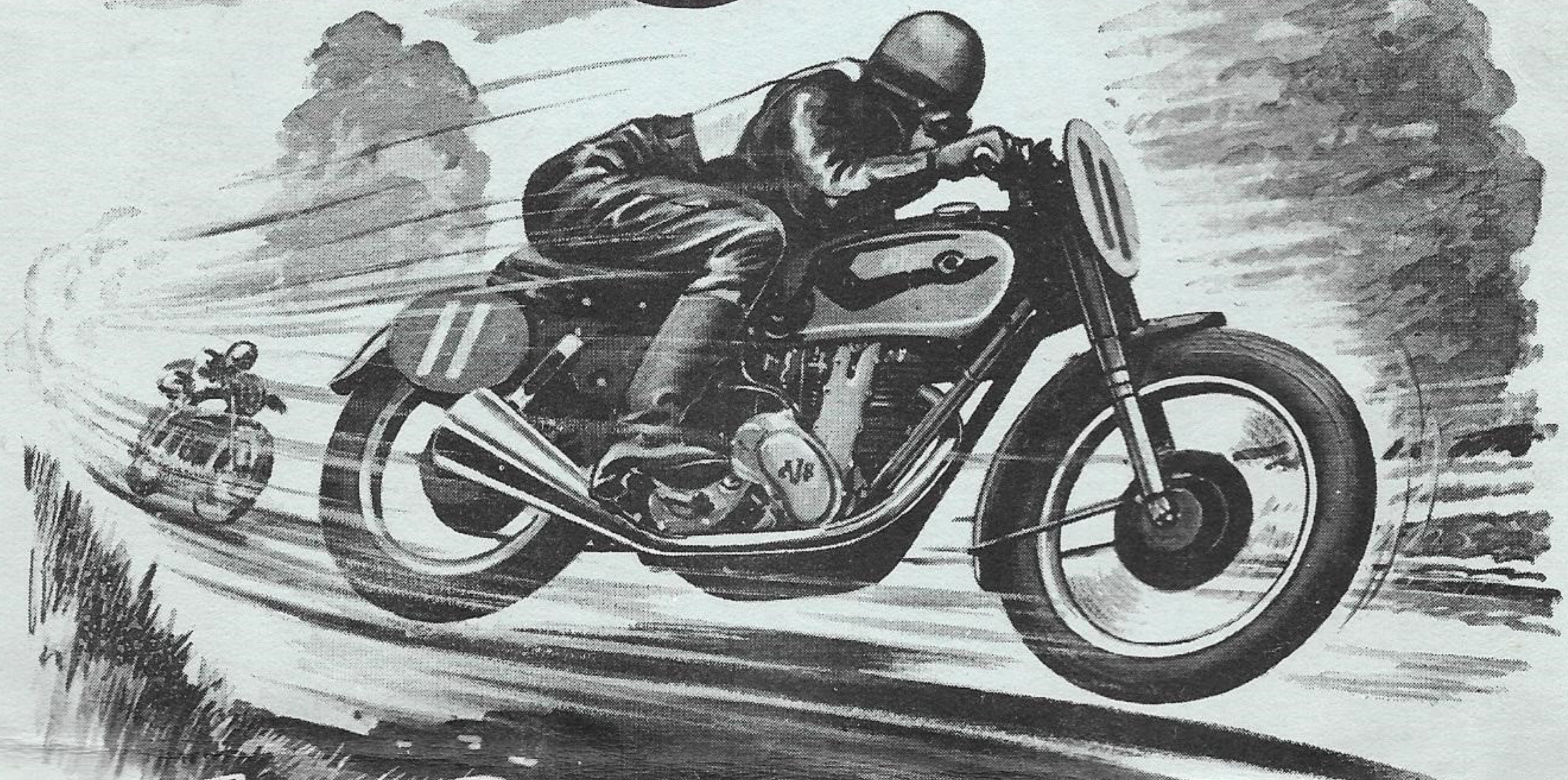


1948 - 1952 AJS 7R

AJS



*The Race-bred
Motor Cycle*

A·J·S MOTOR CYCLES • PLUMSTEAD ROAD • LONDON, S.E.18

Model - 7R

1949 - 1952

INSTRUCTIONS AND TECHNICAL DATA

The Model 7R A. J. S. is fitted with a single-cylinder chain-driven O. H. C. engine, designed for use in International Races run under F. I. M. Regulations:

ENGINE

Bore 74 m. m. Stroke 81 m. m. Displacement 348 c. c.
Standard compression ratio 9.5 to 1.

