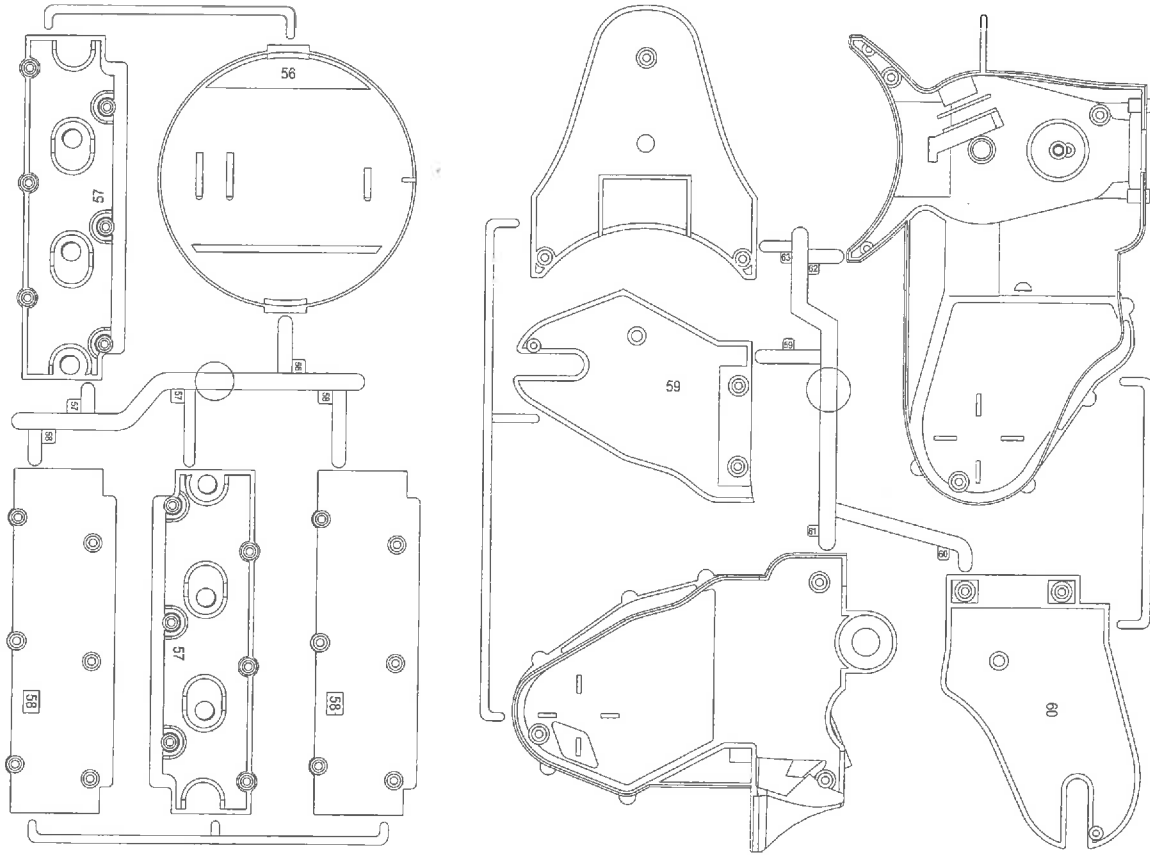
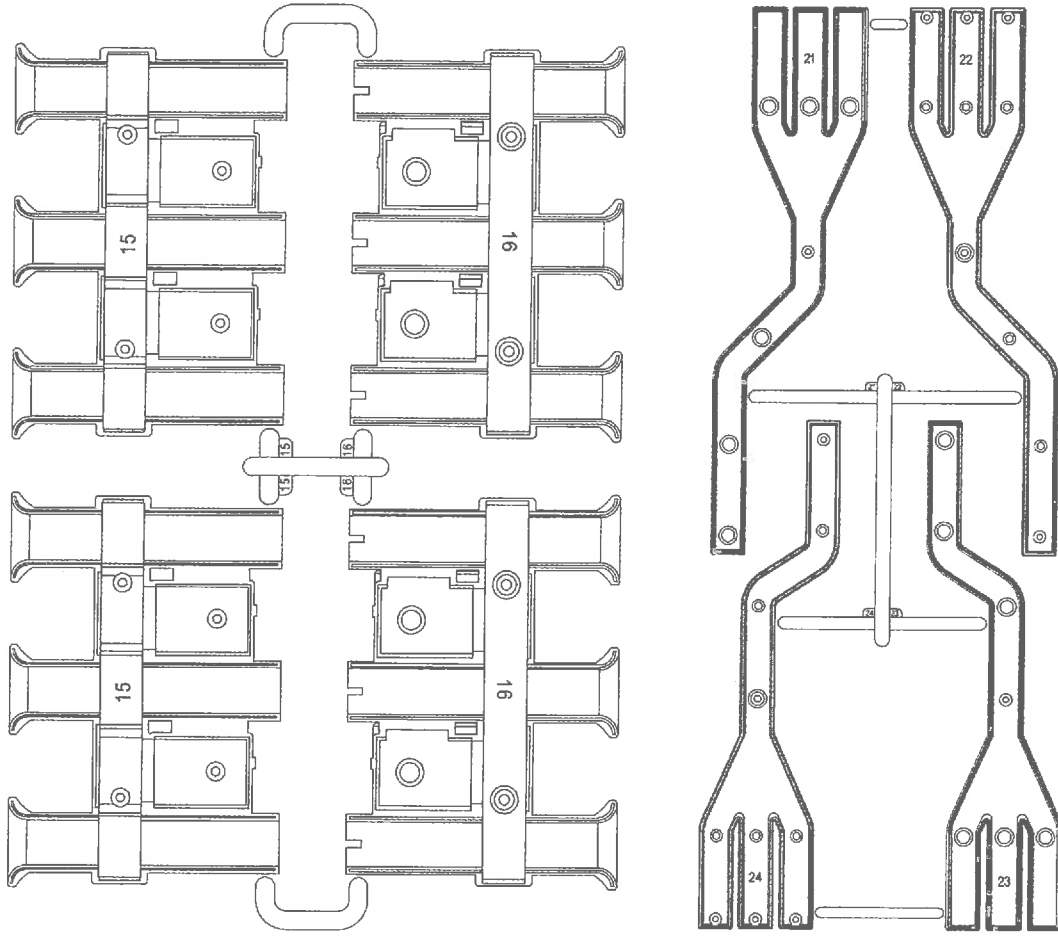


