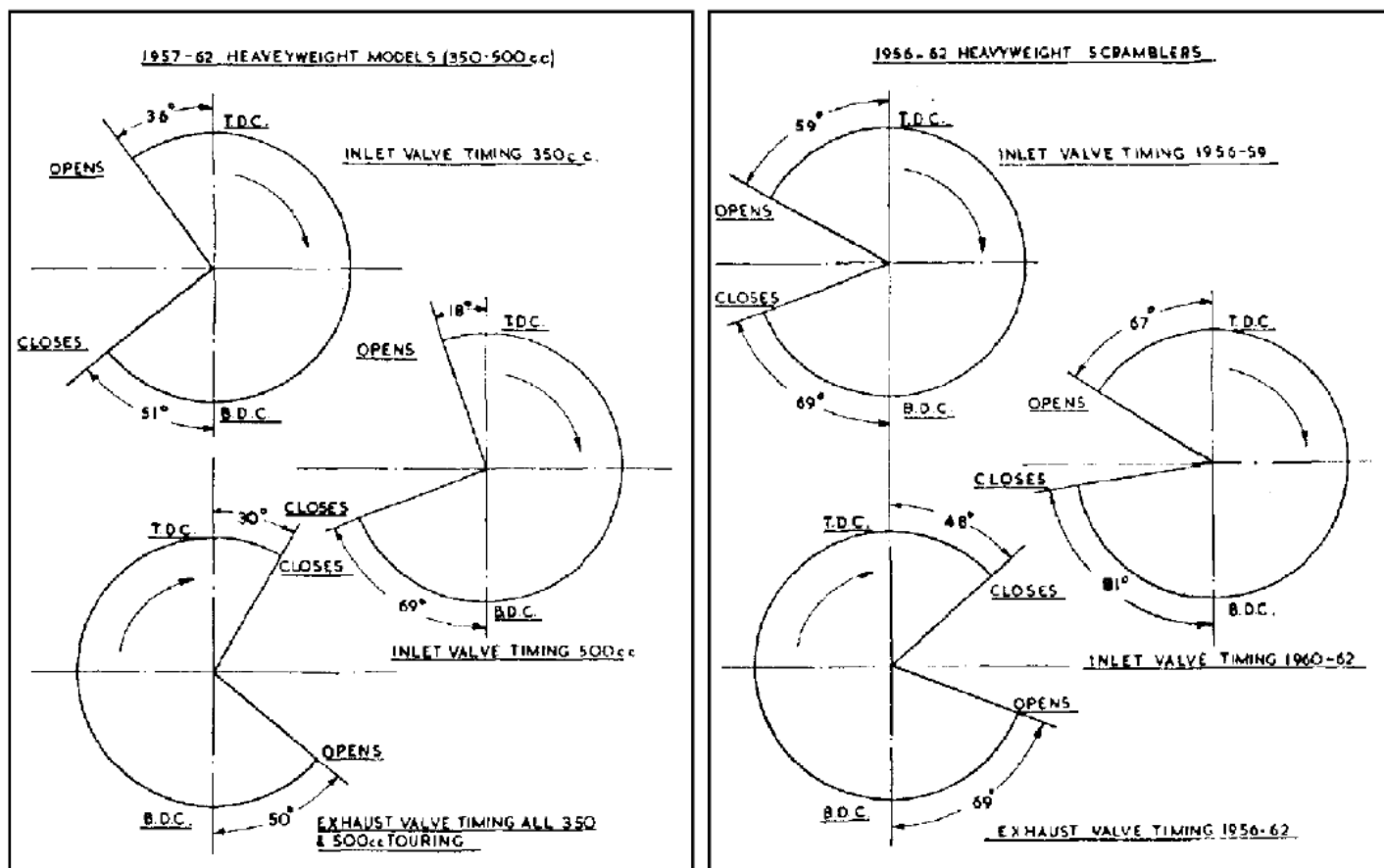


AMC Heavyweight Single Cam Information



Valve Timing. Standard Heavyweight Models

Taken with valve .001" off its seat

Inlet valve timing.

Inlet valve opens 36° before top dead centre—350 c.c. models,

Inlet valve opens 18° before top dead centre—500 c.c. models.

Inlet valve closes 51° after bottom dead centre—350 c.c. models.

Inlet valve closes 69° after bottom dead centre—500 c.c. models.

Exhaust valve timing.

Exhaust valve opens 50° before bottom dead centre—All models.

