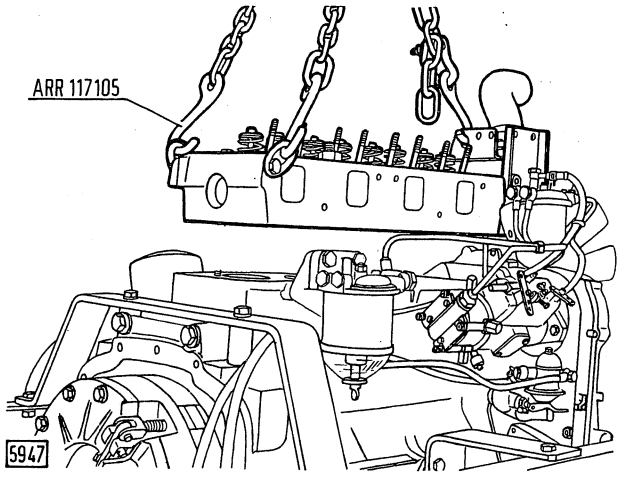

Fig. I/5 - Removing cylinder head from engine installed on turnover stand.

Generally speaking, the cylinder head gasket cannot be recovered for successive use, as it is smeared with a jointing compound which makes it stick to the mating surfaces under the effect of heat.

In case of major engine overhaul, the cylinder head is removed from the engine once the latter is suitably installed on the shop turnover stand (Fig. I/5).

Checking the cylinder head.

For complete inspection and checking of the cylinder head it is best to remove valves, valve springs and nozzles and to clean the mating surface, valve seat and passages.

Check the cylinder head mating plane by moving it over a surface plate smeared with lampblack or blue until the high spots show up; smooth them down with a hand scraper if warping is very slight, otherwise re-face it with a surface grinder.

If valve seats are to be re-cut, the cylinder head mating plane can be ground to a depth not exceeding 0.5 mm (0.020 in).

In case of grinding we suggest that a copper washer of suitable thickness be placed inside the nozzle seat so to maintain the nozzle projection above the cylinder head at the same value as before; also, make sure the valve recessing from the cylinder head plane does not exceed 0.7 ÷ 1.1 mm (0.03 ÷ 0.04 in) (Fig. I/6). The height of a new cylinder head is 92 mm (3.662 in).

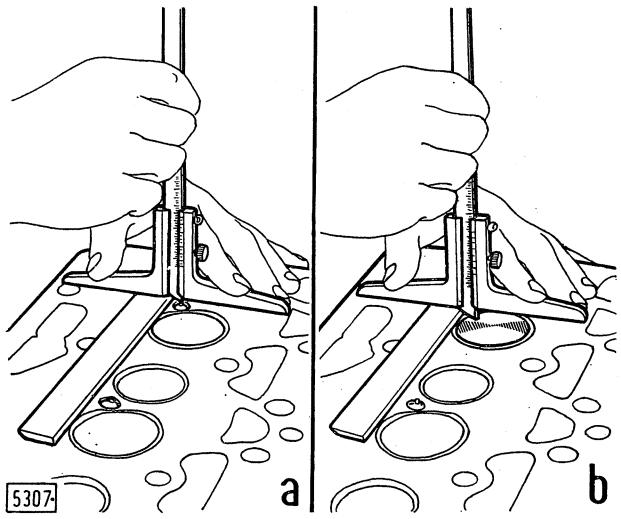

Fig. I/6 - Mesauring nozzle projection above cylinder head plane (a) and valve recessing (b).
(Nozzle projection: 2 ÷ 2.5 mm = 0.08 ÷ 0.10 in. Valve recessing: 0.7 ÷ 1.1 mm = 0.03 ÷ 0.04 in).

Check the expansion cups and threaded plug for water and oil tightness and replace them if unreliable.

Following checks, inspections, and grinding, wash cylinder head in kerosene to remove even the slightest trace of abrasive matter.

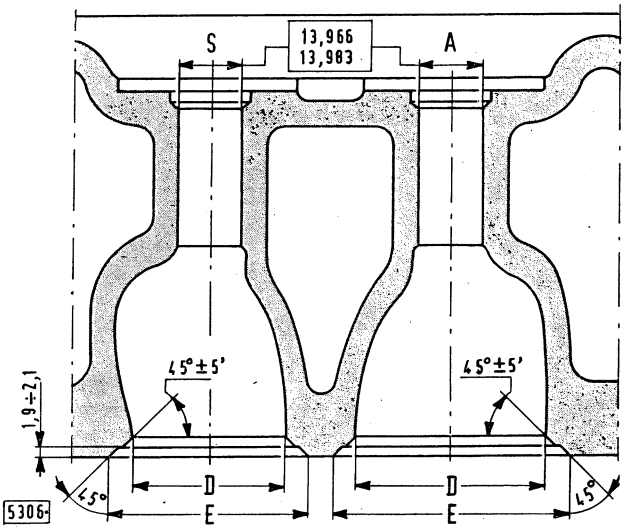

Fig. I/7 - Dimensions of intake and exhaust valve seats and of valve guides in cylinder head.

Valves	(A) Intake		(S) Exhaust	
	mm	in	mm	in
dia. D	40	1.575	33	1.299
dia. E	48.6	1.913	41.6	1.637