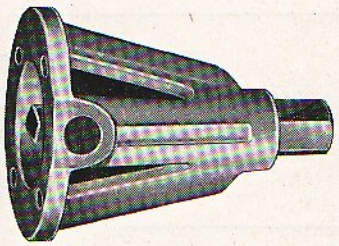
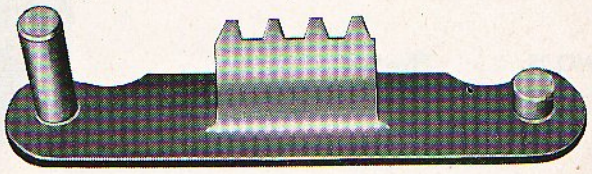
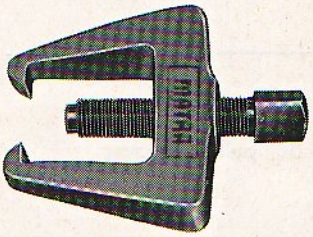
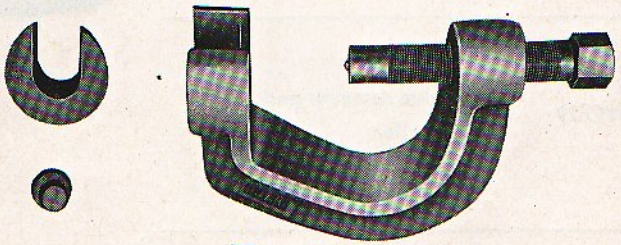
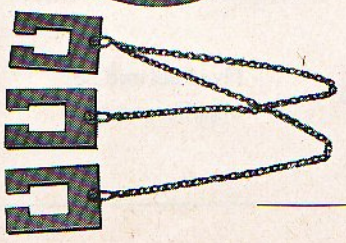
# Main Group S

Shop Equipment

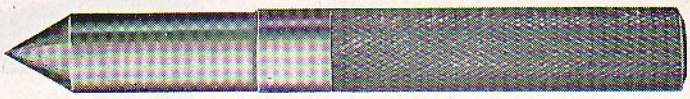
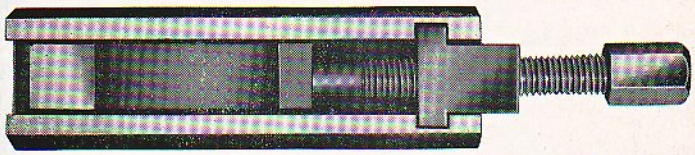
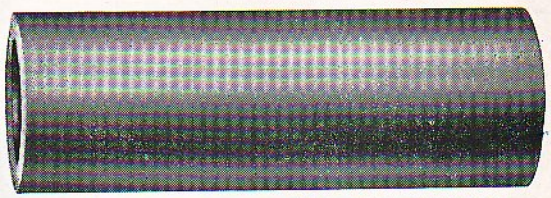
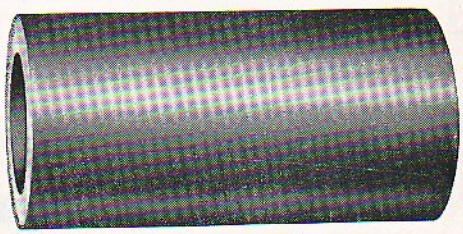
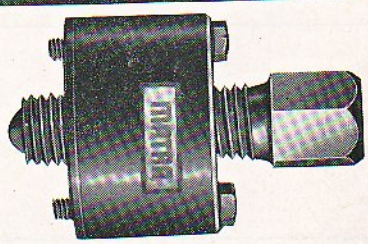
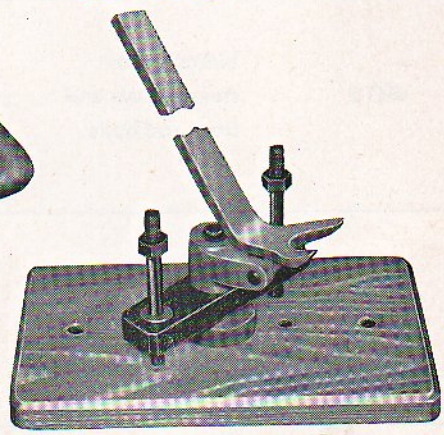
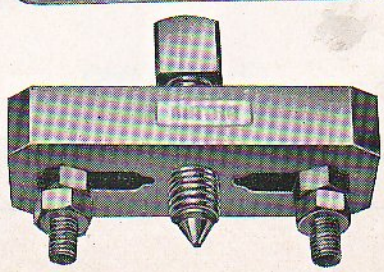
S