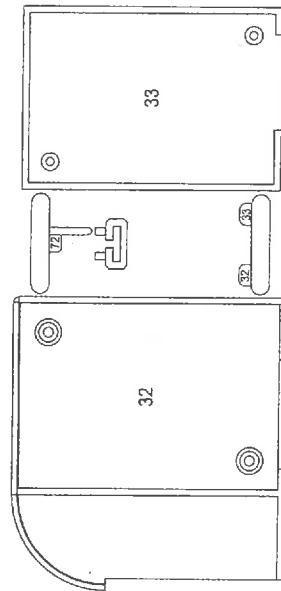
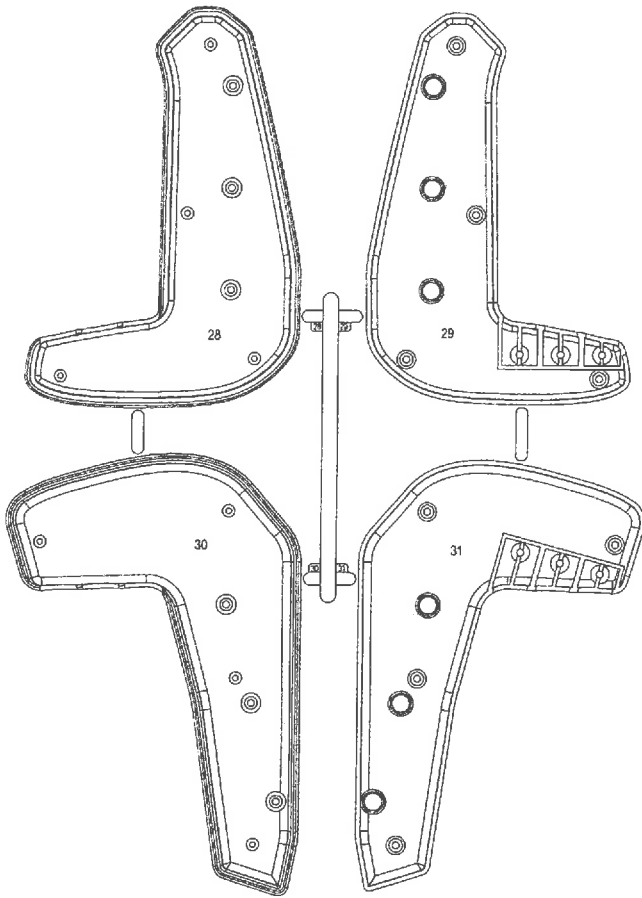
**PARTS LIST**



