

introducing Big Brother



the **AJS** Stormer 410


Riders asked for it, and now they have it, a new big brother to the phenomenally successful Stormer 250. This super power packed bike might even be more than some have bargained for. Built with the sleekness of a cheetah but possessing the heart of a tiger, the performance capabilities of this machine could accurately be described as frightening – not least to the opposition. The Stormer 410 will prove to be the motorcycle with the “get-away” qualities, whether it’s from other competitors at National or International level Motocross events, friends on the week-end enduro, or just simply that exciting off-the-street solo trip. The new 410 engine with its 83 x 74 bore/stroke configuration produces a superbly balanced 35 B.H.P. throughout a broad rev range easily, smoothly, without a sign of fuss. AJS Stormers have always been famous for their excellent handling qualities, the Stormer 410 will enhance this reputation – in a very big way.

A special new feature of the Stormer 410 is an effectively silenced exhaust system that reduces the sound level to that normally associated with street bikes. This new muffler system allows you to use a powerful competition machine anywhere at any time without annoying non-riders. A unique design aids engine torque and neutralizes possible power loss.




Vic Eastwood, factory Motocross competition rider and development engineer in action on a Stormer at the Norton Villiers Performance Shop testing ground.

Factory special performance items available to you from the shop through your dealer include special purpose exhaust



systems, aluminum gastanks,
light alloy handlebar clamps,
nylon lined cables and
lightened wheel hubs.





Across a desolate landscape a solitary rider was moving with an almost alarming urgency. Over desert, mountain tracks, shrub, pot-holed roads, boulder fields and beach with hardly an obvious change in speed. He was reaching speeds of 75 m.p.h. where even walking would be difficult. Into the night he rode, thru the gnawing chill of dawn to the heat of the day, accompanied only by the singing exhaust and wonder as to the outcome. Had his plans been thorough enough? Would the bike break under the terrific pounding? Could he himself stand the strain of possibly 38 hours in the saddle? At times, lost in the wilderness he felt the creeping signs of despair.

The time, December 1970, the rider Doug Douglas, of San Bernadino, California a veteran Baja rider, his bike an AJS Stormer 250, his purpose to break Kim Kimball's Montesa mounted solo motorcycle record of 38 hours 54 minutes for the famous Mexican 1,000 mile desert run - Tijuana to La Paz. Everybody including Doug himself felt that with good fortune and his extensive enduro experience, he might be able to shave up to an hour off. When the tremendous rough-ground speeds attained by the Stormer were taken into consideration, it increased the optimism. What in fact happened was far beyond expectation.

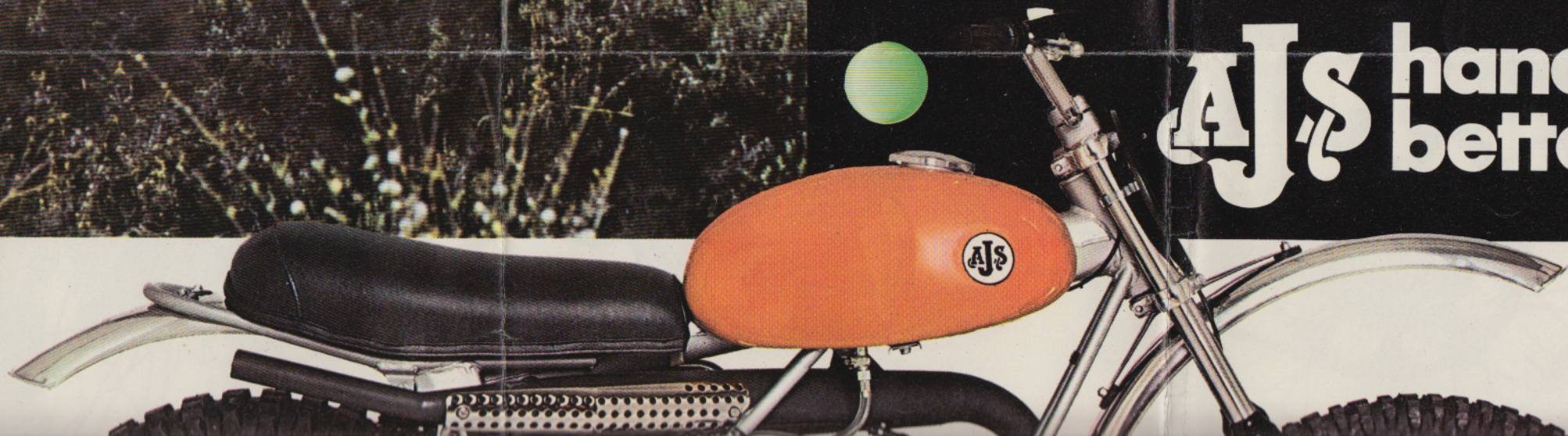
In an incredible display of combined determination, skill, and machine performance he trimmed a colossal 11 hours 39 minutes off the month-old record reducing it to 27 hours 15 minutes - an incredible challenge to any future aspirant.

Again and again, the AJS Stormer has proved to be the motorcycle with the most "get-away" qualities, whether it's from other competitors at National or International level Motocross events, friends on the week-end enduro, or just simply that exciting off-the-street solo trip.

Perfected by constant top class competition, the Stormer is a winner in every sense of the word. With superb unmatched handling, big punch power right thru the rev range and revolutionary light but unbelievably strong frame, it is the leading machine for the big competition. Malcolm Davis and Andy Roberton on Stormers were first and second in the 1970 British National 250 cc Championship, Malcolm winning for the second year.

