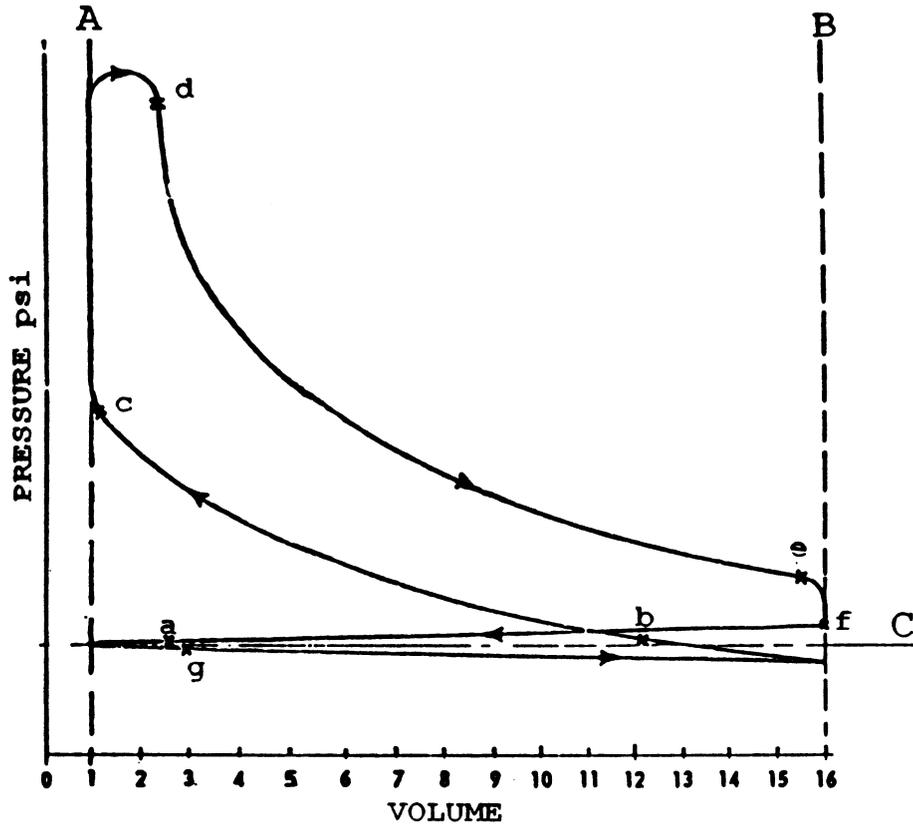
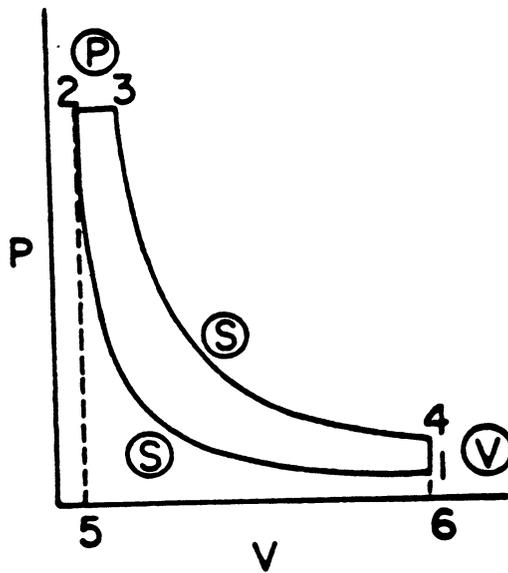


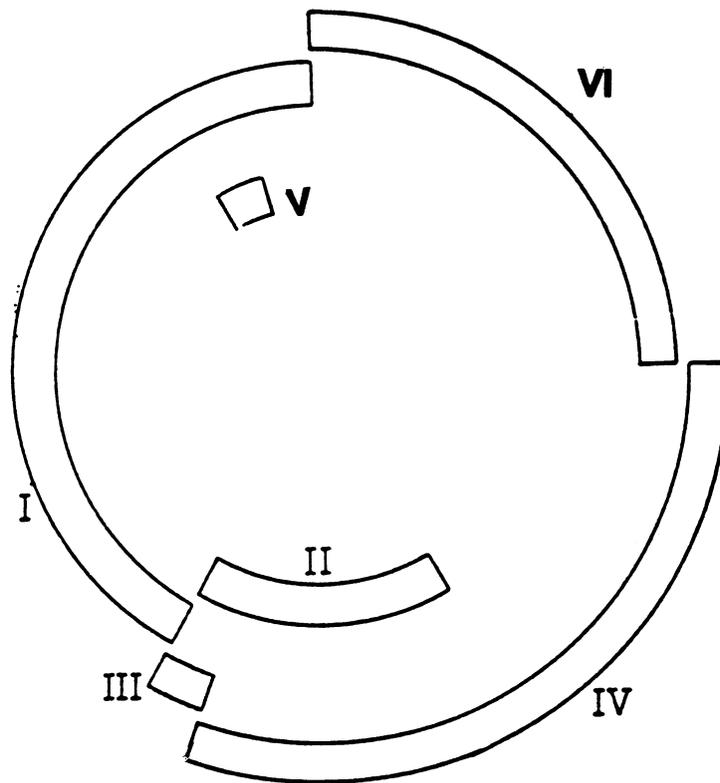
MO-0035



Pressure-volume diagram, diesel 4-stroke cycle.
MO-0036



MO-0037



MO-0038

1	2	3	4	5	6
0	120	240	60	300	180

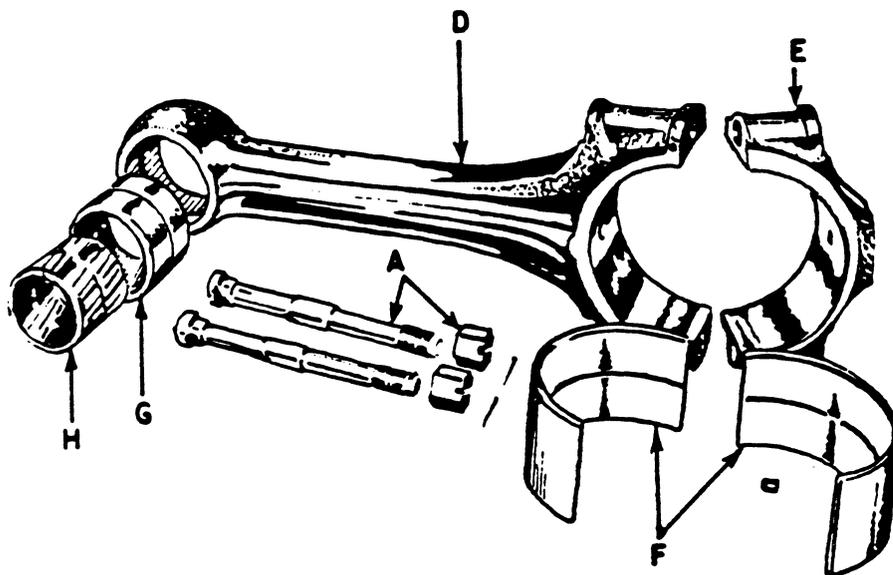
This chart gives the relative positions of fuel injection cam noses on a six-cylinder four-stroke cycle auxiliary diesel engine with a right hand rotation. At the moment indicated, #1 cylinder is at top dead center and combustion is taking place.

