

12) Lubrication system

If the engine is to be used inverted (with spark plugs pointing down) select a lubricant which features low carbon deposits. Oil residues tend to drain to low points, i.e. spark plug cavities. If these residues fail to burn during normal operation, plug fouling will occur, possibly causing pre-ignition. Producers of suitable lubricants will issue warranty of their products.

12.1) Mixture lubrication

Refer to latest version of current Operator's Manual.

12.2) Oil injection for engine lubrication

12.2.1) General advice:

The oil pump driven by the crankshaft via the pump gear supplies fresh oil for engine lubrication. The oil pump is a piston type pump with a metering system. Via diffuser jets in the intake cover or intake socket each cylinder is supplied with exactly proportioned quantity of two-stroke oil. The oil quantity consumed is defined by the engine r.p.m and the oil pump lever position. This lever is actuated via a Bowden cable connected to the throttle cable. The oil flows to the pump from an oil tank by gravity.

▲ **WARNING:** In case of fresh oil lubrication the carburetors are supplied with pure gasoline (no oil/gasoline mixture).

12.2.2) Technical data and configuration:

Oil: Super two-stroke oil.

The oil pump assy. features an oil return nipple and two oil exit nipples with integrated check valve.

12.2.3) Installation

- 1) Oil tank capacity: The oil tank size should be more than 5 % of the fuel tank capacity.
- 2) The oil tank bottom outlet must not be below the oil pump inlet nipple, even at the greatest possible inclination of the aircraft (i.e. dimension Hs must be greater than zero, see fig. no. 20).
- 3) Use a firm, oil-resistant suction hose which cannot be squeezed. Secure it with clamps at the connections.
- 4) Install an adequate oil filter between oil tank and oil pump.
- 5) Install a Bowden cable to actuate the pump lever simultaneously with the carburetors.

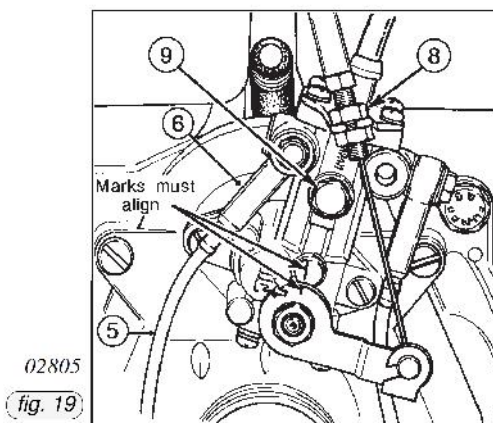
■ **ATTENTION:** At a pump cable breakage or failure. On the ROTAX 582 engine, oil pump is set to minimum discharge. On the ROTAX 503 engine the oil pump is set to maximum discharge.

- 6) Adjustment of oil injection pump alignment marks: At throttle lever idle position the 2 marks must align (see fig. no. 19).
- 7) Vent the suction hose before engine start by opening the vent plug (see fig. no. 19, pos. 9) until all air is vented from that line. Close vent plug carefully.
- 8) It is recommended to fill the first tank of fuel with a gasoline oil mixture at a mixing ratio of 100: 1. This is for safety until the complete system is properly filled with oil.

◆ **NOTE:** This oil injection will not affect or replace the rotary valve gear lubrication nor the reduction gearbox lubrication.

Installation at ROTAX 582 UL DCDI and 582 UL DCDI mod. 99

- (1) Engine
- (2) Oiltank
- (3) Suction hose
- (4) Oil pump
- (5) Discharge line
- (6) Checkvalve
- (7) Oil intake port
- (8) Adjuster nuts
- (9) Venting
- (10) Oil filter



◆ **NOTE:** Oil pump aligning marks for the 503 and 582 are identical.