**PARTS LIST**



# PARTS LIST

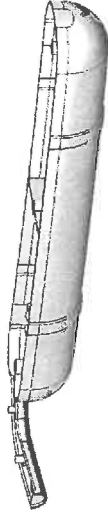


# PARTS LIST

19 Muffler upper



20 Muffler lower



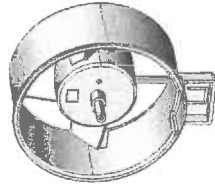
25 Crankshaft pulley



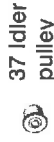
26 Fan pulley



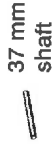
27 Oil return pipes



34 Fan housing

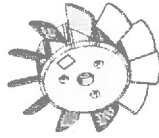
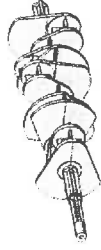


37 Idler pulley

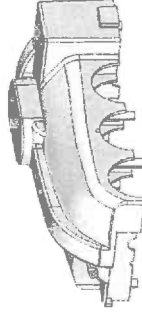


37 mm shaft

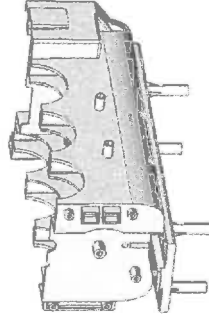
41 Crankshaft



42 Cooling fan

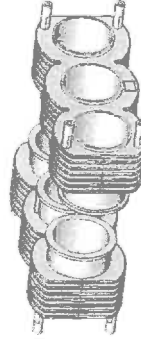


47 Crankcase upper

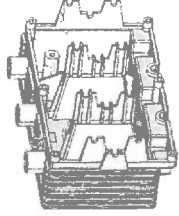
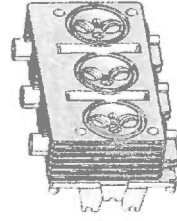


48 Crankcase lower

49 Cylinder barrels

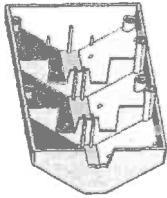


50 & 51  
Cylinder heads

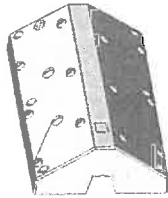


# PARTS LIST

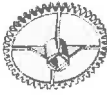
52 & 53 Upper cylinder head



67 Drive gear



68 Crankshaft



69 Distributor gear



Distributor bush



75 Crankshaft gear B

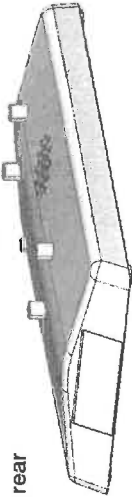


76 Crankshaft gear C

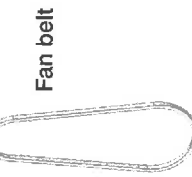
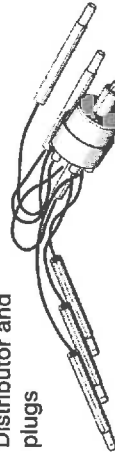


