 3 priming pump strokes	At overflooding rotating back is possible.
+5° to -15°C		+2 divisions	3 - 4 priming pump strokes	Cold start.
-15°C and lower		+2 divisions	3 - 4 priming pump strokes	Cold start and heated through engine by warm air to the engine temperature approximately 20°C.
Warm engine starting after previous flight.	At 50 % of lever range	- /minus/	No priming	No rotating - danger of injury!
Engine starting in flight with cooled down engine	Approximately at 1000 R.P.M.	+2 divisions	3 - 4 priming pump strokes	

When keeping this procedure, the M 332 engine must start easily. In an opposite case the defect is to be looked for in the fuel and ignition system.