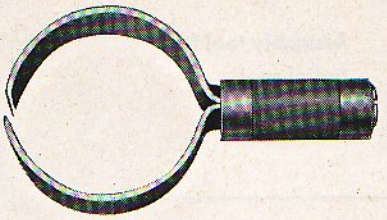
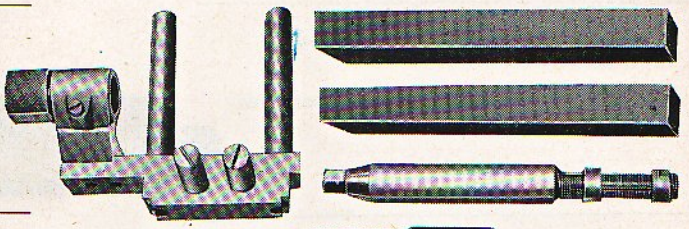
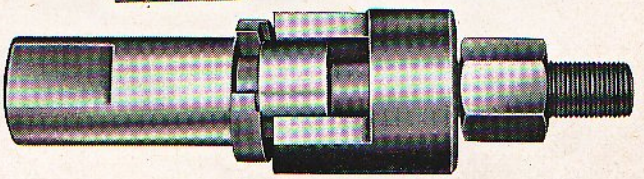
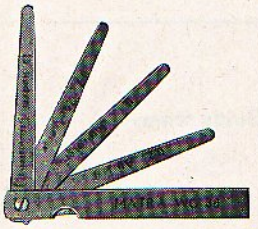
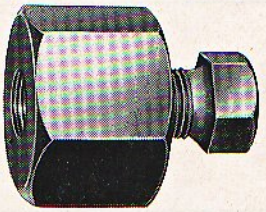
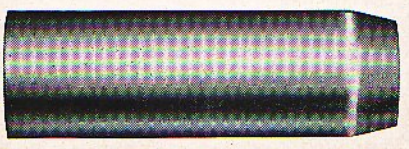
1 – Sub-Group Special Service Tools

2 – Sub-Group Equipment for Repair Shop

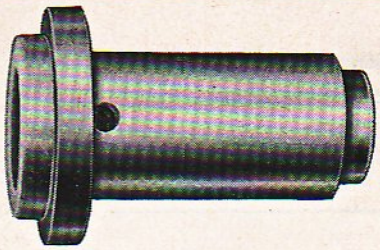
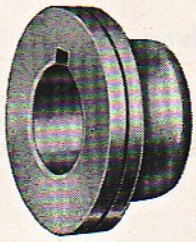
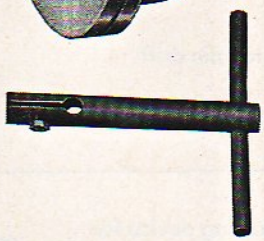
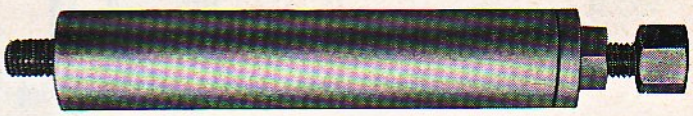
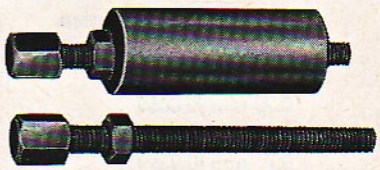
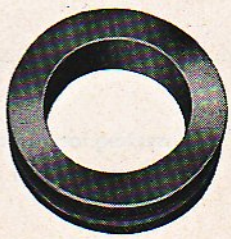
| Tool No. | Designation | Figure |
|---|---|---|
| WO 1 | Special wrench for brake drum |  |
| WO 2 | Rear-wheel hub puller |  |
| WO 4 | Flywheel clamping fixture |  |
| WO 7 | Special wrench for caps |  |
| WO 8 | Spring bolt guide |  |
| WO 9 | Extractor for steering arm and track-rod bolts |  |
| WO 20 | Steering wheel remover |  |
| WO 21 | Feeler for clutch assembly |  |