MO-0039

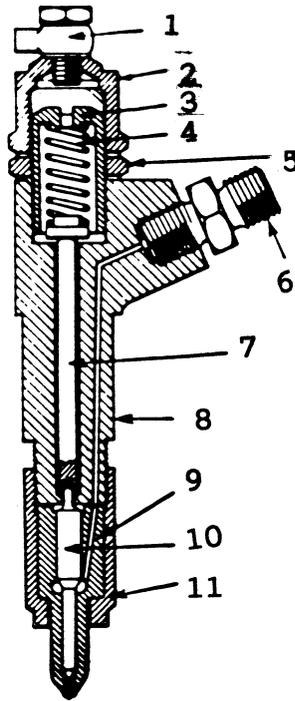
This information is for a two-stroke cycle marine engine and the flywheel is marked with reference to number one cylinder.

20-Cylinder		
Firing Order	Top	Dead Center
1	0	DEGREES
14	27	"
9	36	"
16	63	"
4	72	"
13	99	"
6	108	"
20	135	"
3	144	"
12	171	"
10	180	"
17	207	"
2	216	"
15	243	"
7	252	"
18	279	"
5	288	"
11	315	"
8	324	"
19	351	"

MO-0040



MO-0041



MO-0042

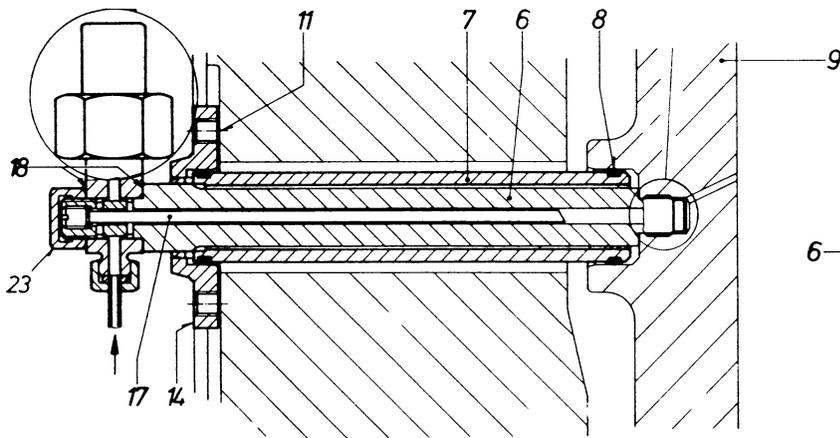


FIG. A

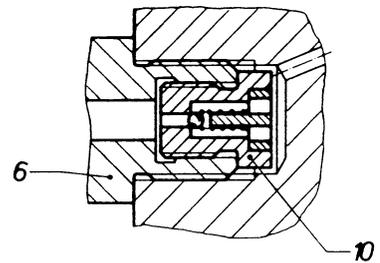


FIG. B

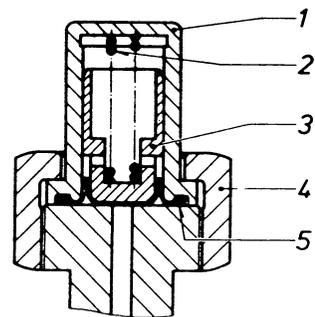
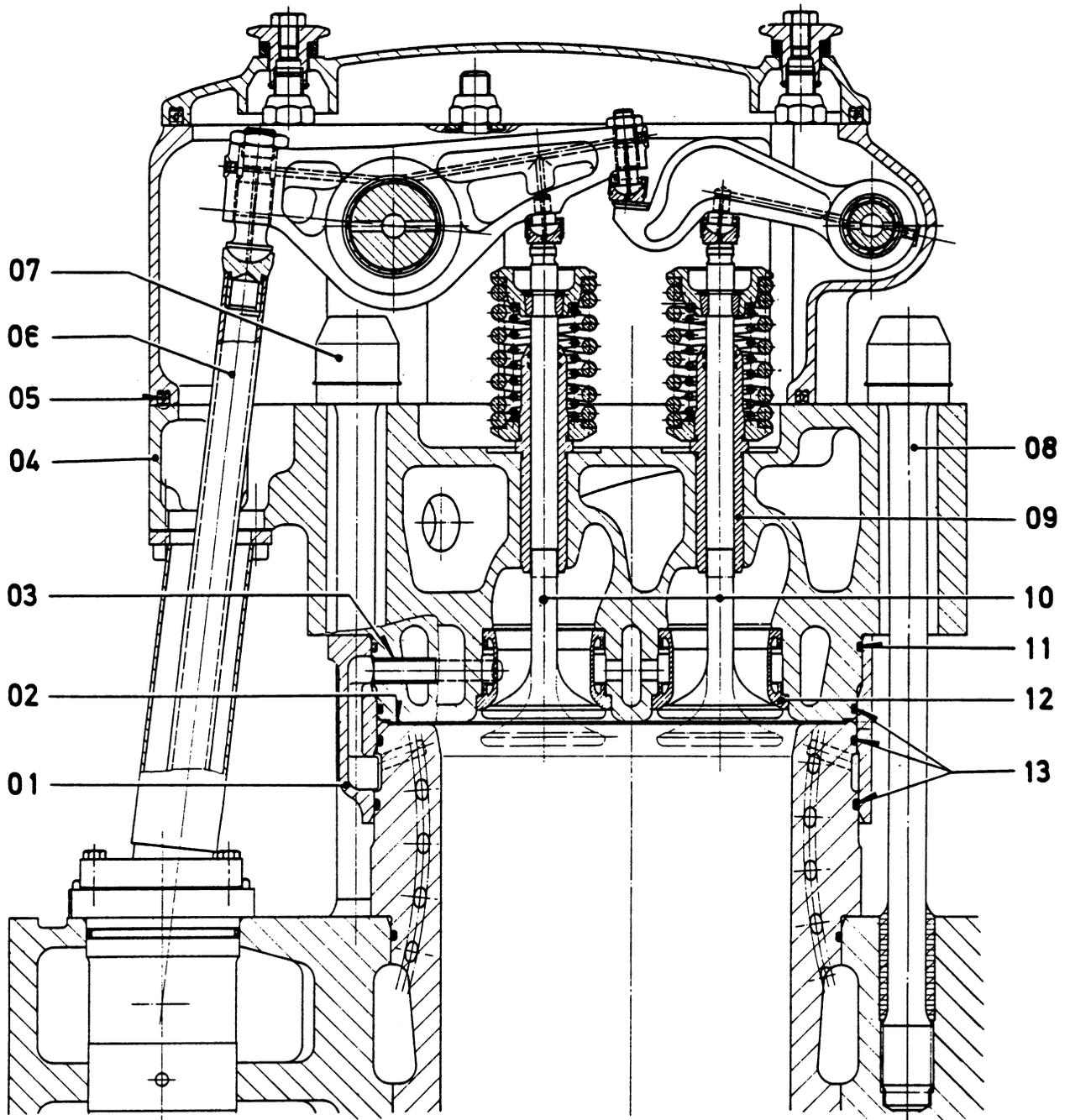
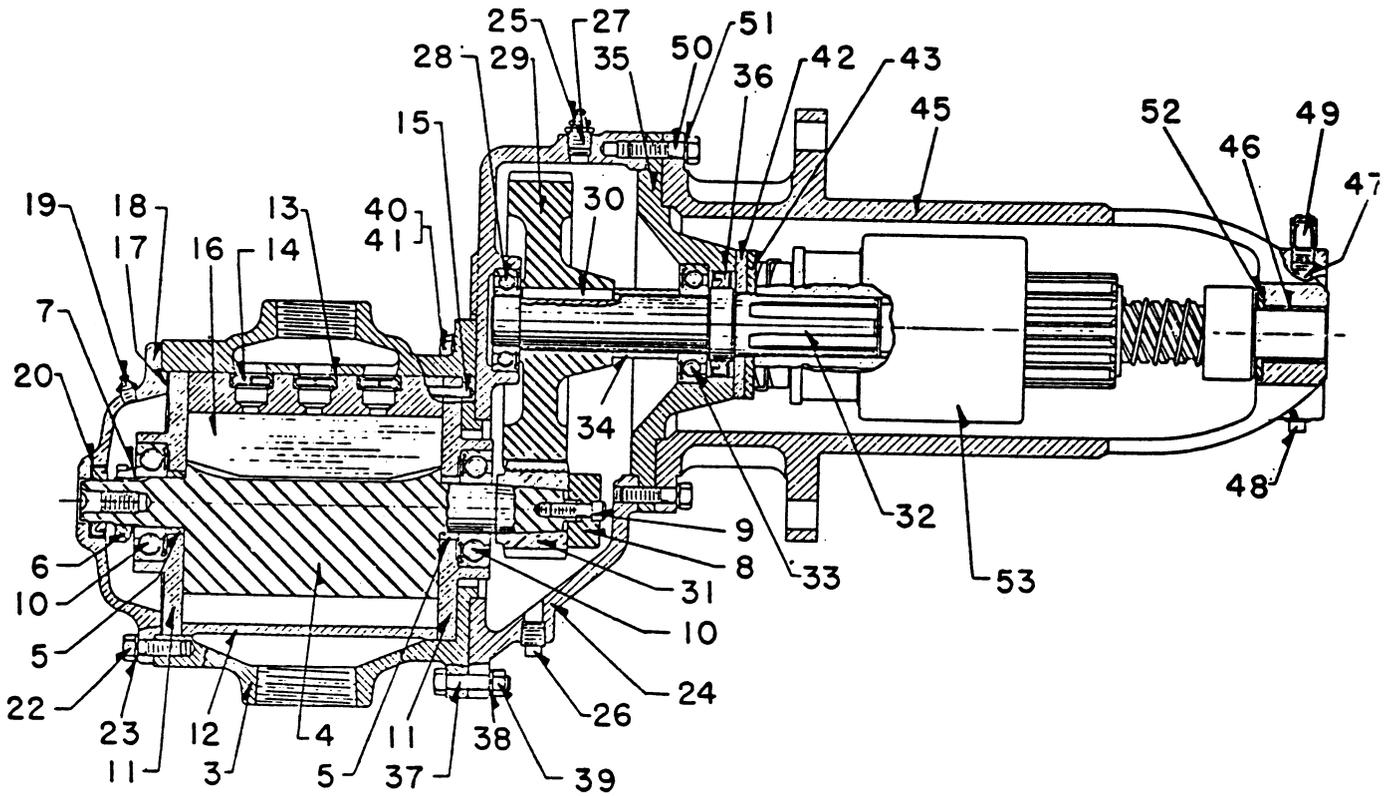