78 Fan housing rear

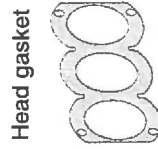
Base



Distributor and plugs

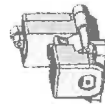


Fan belt



Head gasket

Motor assembly



Rocker and cam shafts



Timing belts



Valve spring



# ASSEMBLING THE ENGINE

## Step 1. Pistons

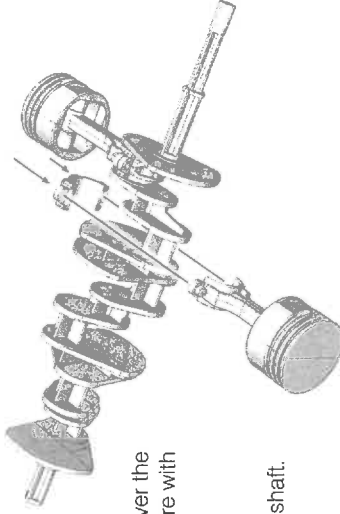
Push a gudgeon (piston) pin (13) through the small end of a connecting rod (1). Push two halves of a piston (2) together over the pin and press together firmly.



Repeat for the other five piston/rod assemblies.

## Step 2. Crankshaft

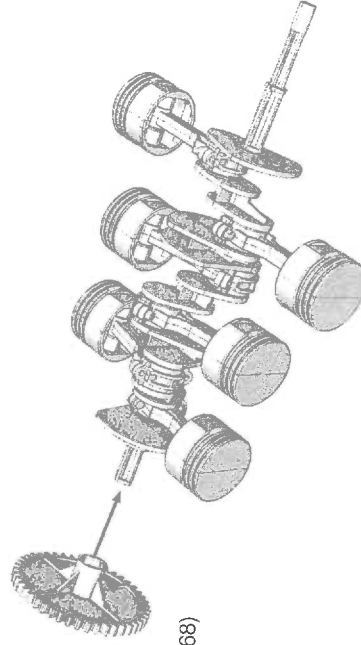
The six connecting rods attach to the crankshaft (41) in the positions shown. In each case, place the connecting rod over the crankshaft, fit a bearing cap (4) and secure with two screws.



Check that the piston/connecting rod assemblies rotate freely around the crankshaft.

## Step 3. Crankshaft drive gear

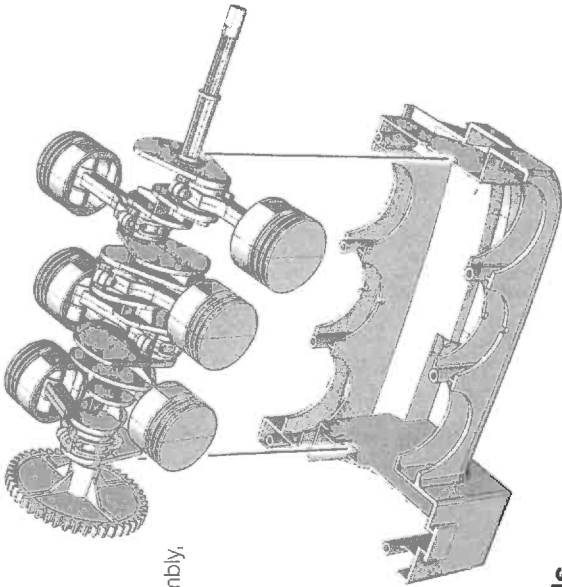
Fit the crankshaft drive gear (68) to the end of the crankshaft.