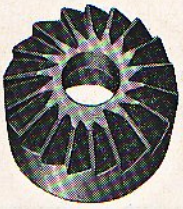
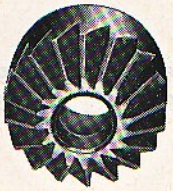
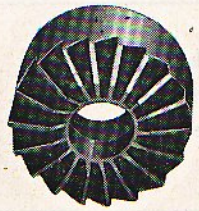
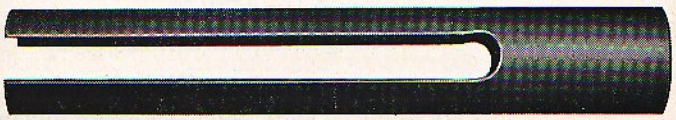
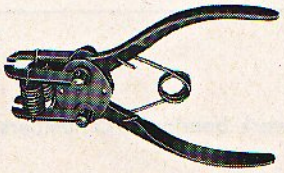
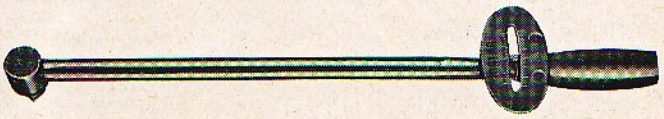
## Special service tools for Lloyd 600

| Tool No. | Designation | Figure |
|---|---|---|
| WO 22 | Clutch assembly drift |  |
| WO 23 | Inner joint remover |  |
| WO 25 | Flywheel driving tool |  |
| WO 26 | Belt pulley driving tool |  |
| WO 27 | Camshaft centering flange remover |  |
| WO 28 | Belt pulley remover |  |
| WO 29 | Valve remover and installer |  |
| WO 30 | Flywheel and fan impeller remover |  |

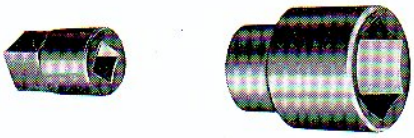
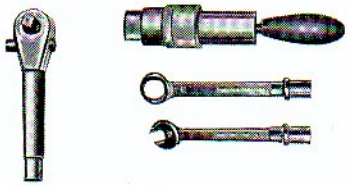
| Tool No. | Designation | Figure |
|---|---|---|
| WO 31 | Piston ring compressor<br>Piston diam. 77 mm<br>(3.0315") |  |
| WO 32 | Piston pin remover |  |
| WO 33 | Piston pin drift |  |
| WO 34 | Reaming device for<br>connecting rod bushings<br>Check bars WO 34/7 |  |
| WO 35 | Remover and installer<br>for piston pin bushings |  |
| WO 36 | Feeler gauge for valve<br>clearance<br>0.15 mm (0.0059")<br>0.20 mm (0.0059")<br>0.4 mm (0.0157")<br>0.7 mm (0.0394")<br>1 mm (0.040 ") |  |
| WO 37 | Pressing nut for<br>expansion bolt on<br>flywheel |  |
| WO 38 | Inserting tool for radial<br>seal on camshaft |  |

## Special service tools for Lloyd 600

| Tool No. | Designation | Figure |
|---|---|---|
| WO 39 | Assembly tool for radial seal (flywheel side) |  |
| WO 40 | Assembly tool for radial seal (belt pulley side) |  |
| WO 41 | Valve clamp for valve grinding |  |
| WO 42 | Rocker arm bolt remover |  |
| WO 43 | Special wrench for belt pulley |  |
| WO 44 | Guide remover |  |
| WO 45 | Valve guide limit gauge 8.08 mm (0.3181") |  |
| WO 46 | Adjustment ring for cylinder bores 77 mm ⌀ (3.0315") |  |

| Tool No. | Designation | Figure |
|---|---|---|
| WO 47 | Valve guide cleaning brush |  |
| WO 48 | Valve seat cutter (intake valve) diam. 32 mm (1.2598") 30° |  |
| WO 49 | Valve seat cutter (outlet valve) diam. 29 mm(1.1417") 45° |  |
| WO 50 | Correction cutter, 15° |  |
| WO 51 | Cutter pilot, complete, consisting of: Guide shaft with split sleeve 7.75-8.25 mm (0.3051"-0.3248"), cutter shank, T-handle with square drive. |   |
| WO 52 | Special tube to remove cutters |  |
| WO 53 | Piston ring pliers. |  |
| WO 54 | Torque wrench 0 - 20 m kg. (144 ft lbs.) |  |

