THE UNAPPROACHABLE

# Notion

THE WORLD'S BEST ROAD HOLDER











Winner of 23 T.T. Races









## FOREWORD 1953

To win a single T.T. Race is an achievement, but to win 28 is an achievement that no other motor cycle manufacturer in the World has accomplished. Couple this with all that Norton has done in the World's Classic International Road Races and you have a performance that is unequalled in the World in any sphere of sport. It is a magnificent record of which we are justly proud and it is a splendid contribution to the prestige of the British Motor Cycle Industry.

This is by no accident or chance, but is the result of research work being constantly undertaken in the Norton factory and this knowledge is used in the building of the machines of our standard range,

which we again offer for 1953 with the utmost confidence.

of new features, the more important, however, is a pivoted fork rear suspension used and developed in racing over a number of years and fitted to all models previously equipped with the plunger type rear suspension. If you want perfect reliability, with road-holding that no other machine possesses and a turn of speed that you can use effectively, you must have a NORTON.



### GENERAL SPECIFICATION

SUSPENSION. All models are fitted with the well proved "Roadholder" telescopic, oil damped front fork and where rear springing is employed, this is now of the swinging arm type so largely responsible for the success of the current racing machines. Progressive, hydraulically damped, leak proof shock absorbers, effectively insulate the rider from road shocks, maintain complete road/tyre contact and provide an unbelievable degree of comfort and safety.

ENGINE LUBRICATION. The engines of all models are lubricated on the dry sump principle whereby oil is drawn from the separate tank, circulated through the engine and returned to the tank, being filtered and cooled before being re-circulated. Oil is pressure fed to big ends and adequate supplies reach all necessary points. A worm driven gear type pump of large capacity ensures continuous and ample circulation.

OIL AND PETROL TANKS. Manufactured from high finish sheet steel. All tanks are welded throughout and either heavily chromium plated or rust proof and enamelled in characteristic Norton colours. Petrol and oil filters are fitted and large diameter filler caps are incorporated. All petrol tanks provide a reserve supply.

SILENCERS. A new and efficient silencer of attractive shape and unobtrusive acoustical qualities is fitted to models ES.2 and 88 enhancing both appearance and performance. Heavily chromium plated, the whole exhaust system blends naturally with the rest of the machine.

TRANSMISSION. The  $\frac{1}{2}$ " pitch  $\times$   $\frac{5}{16}$ " wide single roller primary chain is housed in a patented pressed steel oil bath chaincase with single bolt fixing and drives a multi-plate clutch embodying a dual action vane type shock absorber. Final drive is by  $\frac{5}{8}$ " pitch, single roller chain having a covered top run and lubricated from the crankcase breather.

WHEELS. All models are fitted with 40 hole heavy duty rims built on to rigid cast hubs provided with progressive brakes of improved stopping power and ample braking surface. All rear wheels are removable without detaching rear chain.

GEARBOX. A four speed medium-close ratio gearbox is pivotally mounted in all frames. Short robust shafts and wide gear teeth ensure silent running and long life. Gear changing is light and positive in action and a large clutch worm inspection orifice ensures ease of topping up, over-filling being controlled by a readily accessible level plug.

ELECTRICAL EQUIPMENT. Lucas positive earth electrical system is common to all models, the controlled charging being by a 48 watt dynamo. A sealed beam light unit and underslung pilot light are featured in all headlamps. The 500T fitted with magneto only. A new rear lamp incorporating a stop light is fitted to all models.

SADDLE. All models, with the exception of the 500T, are fitted with a Dual Seat and pillion footrests as standard specification.

SIDE VALVE ENGINES. Both 16H and Big Four engines are identical in design differing only in cubic capacity. As a sidecar machine, the 596 c.c. Big Four needs no introduction, whilst the 16H of 490 c.c. capacity is equally well known for solo work. Mounted on three ball and roller bearings, the rigid flywheel assembly includes a double row crankpin of robust design. Large flat footed tappets are operated by wide cam gears of great accuracy, ensuring silence of operation. Ease of maintenance and long life are features of these engines.