FIG. C

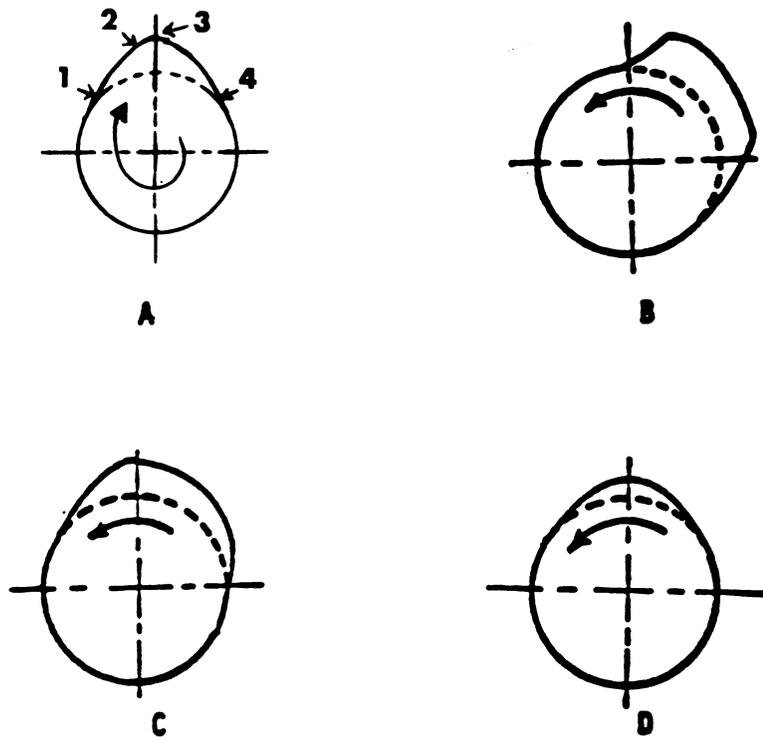
MO-0043



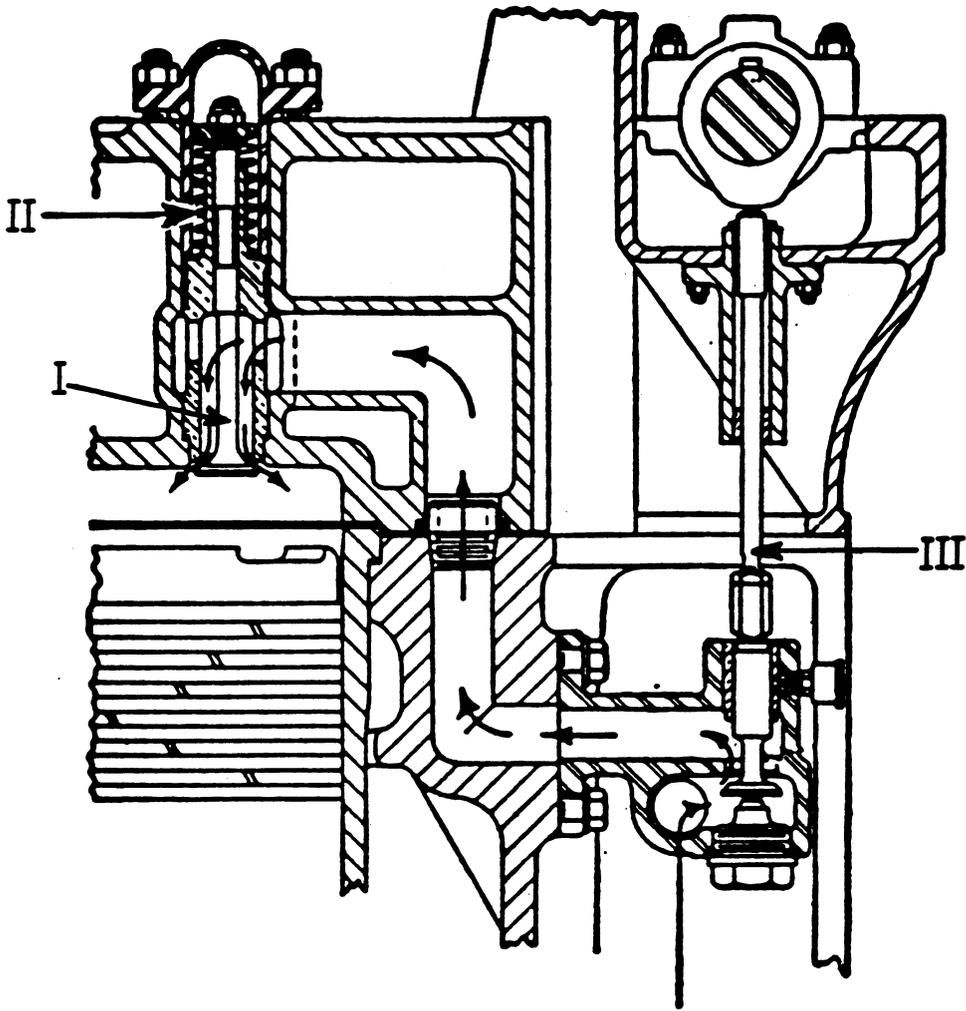
MO-0044



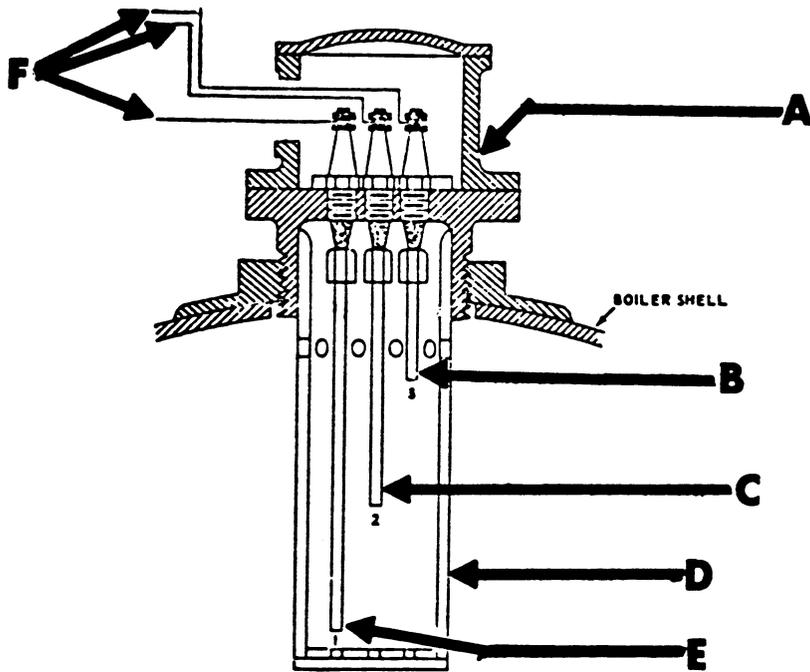
MO-0045