## Special service tools for Lloyd 600

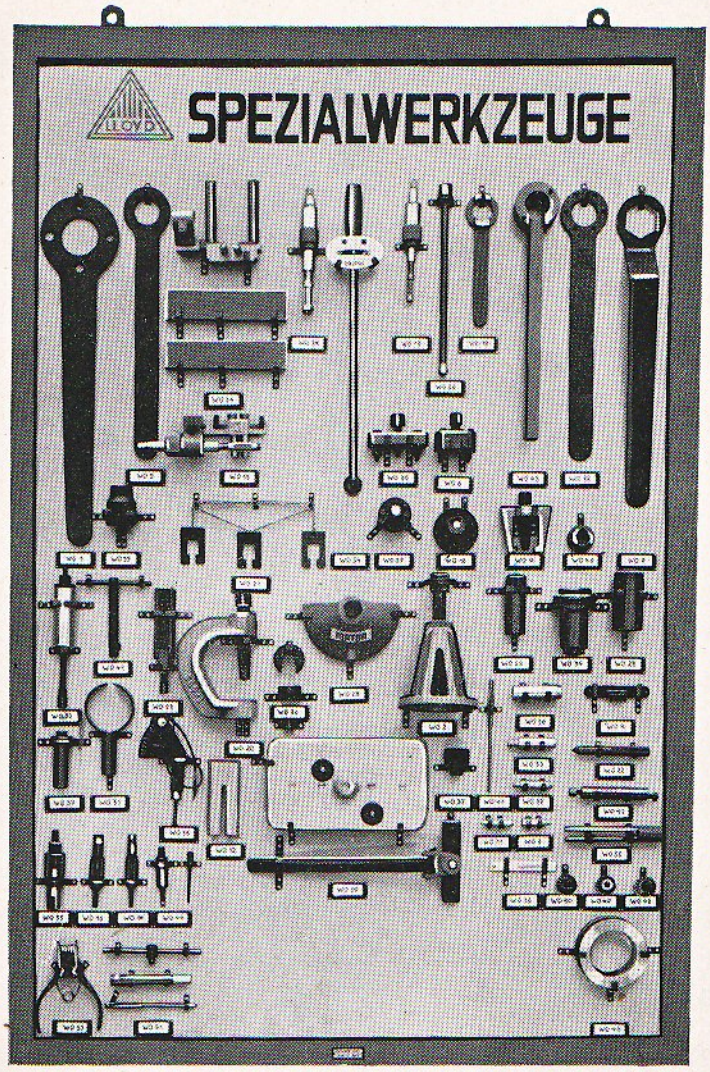
| Tool No. | Designation | Figure |
|---|---|---|
| WO 55 | Socket nut 36 SW with connector for torque wrench (for fastening nut on flywheel) |  |
| WO 56 | Assembly tool for radial seal in distributor pipe. |  |
| WO 57 | Assembly tool for radial seal on gear drive shaft. |  |
| WO 58 | Socket wrench for starter and camshaft case mounting. |  |
| Without number | Torque wrench "Drehmostat" (Maker: Wiegand, Remscheid-Hasten, Büschelstr. 36 a.)<br><br>In addition<br>1 socket wrench insert SW 22<br>for fastening inner joint (universal joint)<br>1 open-end spanner insert SW 14<br>for fastening large spiral gear-wheel (differential)<br>1 ratchet insert for R. H. and L. H. motion. |  |

All tools for special work bearing WO numbers are made by **Matra-Werke G. m. b. H., (16) Frankfurt/Main-Ost, Dieselstraße 30-40.**

When ordering tools address your orders to the "Matra-Werke" stating WO number and tool designation.

