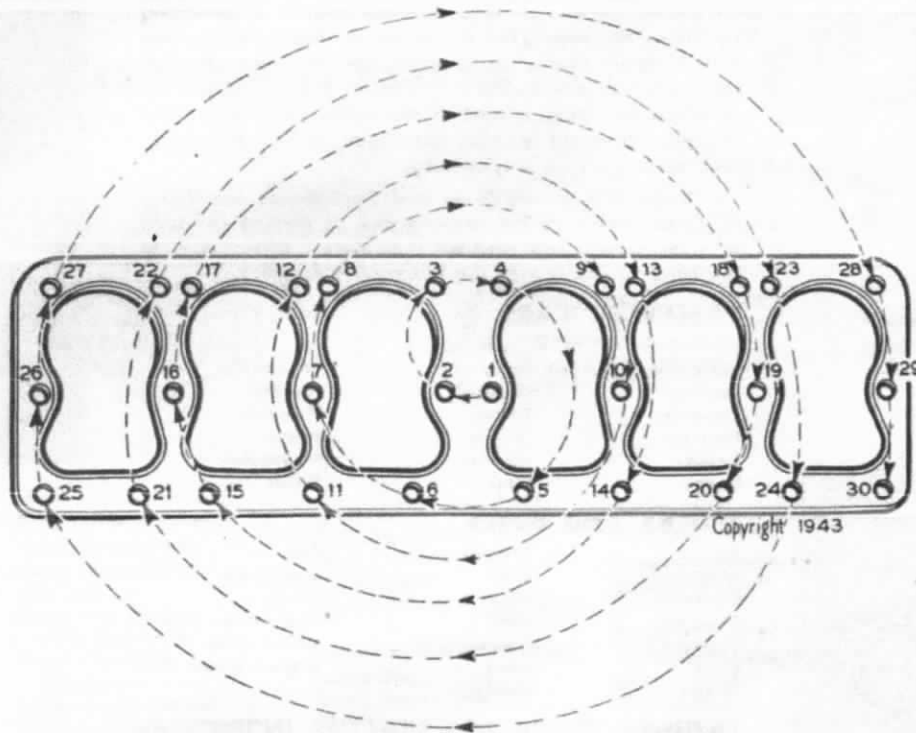


## INSTALL GASKETS CORRECTLY

The best gasket may fail if not carefully installed



### RECOMMENDED SEQUENCE FOR TIGHTENING CYLINDER HEAD BOLTS

- Tighten all bolts with speed wrench to one third of final full torque.
- Retighten all bolts in above order with torque wrench to full torque.
- Repeat with torque wrench to full torque after engine has been run in.

Use new gasket. The cost of a new gasket is small compared with the expense and bother of doing the job over.

**Clean gasket and joint faces.** Particles of carbon, grit or dirt may cause the beginning of a leak that will cause a gasket failure.

**Gasket compounds.** Shellac or gasket compounds that firmly cement the joint are not recommended. However, with steel-faced or heavily reinforced gaskets, precaution against seepage of cooling fluid is desirable. Normally, Victor steel-faced gaskets are "precoted" which means that a special thin coating is applied at time of manufacture to give added sealing qualities. If the steel-faced gasket is not coated, it is desirable to apply a film of gasket compound of a type that will seal but not cement the joint and will permit easy disassembly.

**Distortion.** If the old gasket shows evidence of considerable blow-by, check the cylinder head for distortion which sometimes is the cause of gasket failure. Many

shops are equipped with machines for grinding cylinder head faces.

Satisfactory cylinder head gasket performance depends to a large degree on proper tightening of cylinder head bolts both as to sequence and torque applied. To obtain maximum cylinder head gasket performance, it is necessary to apply the recommended torque to the bolts with a torque indicating wrench.

After the cylinder head and gasket are in place on the cylinder block, the cylinder head cap screws or nuts should be run up until snug. They should then be gone over again and drawn up uniformly to the proper tightness. After the engine has been run long enough to thoroughly warm up they should again be checked and tightened, if necessary to the proper tightness. On aluminum cylinder heads it is preferable that on the final tightening that the engines be permitted to cool down after the warm up before retightening.

This procedure may differ from the recommendations of individual engine manufacturers but it has been accepted as the standard that is most satisfactory for use in production and service. It is the result of extensive investigation and experimentation on the part of the Victor Company engineers.

The spiral sequence shown in the diagram was developed by the Victor Mechanical Laboratories as being the most practical procedure for all types of engines.