Exhaust valve closes 30° after top dead centre—All models.

Camshaft timing marks.

Use mark 1 for exhaust cam—all touring models.

Use mark 2 for inlet cam—500 c.c. touring and competition models.

Use mark 2 for exhaust cam—all competition models.

Use mark 3 for inlet cam—350 c.c. touring models.

NOTE: Touring Models: 500 c.c. timing can be made the same as 350 c.c. by advancing ONE tooth on the cam gear. (Slight performance gain)

When checking the valve timing the tappet clearances must be set to .016 inch so that the tappets may be well clear of the quietening curves of the camshafts. The timing gears are marked to facilitate their replacement. To re-set the valve timing, by using the marks on the gears, proceed as follows;—Turn over the engine till the mark on the small timing pinion is in line with the centre of the inlet (rear) camshaft bush. Insert the inlet camshafts that the No. 2 or No. 3 mark on it is in mesh with the mark on the small timing pinion, according to model. Rotate the engine in a forward direction till the mark on the small timing pinion is in line with the centre of the exhaust (front) camshaft bush. Insert the exhaust camshaft so that the No. 1 mark on it is in mesh with the mark on the small timing pinion.

Trials Models

Inlet opens 26° before top dead centre.

Inlet closes 53° after bottom dead centre.

Exhaust opens 64° before bottom dead centre.

Exhaust closes 25° after top dead centre,

taken with 0.016" tappet clearance and with the valve 0.001" off its seat.

Scrambler Valve timing up to 1959: Cam wheels marked SH were used with part number 018333 and 022567 for the inlet and exhaust respectively,

Inlet opens closes: 59° b.t.d.c....69° a.b.d.c.Exhaust opens, closes: 74° b.b.d.c....48° a.t.d.c.

These readings are taken with the valve .001" off its seat with running push rod clearance.

The valve lift is .375".

Both cam wheels are marked for correct assembly. Install the inlet cam with the No. 2 mark to register with the mark on the small pinion. Use No. 1 mark for exhaust to also register with mark on small pinion. The push rod clearance for these cams is *nil* for the inlet and .005" for the exhaust (engine cold). The inlet push rod should be just free to revolve by finger application. The clearance of .005" for the exhaust represents one flat on the adjusting screw away from the nil clearance setting. Position the engine for push rod adjustment as described for Touring Heavyweight Models.

Scrambler Valve timing after 1960. A more efficient type of inlet cam was introduced for and after the 1960 season. The inlet cam is marked C1, Part No: 024534, and is used in conjunction with the 1959 exhaust cam 022567.

The valve timing with the new cam allows the inlet to open at 67° b.t.d.c. and to close at 80° a.b.d.c. with a *nil* clearance and the valve .001" off its seat.

The valve lift is .428".

G80 R Models.

Engines for this model use the inlet cam 024534 and a special exhaust cam marked CE Part No. 024535, the exhaust valve opens: 83° b.b.d.c. and closes 60° a.t.d.c.

(Use No. 1 mark). This combination is best suited where high r.p.m. is required for short circuit events, or in drag events providing the engine is taken up to 3,500 r.p.m. before take off. Where good torque is needed at comparatively low r.p.m. the 1960 set up is the best arrangement.

The valve lift is .445"

1962 Engines. An improved type of valve operating mechanism is used on these engines, comprising the following parts:

- (1) Long push rods.....2 off 028185
- (2) Short tappets.....028182
- (3) Tappet guides.....028184
- (4) Inlet rocker.....1 off 042043
- (5) Inlet camshaft.....028191
- (6) Exhaust camshaft.....028193

The new type parts can be used on earlier type engines.

1964-66 Short Stroke Engines.

The cam on all single cylinder models for 1964 will not interchange with 1963. Single marking is used on all cams, and for identification each cam wheel is marked with the factory part number.

The 500 c.c. scrambler inlet cam is 030124, Exhaust 030125.

For the standard 350 c.c. engine: Inlet cam is 030121, the Exhaust is 030123.

For the standard 500 c.c. engine: Inlet cam is 030122, the Exhaust is 030123 (same as the 350 cc)

Valve timing and lifts unknown...Please update if you have it.

Additional Info:

**[http://archives.jampot.dk/Technical/General_technical_topics/Cams -
Joining the Dots.pdf](http://archives.jampot.dk/Technical/General_technical_topics/Cams_-_Joining_the_Dots.pdf)**