## Wall Board for Special Tools

For the complete LLOYD special tools programm **Matra-Werke** deliver the illustrated wall board complete with holders, instructions and WO number plates.



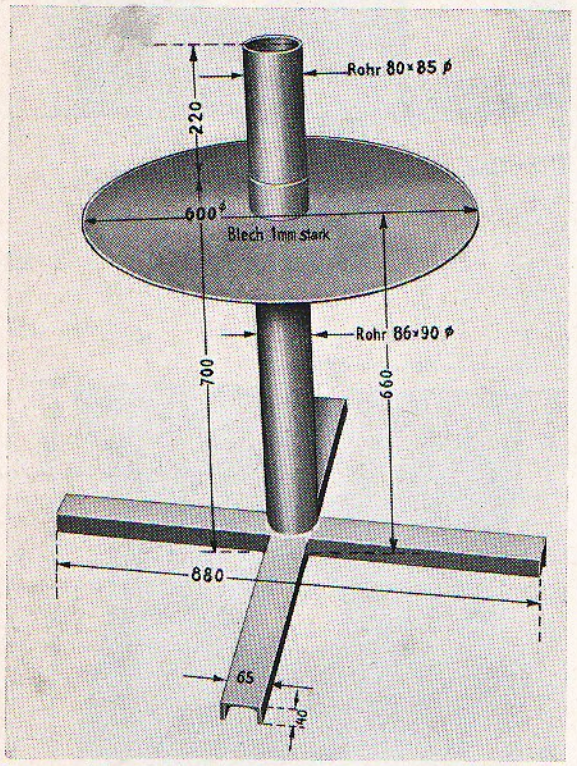

1 - 7/1

Apart from the LLOYD 600 special tools, the wall board contains special tools for the 2-stroke engine models.

| | |
|---|---|
| WO 5 | Spanner for hub 4 holes |
| WO 6 | Remover tool for hub 4 holes |
| WO 10 | Spanner for V-pulley |
| WO 11 | Mandrel for piston pins |
| WO 12 | Base for cylinder fitting |
| WO 13 | Ignition timing gauge |
| WO 14 | Fitting and removing tool for connecting rod bushes |
| WO 15 | Connecting rod bush reamer attachment |
| WO 16 | Fitting and removing tool for connecting rod bushes |
| WO 17 | Mandrel for fitting piston pins |
| WO 18 | Remover tool for hub 6 holes |
| WO 19 | Spanner for hub 6 holes. |

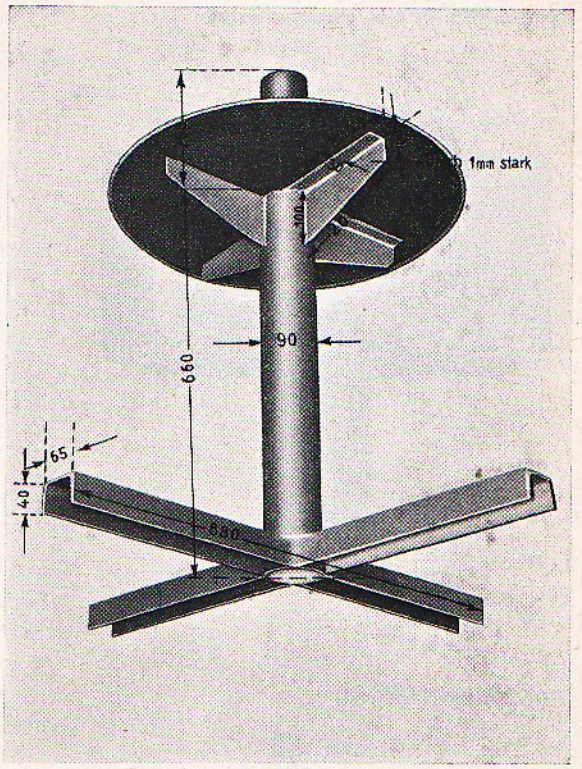
## Assembly table

The assembly table was designed with a view to avoid that the shop bench or vice are taken up too long when overhauling work is done on the engine or gearbox.
The table can be used for either the engine or gearbox by exchanging the stand and carrying head. When work is done on the engine and gearbox at the same time, it is necessary to have two stands available.
(Illustrations 2 - 1/1 – 2 - 1/4).