O.H.V. ENGINES. The engine fitted to models 18, ES. 2 and with slight modifications to the 500T, employs the same crankcase layout as the side valve engines. Light alloy push rods operate the O.H.V. rockers which are carried in a separate aluminium housing and automatically lubricated by the returning oil, surplus oil draining away to the crankcase via a drilled oil way in the cylinder barrel.

VERTICAL TWIN ENGINE. This O.H.V. twin fitted to Dominator and Dominator de Luxe, employs a three piece built up crankshaft and plain steel backed big end bearings. Both camshaft and magneto are operated by roller chain, the former drive incorporating a tensioner. The rocker box is integral with the cylinder head ensuring freedom from possible oil leaks and accessible rocker adjustment.



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BIG FOUR. The Big 4 is world renowned for reliability. It is built throughout of the finest materials available, and its universal success is proof of the soundness of design. The machine is ideally suited to sidecar work. The side valve engine has a capacity of 596 c.c. and a bore and stroke of 82 mm. × 113 mm.

Model 16H. The Model 16H machine is to the same specification as the Big 4, with the exception that the side valve engine has a capacity of 490 c.c. Bore and stroke 79 mm. × 100 mm.



MODEL ES. 2. An overhead valve engine is employed, push rod operated. The whole of the valve gear is totally enclosed, and automatically lubricated. Large bearing surfaces and ground timing gear teeth ensure silent operation. The engine has a bore and stroke of 79 mm.×100 mm. giving a capacity of 490 c.c. The Norton swinging arm spring frame is fitted as standard specification.

MODEL 18. The Model 18 machine is to exactly the same specification as the Model ES. 2, with the exception that a rigid frame is fitted.

THE UNAPPROACHABLE







SENIOR T.T.

## orlon) SUCCESSES

WINNERS OF 28 T. T. RACES

WORLD CHAMPIONS



# KAVANAGH

#### ISLE OF MAN

JUNIOR T.T. NORTON 90-29 m.p.h. 1st, G. E. Duke 2nd, H. R. Armstrong NORTON 89-55 m.p.h. SENIOR T.T. 1st, H. R. Armstrong NORTON 92-97 m.p.h. NORTON 3rd, R. Amm

#### SOUTH AFRICA

DURBAN ANNUAL CHAMPIONSHIP MEETING 1st, G. Anderson ... NORTON ... NORTON 2nd. B. Castellani ... NORTON 3rd, H. Theron NATAL CHAMPIONSHIP RACES, Maritzburg 350 c.c. Championship 1st, W. Kay .... NORTON 500 c.c. Championship 1st, R. Allison ... 2nd, P. Ogle ... NORTON

#### HOLLAND

DUTCH T.T. 350 c.c. Class 1st, G. E. Duke NORTON 92.96 m.p.h. NORTON 2nd, R. Amm Record lap, G. E. Duke NORTON 94-65 m.p.h.

#### BELGIUM

BELGIAN GRAND PRIX 350 c.c. Class NORTON 101.71 m.p.h. 1st, G. E. Duke 2nd, R. Amm ... NORTON 3rd, H.R. Armstrong NORTON Record lab. G. E. Duke NORTON 103-15 m.p.h.

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#### IRELAND

LEINSTER '200' 500 c.c. Class 1st, H. R. Armstrong ... 2nd, K. Kavanagh ... NORTON 3rd, I. K. Arbor ... NORTON 350 c.c. Class 1st. H. R. Armstrong ... 2nd, K. Kavanagh NORTON \*\*\* 3rd, W. A. C. McCandless NORTON NORTH WEST '200' 1st, I. K. Arbor ... NORTON 2nd, W. A. C. McCandless NORTON 3rd, H. Clark ... ... NORTON ULSTER GRAND PRIX 350 c.c. Class 1st, K. Kavanagh NORTON 2nd, H.R. Armstrong NORTON HURST CUP TRIAL Won by A. A. Kirk NORTON