## ASSEMBLING THE ENGINE

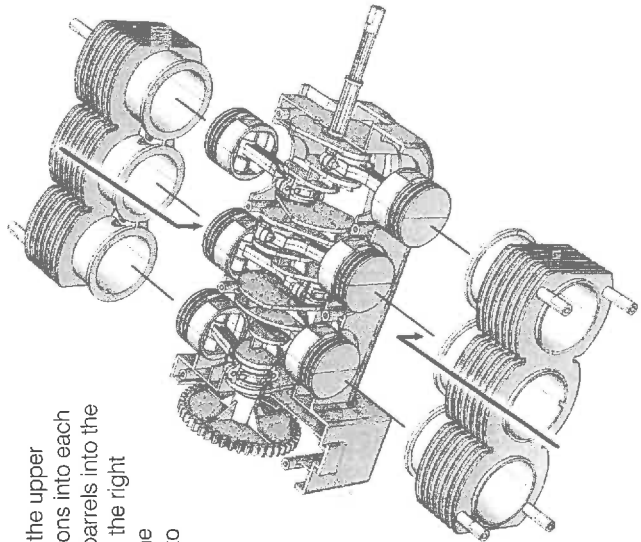
### Step 4. Crankshaft assembly

Place the upper crankcase (47) upside down on a table. Hold the piston/crankshaft assembly, and lower it on to the crankcase.



### Step 5. Cylinder barrels

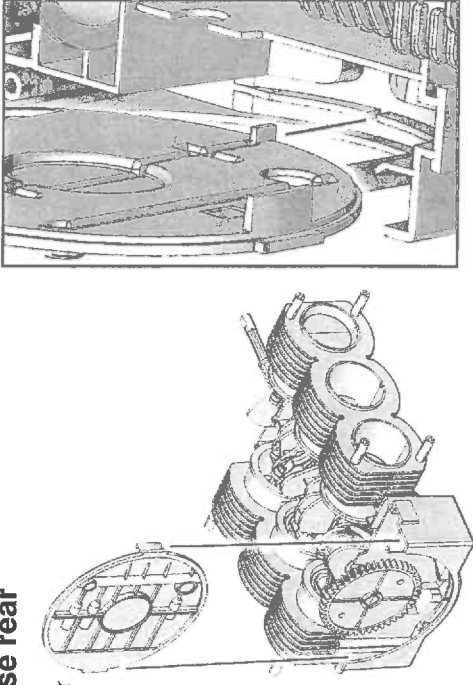
Attach the cylinder barrels (49) to the upper crankcase. Carefully slide the pistons into each set of barrels and then lower the barrels into the crankcase. Ensure the barrels are the right way up - note that the barrel for the middle piston has a rib that fits into a corresponding slot in the upper crankcase.



## ASSEMBLING THE ENGINE

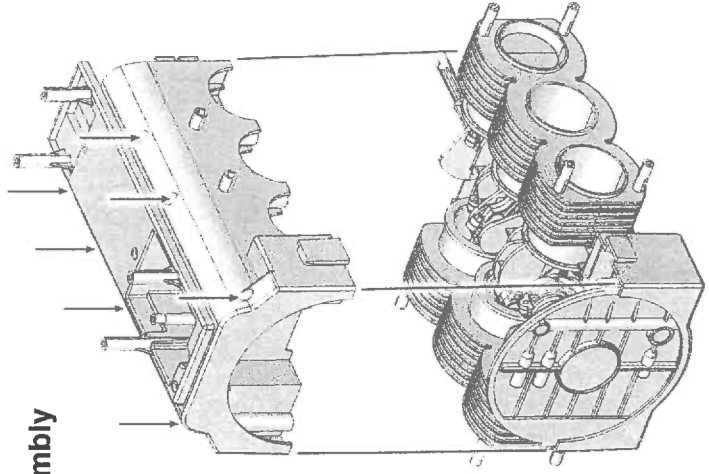
### Step 6. Crankcase rear

Slide the crankcase rear (56) in to the upper crankcase. There is a rib in the plate that fits into a corresponding slot in the upper crankcase - refer to the inset image (the crankshaft and drive gear have been removed for clarity).