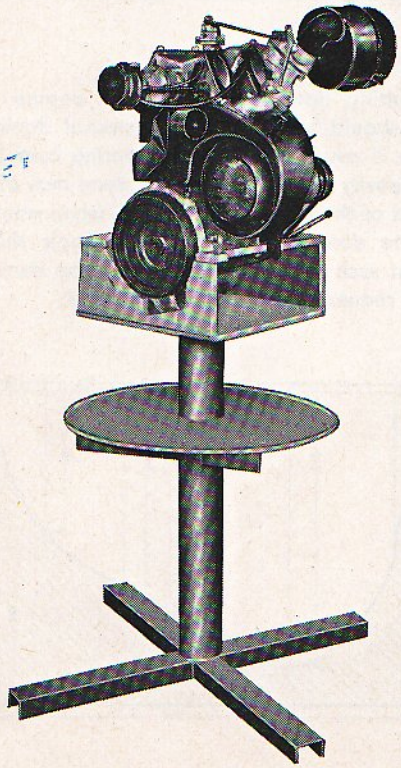

Sheet metal 1 mm thick. Tube 80 x 85 mm diam. Tube 86 x 90 mm diam.

**2** - 1/1

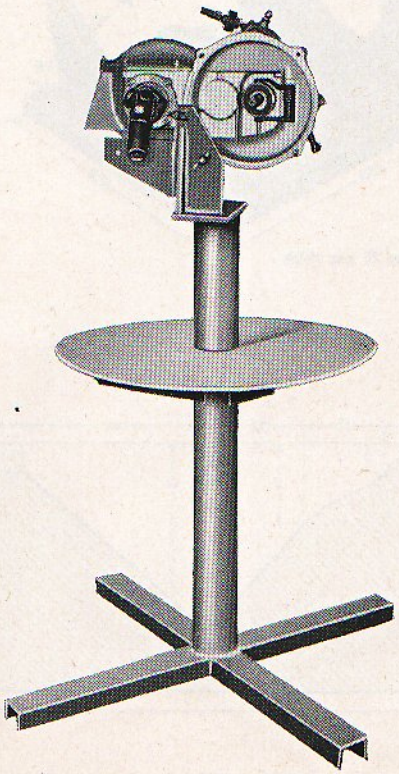



Sheet-metal 1 mm thick

**2** - 1/2



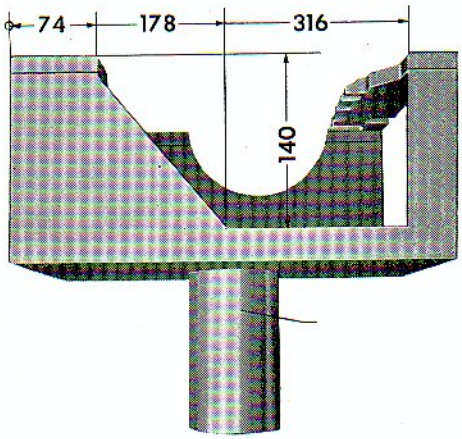
**2** - 1/3



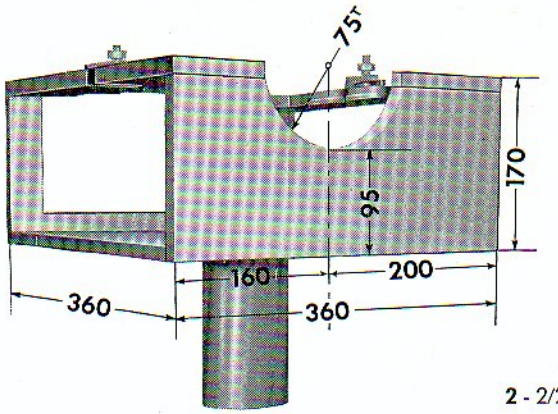
**2** - 1/4

### Engine Stand

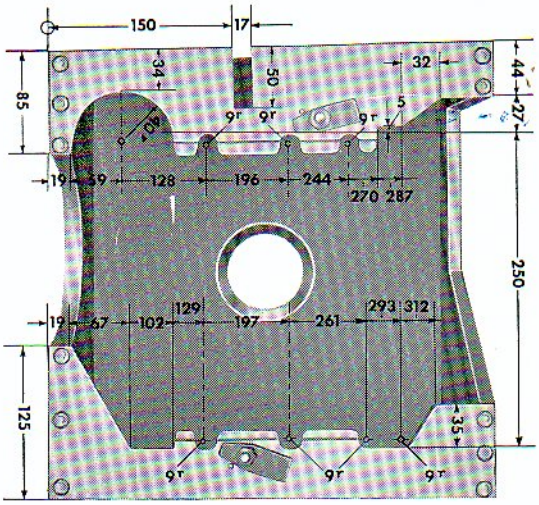
The stand permits the dismantled engine to be safely located. For large-scale repairs and overhaul work such stands have proved very practical. The engine stand as shown is of so simple design that every shop can easily make it from its own stock material.