#### SWITZERLAND

SWISS GRAND PRIX 350 c.c. Class 1st, G. E. Duke NORTON 91-54 m.p.h. 3rd, H.R. Armstrong NORTON Record lap, G. E. Duke NORTON 93-27 m.p.h. NEW ZEALAND

SENIOR T.T. 1st, J. Swarbrick ... NORTON JUNIOR T.T. 1st, J. Swarbrick ... NORTON

**PORTUGAL** PORTUGUESE GRAND PRIX 350 c.c. Class 1st, J. de Ortueta ... NOR 2nd, J. Grace ... NOP 3rd, Pinto Todos ... NOR 500 c.c. Class 1st, J. de Ortueta ... NOR 2nd, John Grace ... NOR 3rd, Pinto Todos ... NOR

**SWEDEN** HEDEMORA T.T. 350 c.c. Class 1st, K. Kavanagh NORTON 2nd, S. Sorensen NORTON 500 c.c. Class 1st, K. Kavanagh NORTON 3rd, O. Nygren NORTON SPAIN

GRAND PRIX DE MADRID Senior Race 1st. J. de Ortueta

#### GERMANY

GERMAN GRAND PRIX 500 c.c. Class 1st, H.R. Armstrong NORTON 83-12 2nd, K. Kavanagh NORTON 3rd, S. Lawton NORTON 350 c.c. Class 1st, H.R. Armstrong NORTON 81-07 r 2nd, K. Kavanagh NORTON Sidecar Race

1st, C. Smith ... NORTON

# Norlon) SUCCESSES

WINNERS OF 28 T. T. RACES

WORLD CHAMPIONS

#### **IRELAND**

ISTER ' 200 ' .c. Class 1st, H. R. Armstrong ...

NORTON ... NORTON 2nd, K. Kavanagh 3rd, I. K. Arbor ... NORTON .c. Class

1st, H. R. Armstrong ... NORTON 2nd, K. Kavanagh ... NORTON 3rd, W. A. C. McCandless NORTON

RTH WEST '200'

1st, I. K. Arbor ... ... NORTON 2nd, W. A. C. McCandless NORTON 3rd, H. Clark ... NORTON

TER GRAND PRIX c.c. Class

t, K. Kavanagh NORTON d, H.R. Armstrong NORTON ST CUP TRIAL

on by A. A. Kirk NORTON

#### **SWITZERLAND**

SS GRAND PRIX .c. Class

NORTON 91-54 m.p.h. t, G. E. Duke d, H.R. Armstrong NORTON rd lap, G. E. Duke NORTON 93-27 m.p.h.

#### **NEW ZEALAND**

OR T.T. ... NORTON 1st, J. Swarbrick IOR T.T. ... NORTON 1st. J. Swarbrick

PORTUGAL

PORTUGUESE GRAND PRIX 350 c.c. Class 1st, J. de Ortueta ... NORTON ... NORTON 2nd, J. Grace 3rd, Pinto Todos ... NORTON 500 c.c. Class 1st, J. de Ortueta ... NORTON 2nd, John Grace ... NORTON

#### **SWEDEN**

3rd, Pinto Todos ... NORTON

HEDEMORA T.T. 350 c.c. Class

1st, K. Kavanagh NORTON 82 m.p.h. 2nd, S. Sorensen NORTON 500 c.c. Class

1st, K. Kavanagh NORTON 3rd, O. Nygren NORTON

SPAIN GRAND PRIX DE MADRID

Senior Race 1st, J. de Ortueta

... NORTON

#### GERMANY

GERMAN GRAND PRIX 500 c.c. Class

1st, H.R. Armstrong NORTON 83-12 m.p.h. 2nd, K. Kavanagh NORTON 3rd, S. Lawton .... NORTON

350 c.c. Class 1st. H.R. Armstrong NORTON 81.07 m.p.h.

2nd, K. Kavanagh NORTON Sidecar Race

1st, C. Smith ... NORTON

U.S.A.

DAYTONA 200 MILES EXPERTS RACE 1st, Dick Klamforth NORTON NORTON 2nd, C. R. Farwell

#### **AUSTRALIA**

NEW SOUTH WALES T.T.