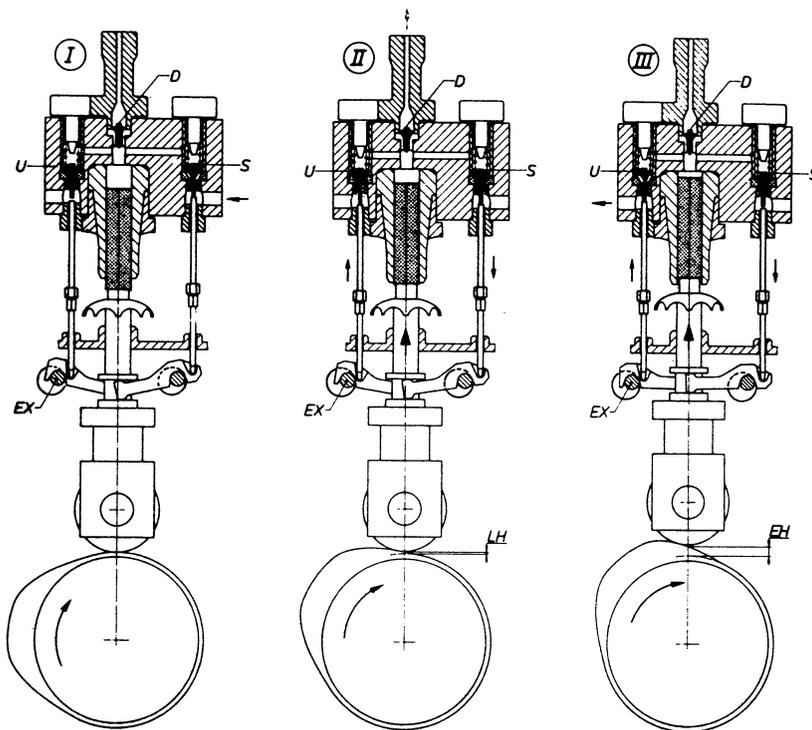
MO-0046

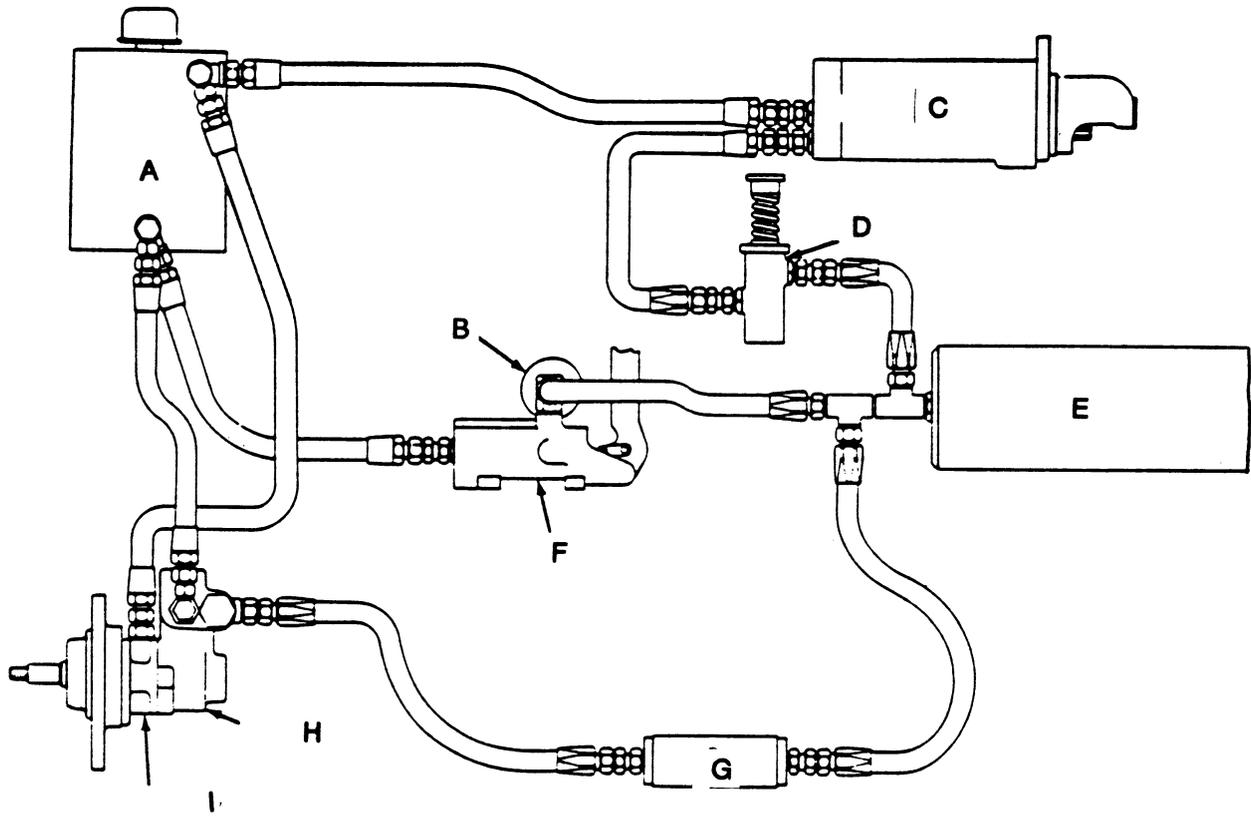


MO-0047



MO-0048





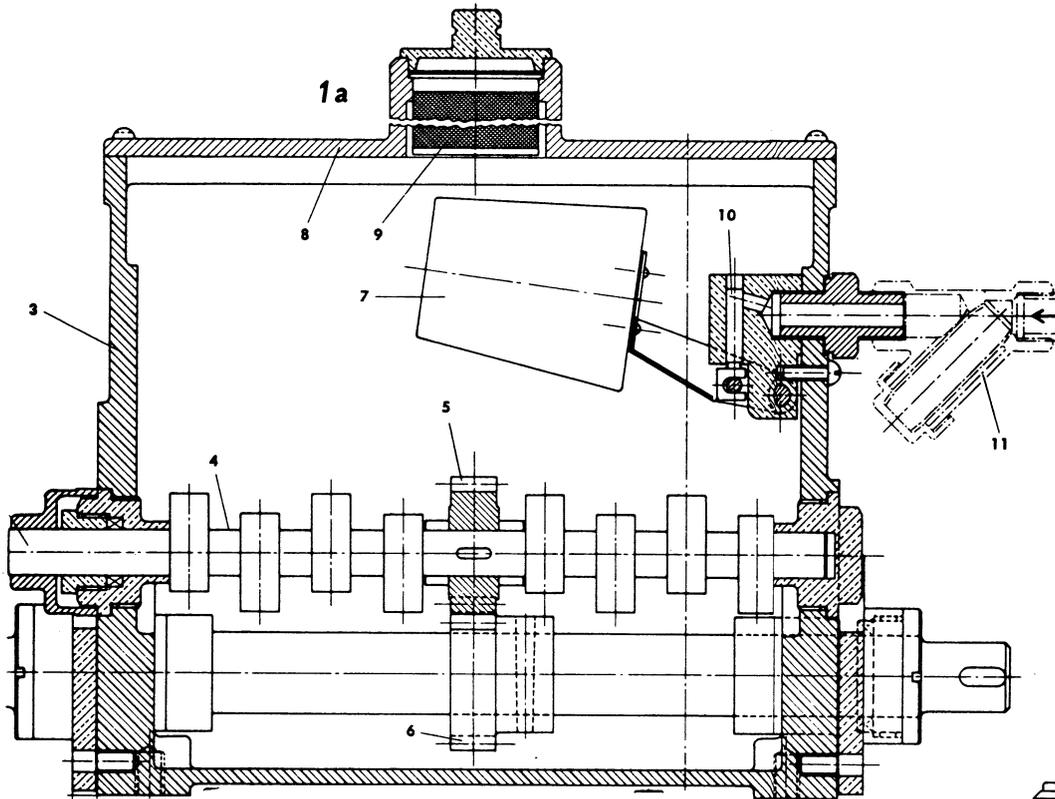


FIG. A

(Courtesy of New Sulzer Diesel)