2 - 2/1

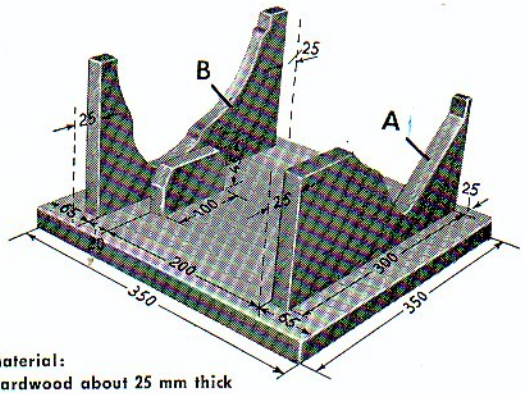



2 - 2/2




2 - 2/3

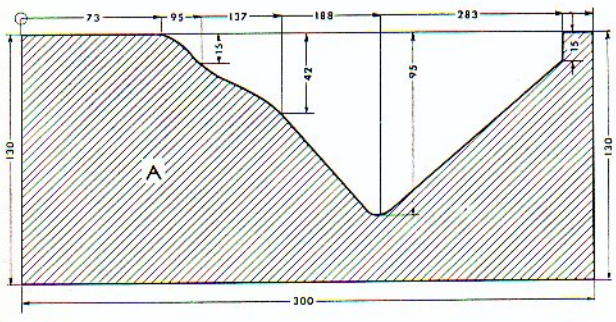
### Engine Wooden Stand



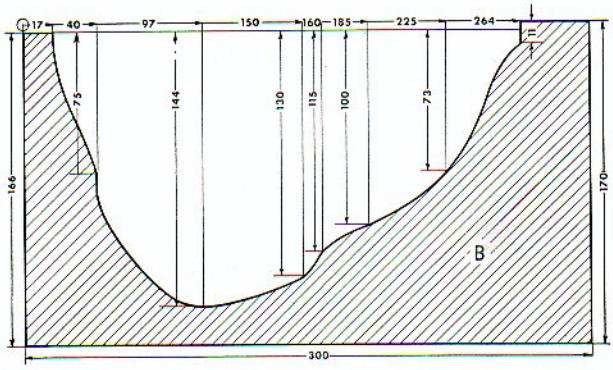

**Material:**
**Hardwood about 25 mm thick**

2 - 2/4

For putting down the dismantled engine a wooden stand should be used. Thus, external damage to the engine is avoided, which, on canting over the engine, might easily occur. This wooden stand may also be used, instead of the large engine stand, when smaller repairs must be done very quickly. No repair shop can do without such a stand and service shop owners are urgently requested to make such a stand.