Junior Race 1st, H. Hinton ... NORTON Senior Race 1st, H. Hinton ... NORTON 2nd, L. Boulter ... NORTON

#### **ENGLAND**

SILVERSTONE B.M.C.R.C. CHAMPIONSHIP MEETING

350 c.c. Championship Race

1st, G. E. Duke NORTON 86.97 m.p.h. 500 c.c. Championship Race

1st, G. E. Duke NORTON 89-88 m.p.h. A.C.U. INTERNATIONAL RACE MEETING, Boreham

350 c.c. British Championship

... NORTON 1st, T. K. Kavanagh 500 c.c. British Championship

... NORTON 1st, T. K. Kavanagh

COLMORE CUP TRIAL Colmore Cup (best performance)

... NORTON G. J. Draper WilliamWatson Shield (best sidecar performance)

A. J. Humphries ... NORTON Kershaw Cup-R. B. Young ... NORTON

NATIONAL TRAVERS TROPHY TRIAL Travers Trophy (best performance)

... NORTON G. J. Draper



G. E. DUKE







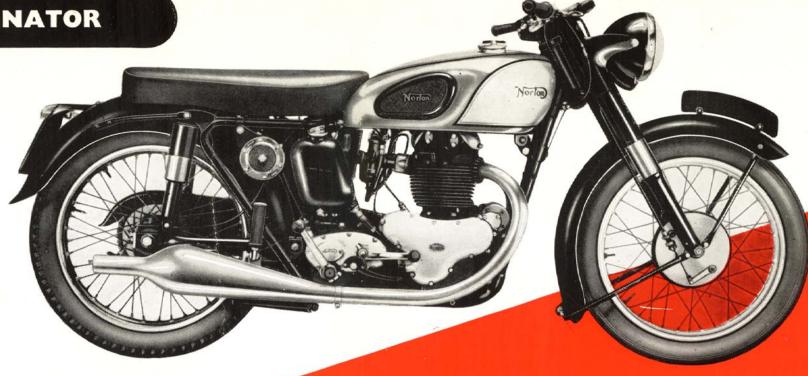
THE UNAPPROACHABLE OCTOR

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MODEL 88 "DOMINATOR DE LUXE." This machine has been produced following several years of research and development and it embodies the well-known duplex type frame similar to that used so successfully by Norton racing machines in International events. The engine of this machine is the well proven 500 c.c. O.H.V. vertical twin first introduced on the Model 7 Dominator."

No other machine offered to the public embodies such a large number of unique features. Its road-holding qualities and smooth surging power have to be experienced to be appreciated.

## **DOMINATOR**



MODEL 7 "DOMINATOR." The Norton 'Dominator' machine has already proven itself to be worthy of retention in the Unapproachable Norton range.

This machine now embodies the swinging arm hydraulically damped rear wheel suspension in place of the original plunger type.

The engine is the standard 'Dominator' 497 c.c. O.H.V. vertical twin.

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# Norton

THE WORLD'S BEST ROAD HOLDER

ENGINE. 490 c.c. (79×100) O.H.V. with light alloy cylinder head and barrel. Compression ratio 6:1. Totally enclosed and automatically lubricated valve mechanism, dry sump lubrication. B.T.H. magneto, Amal carburettor, KLG. waterproof sparking plug.

KLG. waterproof sparking plug.

TRANSMISSION. Wide ratio, four speed, positive stop foot operated gearbox giving ratios of 5.5, 8.1, 13.15 and 18.1 with 20 tooth engine sprocket and 16 tooth gearbox axle sprocket. Multi plate, Ferodo lined clutch with vane type shock absorbers. Primary chain housed in hermetically sealed oil bath chaincase. Folding kickstarter.

FRAME. Light triangulated construction, with crankcase shield. Side prop and rear stands, narrow light alloy mudguards and small type Dunlop saddle. Roadholder telescopic forks giving 100° total lock.

WHEELS. Front, 2.75 × 21 (WM. 1-21), rear, 4.00 × 19 (WM. 3-19) high tensile rims. 7" diameter. Brakes with light alloy plates and finger adjustments.

