

SECTION 08-1

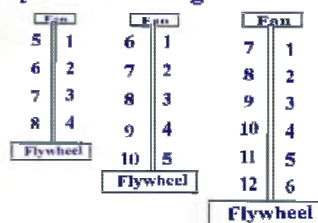
Technical Data

	422N	422T	422TI	423N	423T	423TI	424N	424T	424TI
Ratings to SABS 013-1977									
Output kW/r/min	202/2300	243/2300	276/2300	256/2300	300/2300	368/2300	289/2300	412/2300	452/2300
Torque N.m/r/min	1022/1200	1402/1200	1550/1200	1278/1200	1687/1200	2000/1200	1388/1200	2236/1200	2400/1400
Cubic capacity	14,62ℓ	14,62ℓ	14,62ℓ	18,27ℓ	18,27ℓ	18,27ℓ	21,93ℓ	21,93ℓ	21,93ℓ
Bore mm	128	128	128	128	128	128	128	128	128
Stroke mm	142	142	142	142	142	142	142	142	142
No. of cylinders	8	8	8	10	10	10	12	12	12
Compression ratio	16,9:1	16,25:1	16,25:1	16,9:1	16,25:1	16,25:1	16,9:1	16,25:1	16,25:1
Compression test pressure MPa	2,8	2,6	2,6	2,8	2,6	2,6	2,8	2,6	2,6
Engine at operating temperature, readings taken at 180-200 r/min. Minimum pressure 2,0 MPa. Difference between cylinders should not exceed 0,4 MPa.									
Start of delivery	13°±0,5	15°±0,5	15°±0,5	13°±0,5	15°±0,5	15°±0,5	13°±0,5	15°±0,5	15°±0,5
Firing order	1.5.7.2.6.3.4.8.			1.6.5.10.2.7.3.8.4.9.			1.12.5.8.3.10.6.7.2.11.4.9.		
Engine Mass Kg	815	865	865	965	1020	1020	1115	1165	1215
(approximate figures depending on application)									
Idling speed	600 r/min								

Barrington Diesel Club

ADE & Mercedes firing orders and valve set

Cylinder Arrangement



Firing Orders:

V8 = 1,5,7,2,6,3,4,8

V10 = 1,6,5,10,2,7,3,8,4,9

V12 = 1,12,5,8,3,10,6,7,2,11,4,9

Valve Set

Valves Rocking	1	2	3	4	5	6	7	8	9	10	11	12
Set V8 firing	6	8	5	7	3	1	4	2				
Set V10 firing	7	9	6	10	8	3	1	5	2	4		
Set V12 firing	6	5	4	3	2	1	12	11	10	9	8	7

Throughout the Workshop Manual, SI (International Metric Systems) units as approved by the South African Bureau of Standards (SABS) are used. All measurements are in mm unless otherwise indicated.