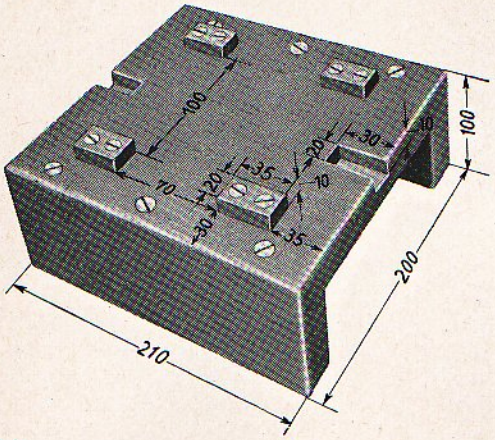

2 - 2/5




2 - 2/6

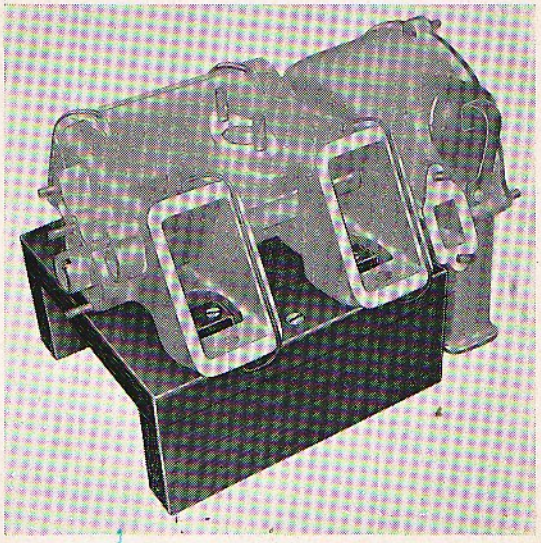
### Camshaft casing stand

On this stand the dismantled camshaft housing may be put down. For working on the housing it affords a safe location so that, particularly, finished bearing surfaces will not suffer any damage. Even this stand can be made by service shops very easily and should form part of every Lloyd Repair Shop equipment.




**Material:**
**Hardwood about 25 mm thick**

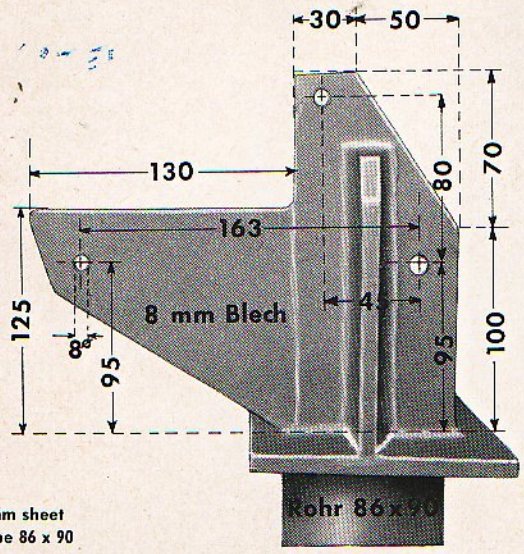
**2** - 3/1



**2** - 3/2

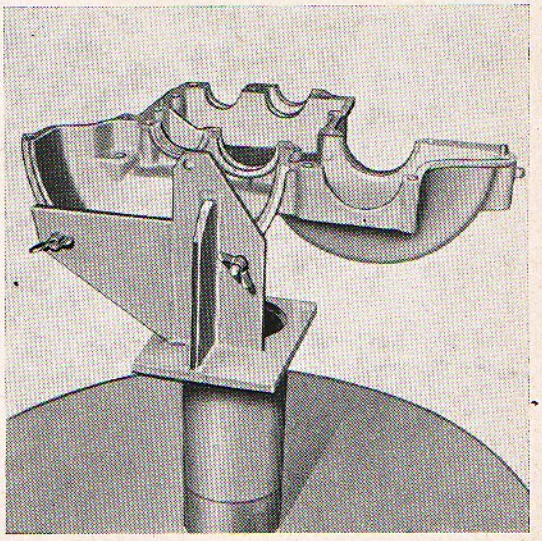
### Gearbox Assembly Stand

Illustration 2 - 3/3 shows the stand for the 3-speed and 4-speed gearbox. As Illustration 2 - 3/4 shows, the stand permits of bolting down the turned-over casing top (4-speed gearbox) for fitting the selector forks. Workshops which have the 3-speed gearbox stand can easily convert it for use on the 4-speed gearbox by welding the sheet 130 x 125 to it.




**8 mm sheet**
**Tube 86 x 90**

**2** - 3/3



**2** - 3/4