### Step 7. Crankcase assembly

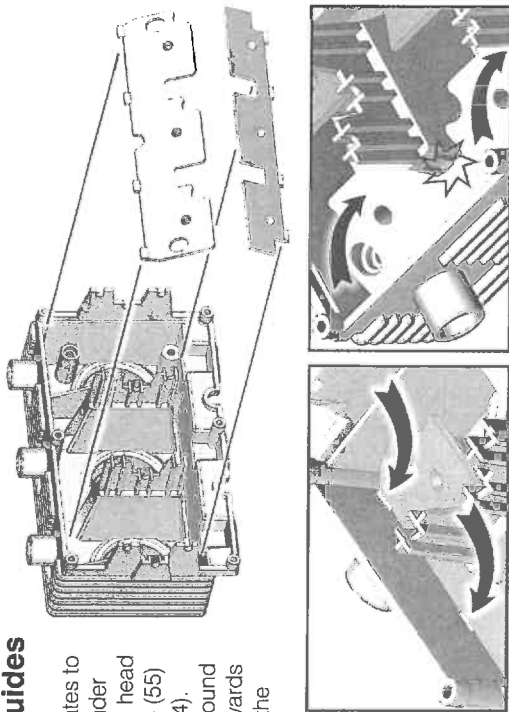
Fit the lower crankcase (48) to the upper crankcase and secure with seven screws.



## ASSEMBLING THE ENGINE

### Step 8. Valve guides

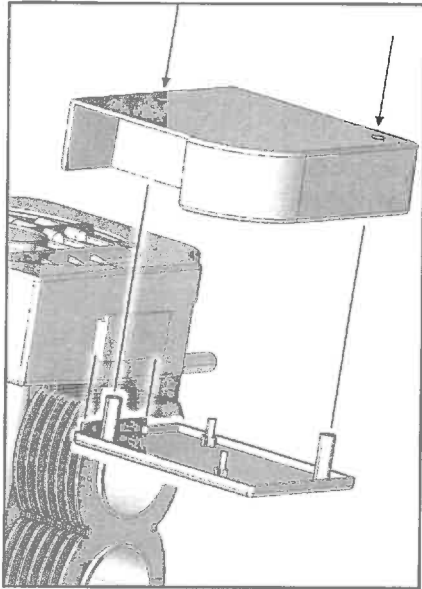
Fit two valve guide plates to each of the lower cylinder heads. Note that each head uses one narrow plate (55) and one wide plate (54). Each plate has three round studs that face downwards into the head. First fit the tabs on the outside of each plate into the corresponding holes in the side of the head, then push the plates down firmly so they clip into position (circled).



## ASSEMBLING THE ENGINE

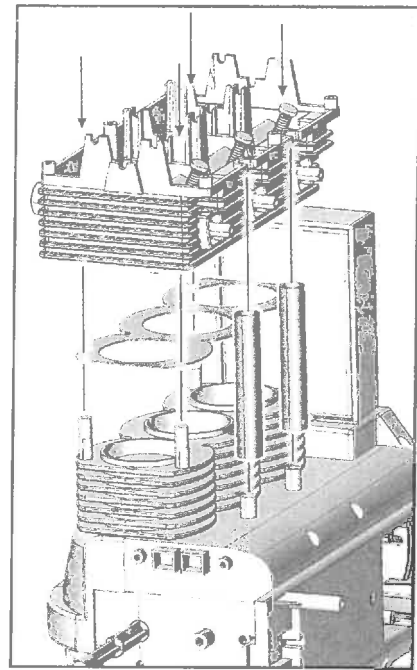
### Step 10. Oil cooler

The oil cooler must be fitted at this time. This is in two parts (32 & 33), and should be assembled so that the parts clamp to the T-shaped moulding on the side of the crankcase. Hold the smaller inner part (33) in place, then fit the larger outer part of the cooler (32) to this and secure with two screws.



### Step 11. Cylinder head - right side

Place a paper cylinder head gasket over the right hand cylinder barrels. Fit two oil return pipes (27) to the moulded lugs on the side of the crankcase, then fit the right cylinder head (51) and secure with four screws.



Repeat for the other (left) side of the engine, using the other gasket, two oil return pipes, and the left cylinder head (50).