Made by the Manufacturers of the famous Norton Commando Superbike, the Machine with the Isolastic Super-ride.

AJS handles better





Stormer 250

AJS Specifications

Models Stormer 250 and Stormer 410

Frame

Norton Villiers pattern steel frame, constructed of a large tapered top tube with twin looped downtubes, giving tremendous strength and rigidity together with lightness and superb handling.

Engine

AJS air-cooled single cylinder two-stroke. Unit construction in aluminum alloy with long life spun-cast iron liner. Cylinder barrel available with wide spaced fins (as illustrated) or narrow spaced fins as optional alternative for dry and wet conditions. Performance characteristics specifically designed for Motocross, giving high power throughout a wide r.p.m. range with outstanding torque and flexibility.

	250	410
Capacity	15 cu. ins. (247 cc)	24 cu. ins. (403 cc)
Bore	2.676 ins. (68 mm)	3.267 ins. (83mm)
Stroke	2.676 ins. (68 mm)	2.915 ins. (74 mm)
Com. ratio	11:1	10 $\frac{3}{4}$:1
B.H.P. at Rear Wheel at sea level	Over 25 at 6000-8000 r.p.m.	Over 35 at 5500-7000 r.p.m.
Max. torque	22 lbs./ft. at 5750 r.p.m.	31 $\frac{1}{2}$ lbs./ft. at 5500 r.p.m.

Clutch

Long life all-metal diaphragm spring clutch running in oil.

Gearbox

Motocross-strong four-speed gearbox with choice of selected ratios. A unique rear chain adjustment through a single movement cam action. Choice of two sets of gears providing gearbox internal ratios as below:

Ignition System

Flywheel generator with external coil.

Carburetor	250	410
Amal concentric type	932	1034
Jet	280	310
Choke	32 mm	34 mm
Pilot Jet	20	20

These jet and choke sizes are those fitted as standard at the factory. They may require to be changed to suit local conditions.

Air Box

Large air box for large capacity air cleaner, specially sealed at joints, providing positive location of element.

Power Transmission	250	410
Primary chain sprocket ratio (Crankshaft/clutch)	20:43	24:40
Secondary chain sprocket ratio (Clutch/rear wheel)	13:59	13:59

Rear wheel sprocket bolted through rear wheel for extra security.

Lubricating System

Engine: Castor-based oil mixed with premium grade gasoline 20:1 ratio.

Gearbox: Gears and shafts running in oil bath.

Gastank

Strong glass reinforced plastic sports tank with rapid action gascap. Capacity: 2 $\frac{1}{4}$ gallons (8 $\frac{1}{2}$ litres).

Exhaust System

Upswept expansion chamber of length specially tuned to provide the desired engine characteristics. Silenced system (as illustrated) available on 410.

Front Suspension

AJS ultra-lightweight teledraulic fork with revised damping. Chrome-moly stanchions, aluminum alloy

with external springs rated 75 lbs. (normally fitted to the 250) or 88 lbs. (normally fitted to the 410).

Handlebars

Competition type steel handlebars with tough strengthening brace. Width 32 ins. or 34 ins. at option.

Competition Number Plates

Front, right and left side plates supplied, all of tough black ABS plastic. Left side number plate forms airbox lid. Spring clip fixing to forks for front plate.

Wheels

Chromed steel or hi-tensile aluminum wheel rims with hi-tensile steel spoking—40 spokes per wheel. Double security bolts to each wheel. Robust brake torque arms. Rear torque arm with bolt on rear chain guide.

Brakes

Extra wide drum brakes front and rear incorporating unique AJS piston ring seal in lightweight conical hubs.

Footpegs

Forged steel, spring-loaded, folding footpegs. Splined mounting, providing a range of adjustment.

Seat

Custom-designed for maximum rider comfort. Extra tough glass reinforced plastic seat base.

Fenders

Light alloy front and rear.

Dimensions and weight

Wheelbase	55.5 ins.
Length	83 ins.
Saddle height (Rider seated)	30 ins.
Ground clearance	9.5 ins.
Weight (dry)	250 222 lbs. 410 229 lbs.
Tire sizes	Front: 2.75 x 21 Rear: 4.00 x 18

Norton Villiers reserves the right to vary the specification of all motorcycles and spare parts without notice and the information in this leaflet does not therefore constitute a term of any sale. All descriptions and claims are given and made in good faith but are intended to apply generally. Variations in performance and construction on individual machines may occur. Performance on any particular occasion will also be affected by the conditions, circumstances and the rider. Capacity measurement in this leaflet are stated in U.S. gallons and in metric units.

United Kingdom Registered Design Number 931852 and United States of America Design Patent Number D.212405 have been granted on the frame.



Norton Villiers Limited
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a single movement cam action. Choice of two sets of gears providing gearbox internal ratios as below :

	Wide ratio	Close ratio
4th	1:1	1:1
3rd	1.255:1	1.255:1
2nd	1.66:1	1.51:1
1st	2.53:1	2.00:1

damping. Chrome-moly stanchions, aluminum alloy yokes and sliders allowing 6 $\frac{3}{4}$ ins. travel. Fork springs rated 24 lbs. or 29 lbs. at option.

Rear Suspension

Swing-arm pivoting on sealed-for-life polyurethane bushes and controlled by Girling adjustable oil dampers

Emergency Parts Kit

- | | |
|-----------------------|------------------------------------|
| Throttle cable | Set of contact breaker points |
| Clutch cable | Set of piston rings |
| Spark plug | .015 in. and .018 in. feeler gauge |
| Rear chain split link | Timing tool |

Rear: 4.00 x 18