TANKS. Petrol 2½ gallons capacity. Three point rubber mounting with single bolt fixing, finished in dull chrome plating, suitably lined. Separate narrow type oil tank of 3½ pints capacity.

## TABULATED SPECIFICATIONS

MODELS	16H	Big 4	18	ES.2	500T	No. 7 Twin	88 Twin	MODELS
Bore and Stroke	79×100mm.	82×113mm.	79×100mm.	79×100mm.	79×100mm.	66×72·6	66×72·6	Bore and Stroke
Cylinder capacity	490 c.c.	596 c.c.	490 c.c.	490 c.c.	490 c.c.	497 c.c.	497 c.c.	Cylinder capacity
Compression ratio	4.9	4.5	6.16	6.16	6	6.7	6.7	Compression ratio
Valves	S.V.	S.V.	O.H.V.	O.H.V.	O.H.V.	O.H.V.	O.H.V.	Valves
Gear ratios—top ,, ,, third ,, ,, second ,, ,, bottom	5 6·05 8·85 14·88	5·6 6·78 9·9 16·6	4·75 5·75 8·4 14·2	4·75 5·75 8·4 14·2	5·5 8·1 13·15 18·2	5 6·05 8·85 14·88	5 6·05 8·85 14·88	Gear ratios — top ,, ,, third ,, ,, second ,, ,, bottom
Saddle height	29"	29"	29"	31"	32"	31"	31"	Saddle height
Wheel base	54½"	541"	541"	541/2"	53"	541"	55½"	Wheel base
Overall length	841"	841″	841"	841″	82"	841″	84"	Overall length
" width	28"	28"	28"	28"	28"	28"	26"	,, width
Ground clearance	51"	51"	51"	61"	71"	5½"	63"	Ground clearance
Weight	367 lbs.	373 lbs.	374 lbs.	379 lbs.	300 lbs.	413 lbs.	393 lbs.	Weight
Petrol tank capacity	3½ galls.	3½ galls.	3½ galls.	3½ galls.	2½ galls.	3¾ galls.	3½ galls.	Petrol tank capacity
Oil tank capacity	4 pts.	4 pts.	4 pts.	4 pts.	3½ pts.	4 pts.	4½ pts.	Oil tank capacity
Tyre size—front, ,, rear	3·25×19 3·25×19	$\begin{array}{c} 3 \cdot 25 \times 19 \\ 3 \cdot 25 \times 19 \end{array}$	3·25×19 3·25×19	3·25×19 3·25×19	$2.75 \times 21 \\ 4.00 \times 19$	3·25×19 3·50×19	3·00×19 3·50×19	Tyre size—front
Brake dimensions	7" DIAMETER × 1\frac{1}{4}" WIDE FRONT AND REAR							Brake dimensions
Chains	$\frac{1}{2}$ " PITCH $\times$ ·305" WIDE FRONT. $\frac{5}{8}$ " PITCH $\times$ $\frac{1}{4}$ " WIDE REAR.							Chains

## GUARANTEE

#### COPY OF GUARANTEE GIVEN BY NORTON MOTORS LTD. TO THEIR DEALERS

WE do not appoint agents for the sale on our behalf of our motor cycles, but we assign to motor cycle dealers distributing rights. No such dealer is authorised to transact any business, give any warranty or make any representation, or incur any liability on our behalf.