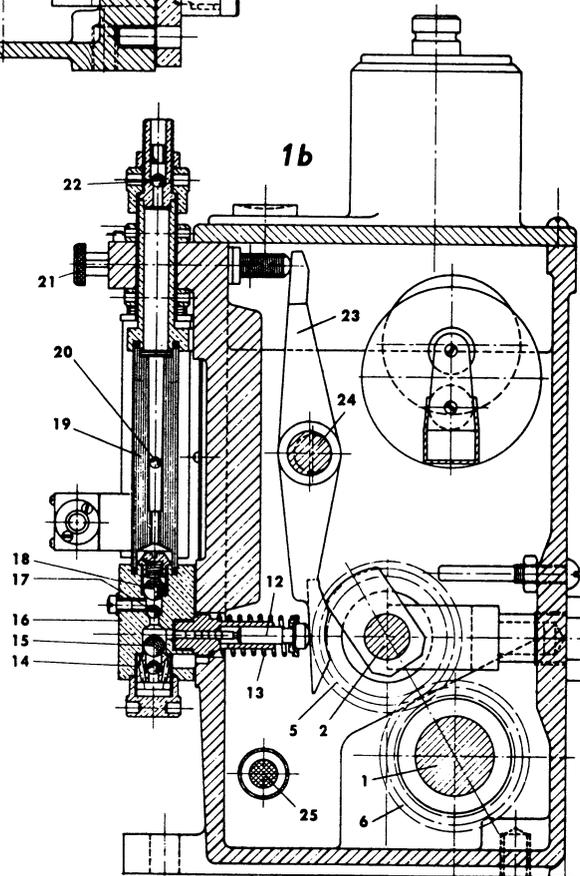
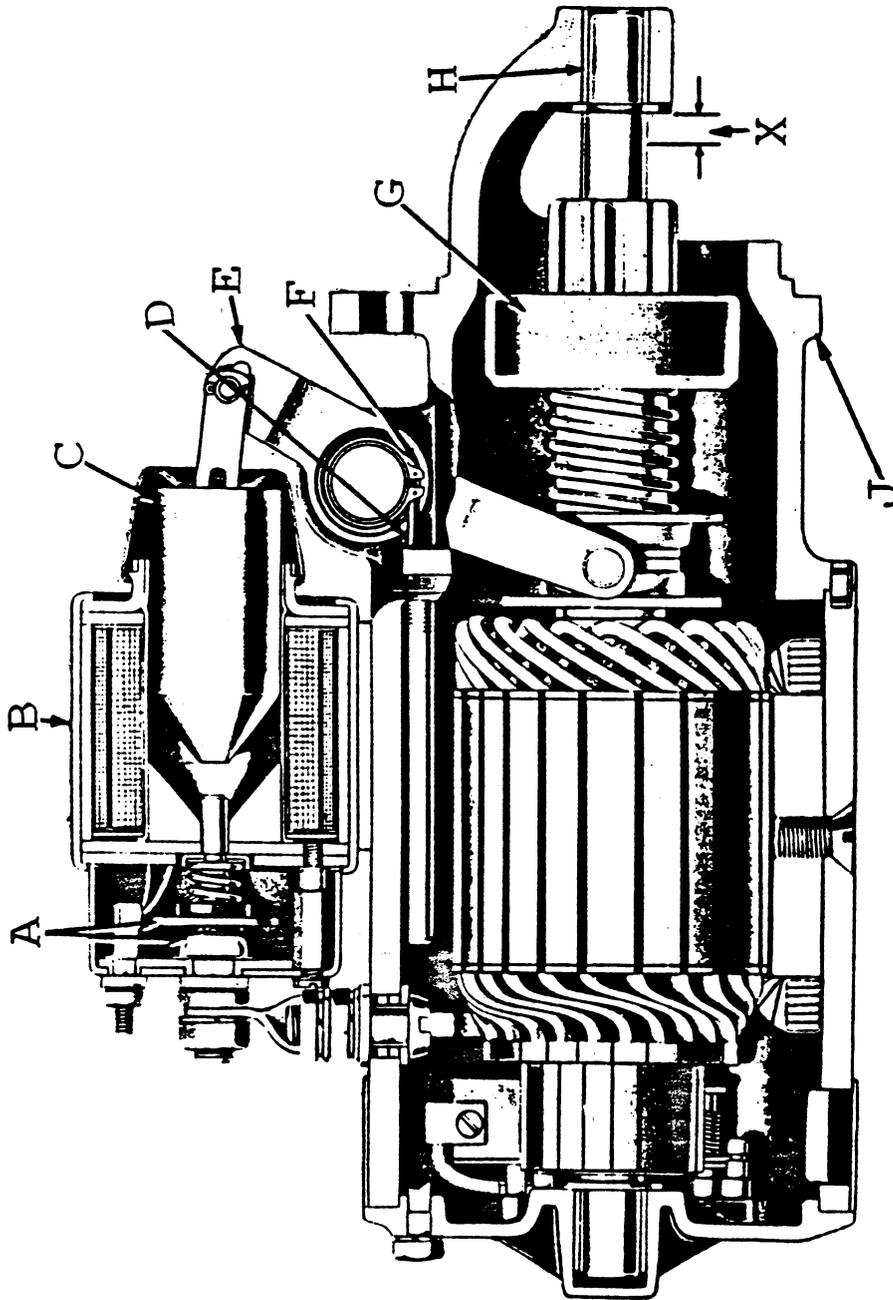