CARBURETTOR

Amal 10 T. T. type. $1\frac{1}{8}$ " bore. V3U Choke.
No. 109 needle jet. No. 340 main jet (See note)
(Set at Sea level in dry atmosphere)

NOTE:

Where a jet of different size is fitted, tests have shown that it is suited to the particular engine concerned under these conditions.

SPARKING PLUG

KLG. 689

MAGNETO -

BTH type M. D. 1. or Lucas NTT. 1.

VALVE TIMING

Inlet Opens 61° B. T. D. C. Closes 71° A. B. D. C.
Exhaust Opens 74° B. B. D. C. Closes 44° A. T. D. C.

VALVE ROCKER

CLEARANCE -

For timing and tuning Inlet .005" Exhaust .014"

OIL -

Castor base racing oil.

FUEL CONSUMPTION

Approximately 40 m. p. g. on average circuit at Racing speeds.

ENGINE R. P. M.

Motor to be raced as near to 7000 r. p. m. as possible. R. P. M. should not exceed 7400.

PRIMARY CHAIN

LUBRICATION

Oil is fed from bottom of oil tank through a jetted on-off tap. Standard Amal jets of from 80 to 110 are suitable according to temperature conditions, the smaller sizes being used in hot weather or on small circuits with low gear ratios. The flow of oil should be controlled to 15-20 drops per minute after the motor has been thoroughly warmed up.

FRAME -

The Frame and suspension system has been specially developed for racing.

FRONT AND REAR

SPRING UNITS

are filled with Mineral Oil as follows:

Front Forks - 250cc's ($8\frac{3}{4}$ fluid ozs) oil each leg.
Rear suspension 85cc's (3 fluid ozs) (max.) oil each leg.
Recommended Brands: Castrolite, Single Shell, Mobiloil "Arctic"
Essolube 20, Motormine 'E'

TYRE PRESSURES

Front Dunlop ribbed racing tyre 21" x 3.00" = 21-lbs
Rear Dunlop studded racing tyre 20" x 3.25" = 21-lbs

GEAR RATIOS

Standard gear ratios 5.24, 5.95, 7.07, 10.14
Standard sprockets 21-tooth engine 55 tooth rear wheel
44-tooth clutch 22 tooth gear box.

continued ..

ALTERNATIVE GEAR RATIOS

<u>Engine Sprocket</u>	<u>Rear Wheel Sprocket</u>	<u>Top Gear</u>
22	56	5.08
21	54	5.14
22	57	5.18
21	55	5.24
21	56	5.33
20	54	5.40
21	57	5.43
20	55	5.50
20	56	5.60
19	54	5.68

GEAR BOX RATIOS

<u>Top</u>	<u>Third</u>	<u>Second</u>	<u>Bottom</u>
1 to 1	1.136 to 1	1.35 to 1	1.936 to 1

6,750 r.p.m. with top gear of 5.24 represents 100 m.p.h.

GEAR BOX

Correct amount of lubricant 1 pint Summer Grade Mineral Oil.

WEIGHT AND TANK CAPACITIES

Approximate weight (tanks empty)	298-lbs.	or	135 kilos.
Fuel tank capacity	4.75 galls	or	21.5 litres.
Oil tank not to have more than	1 gall.	or	4.5 litres.

COMPRESSION RATIOS

<u>FUEL</u>	<u>Comp: ratio</u>	<u>Piston Part No.</u>	<u>Main Jet.</u>	<u>Needle Jet.</u>	<u>Magneto Timing B. T. D. C.</u>
72 Octane	8.45 - 1	014081	320-350	109	40°
80 Octane	9.5 - 1	016832	320-350	109	40°
50/50 Petrol Benzol	10.75 - 1	014526	320-350	109	37°
90% Methanol-					
10% Benzol	13.0 - 1	016417	750-850	118-120	35°

(These pistons are also suitable for '49 and '50 type engines)

BRAKES

These are special A. J. S. double leading shoe brakes adjusted and ground before assembly to machine. Link rods between two brake levers on each hub are not to be adjusted except when relining brakes.

Important:

The leading ends of the brake liners must be kept well "backed off" and this relief must be maintained at 1½" at all times. The rider must bear in mind that as the liners wear, so the relief becomes less.

The A. J. S. double-leading shoe brakes are exceedingly powerful and light in operation and care should be taken before employing the full braking which is available. The rider is strongly advised to learn the 'feel' of the brakes before taking part in serious racing.