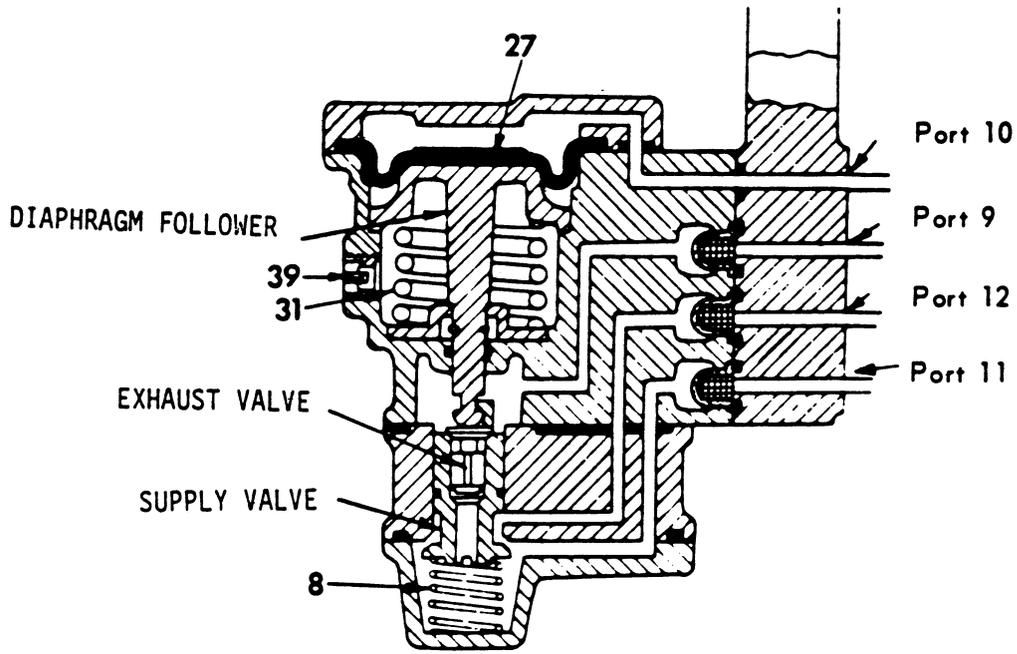
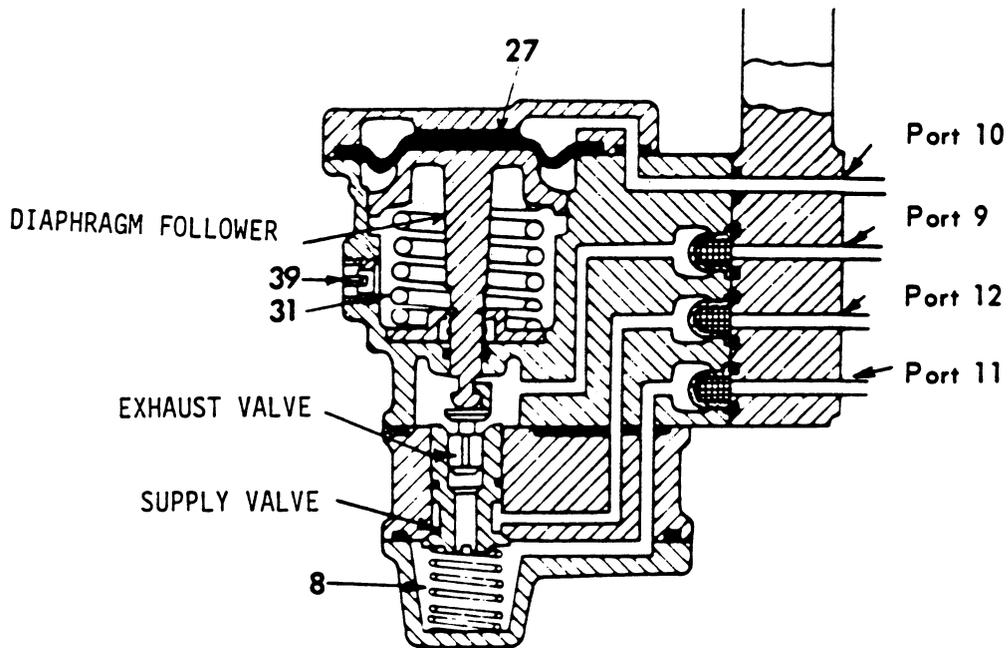


FIG. B





APPLIED POSITION



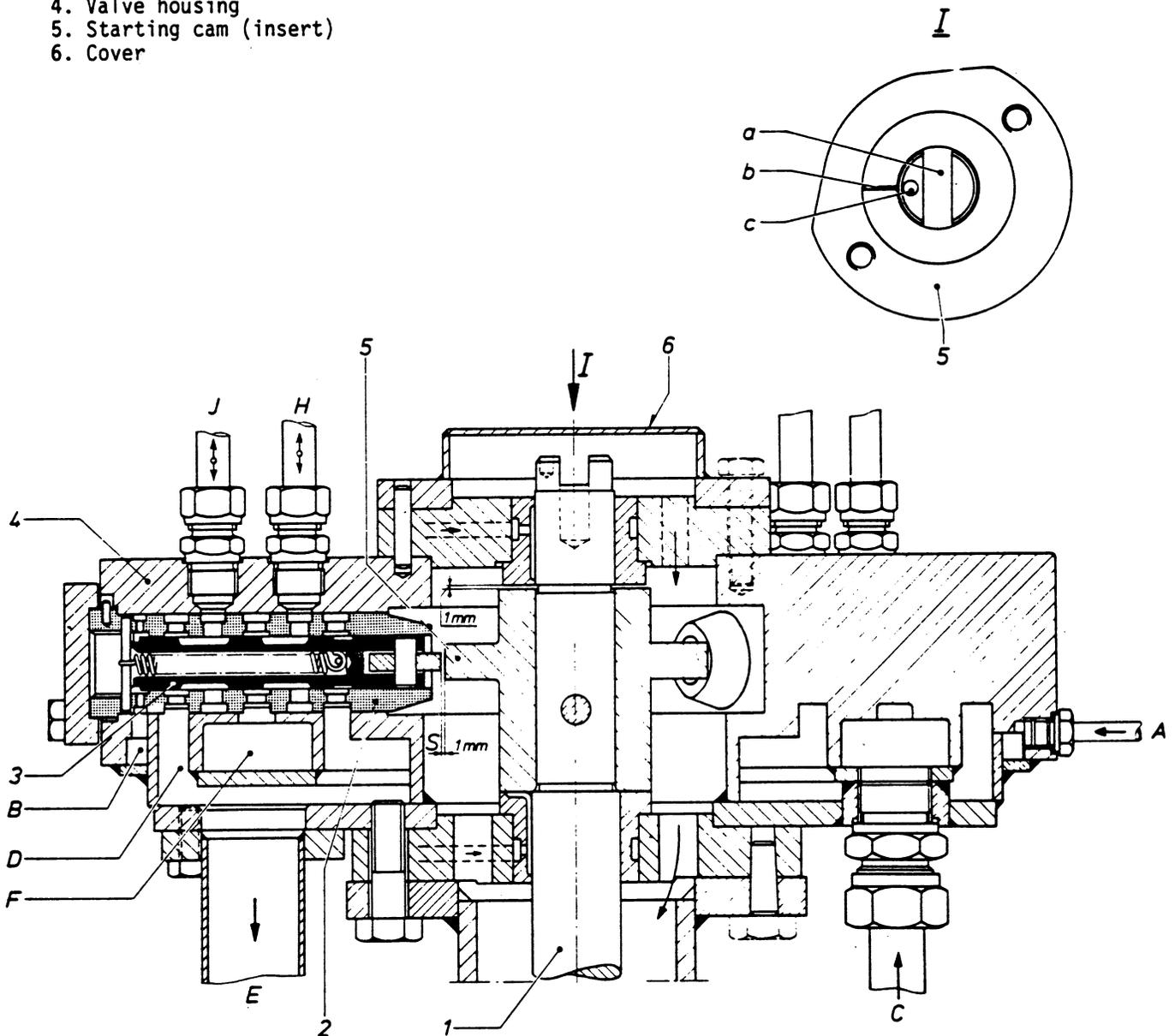
RELEASED POSITION

STARTING CONTROL AIR DISTRIBUTOR

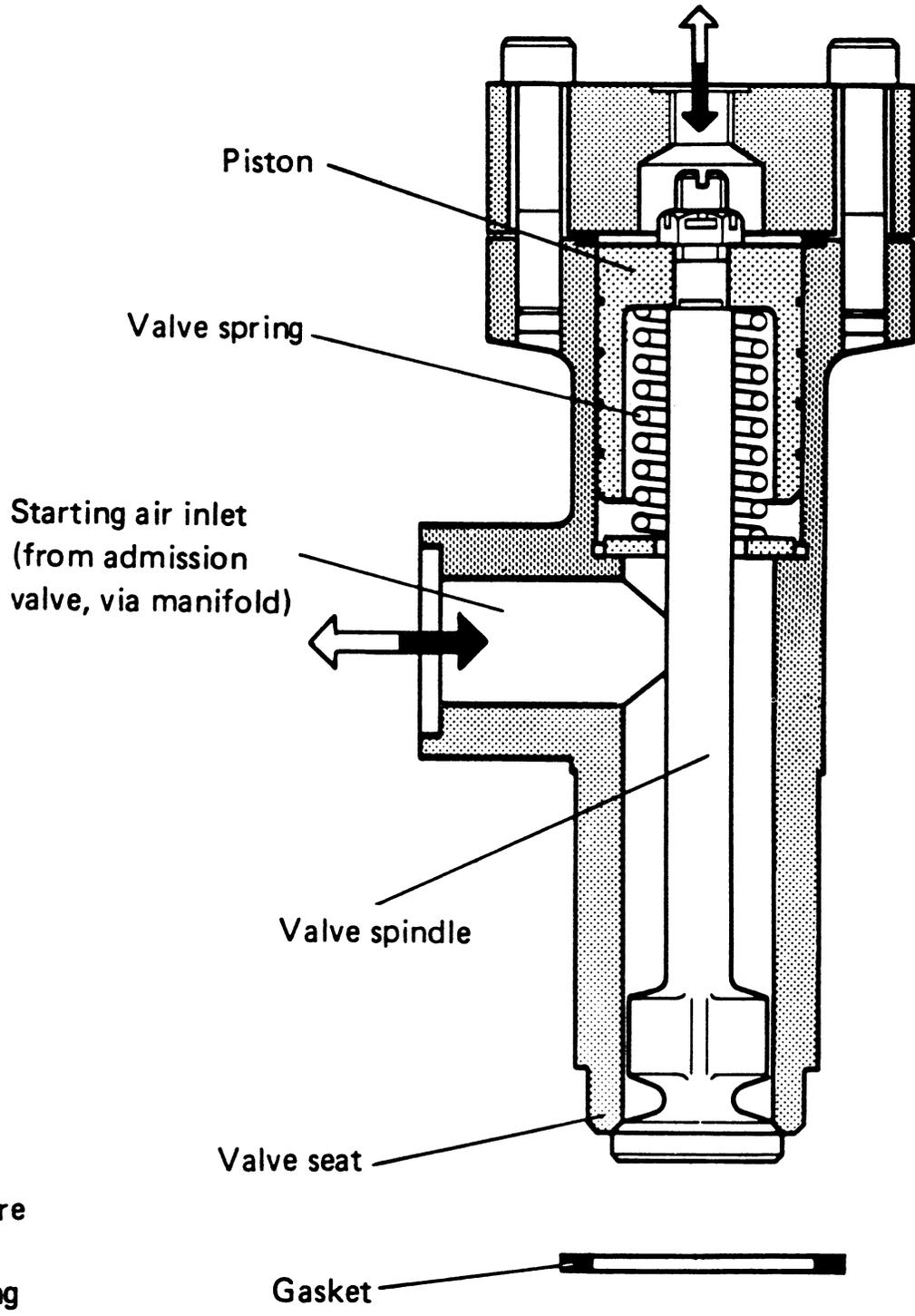
- A. Control air pipe
- B. Annular space
- C. Air inlet
- D. Discharge space
- E. Discharge line
- F. Distribution space
- H. Closing pipe to starting air valve
- J. Opening pipe to starting air valve

- 1. Upper shaft of vertical drive
- 2. Bush for starting control valve
- 3. Starting control valve
- 4. Valve housing
- 5. Starting cam (insert)
- 6. Cover

NOTES: The illustrated "starting control air distributor" is sectioned to show the operation of one starting control valve (3) of which there are several. These valves are arranged radially in a common plane and operated by a common starting cam (5). The air inlet (C), discharge line (E), and control air pipe (A), are common to the entire bank of starting control valves (3).



Control air inlet (from air distributor)



 Pressure
 Venting