#### CONDITIONS OF SALE AND GUARANTEE

We give the following guarantee with our motor cycles, motor cycle combinations and sidecars, including all accessories and component parts other than tyres, saddles, chains and lighting and electrical equipment and other accessories and component parts supplied to the order of the purchaser and differing from those comprised in the standard specifications supplied with our motor cycles, motor cycle combinations and sidecars, but including accessories and parts supplied by way of exchange as hereinafter provided. This guarantee is given in place of any implied conditions or warranties or any liabilities whatsoever statutory or otherwise no guarantee except that hereinafter contained and no condition or warranty whatsoever statutory or otherwise is given or is to be implied, nor are we to be under any liability whatsoever except under the guarantee hereinafter contained. Any statement, description, condition or representation contained in any catalogue, advertisement, leaflet or other publication shall not be construed as enlarging, varying or over-riding anything herein contained. In the case of machines (a) which have been used for "hiring out" purposes, or (b) any motor cycle and or sidecar used for any dirt track, cinder track or grass track racing or competitions (or any competition of any kind within an enclosure for which a charge is made for admission to take part in or view the competition), or (c) machines from which the trade mark, name or manufacturing number has been altered or removed, or (d) any machines in which parts have been used not supplied by or approved by the motor cycle manufacturer, or (e) any machine from which the silencing system as fitted by the manufacturer has been partially or wholly removed or interfered with, no guarantee, condition or warranty of any kind statutory or otherwise is given or is to be implied, nor are we to be under any liability whatsoever in respect of any such machine.

We guarantee, subject to the conditions mentioned below, that all precautions which are usual and reasonable have been taken by us to secure excellence of materials and workmanship, but this guarantee is to extend and be in force for six months only from date of purchase, or date of exchange in case of any accessory or part supplied by way of exchange as hereinafter provided, and damages for which we make ourselves responsible under this guarantee are limited to the free repair of or supply of a new part or accessory in exchange for the part of the motor cycle, motor cycle combination or sidecar or accessory which may be proved defective. We undertake, subject to the conditions mentioned below, to make good in manner aforesaid any part or accessory covered by this guarantee which has proved defective within the said period of six months. We do not undertake to replace or refix, or bear the cost of replacing or refixing any such new part or accessory in the motor cycle, motor cycle combinations and sidecars are easily liable to derangement by neglect or misuse, this guarantee does not apply to defects caused by wear and tear, misuse or neglect. The term "misuse" shall include amongst others the following acts:—

- 1. The attaching of a sidecar to a motor cycle in such a manner as to cause damage or calculated to render the latter unsafe when ridden.
- 2. The use of a motor cycle or of a motor cycle and sidecar combined, when carrying more persons or a greater weight than that for which the machine was designed by the manufacturers.
- 3. The attaching of a sidecar to a motor cycle by any form of attachment not provided, supplied, or approved by the manufacturers, or to a motor cycle which is not designed for such use.

We do not guarantee tyres, saddles, chains or lighting and electrical equipment, or any accessories or component parts supplied to the order of the purchaser differing from those comprised in the standard specifications supplied with our motor cycles, motor cycle combinations or sidecars. As regards all such tyres, saddles, chains, lighting and electrical equipment, accessories and component parts, no guarantee, condition or warranty of any kind statutory or otherwise is given or is to be implied, and we are to be under no liability whatsoever in respect thereof.

#### CONDITIONS OF GUARANTEE

If a defective part or accessory should be found in our motor cycles, motor cycle combinations or sidecars, or n any part or accessory supplied by way of exchange as before provided, it must be sent to us CARRIAGE PAID, and accompanied by an intimation from the owner that he desires to have it repaired or exchanged free of charge under our guarantee, and he must also furnish us at the same time with the number of the machine, the date of the purchase or the date when the alleged defective part or accessory was exchanged as the case may be.

Failing compliance with the above, such articles will lie here at THE RISK OF THE OWNER, and this guarantee and any implied guarantee, warranty or condition shall not be enforceable.

#### REPAIRS

Any motor cycle combination or sidecar sent to us to be plated, enamelled or repaired will be repaired upon the following conditions, i.e., we guarantee that all precautions which are usual and reasonable have been taken by us to secure excellence of materials and workmanship, such guarantee to extend and be in force for three months only from the time such work shall have been executed, and this guarantee is in lieu and in exclusion of all conditions and warranties statutory or otherwise and all liabilities whatsoever and the damages recoverable are limited to the cost of any further work which may be necessary to amend and make good the work found to be defective.

NO EXCHANGE OR REPLACEMENT WHATEVER WILL BE CONSIDERED UNTIL PARTS HAVE BEEN PRESENTED TO US FOR EXAMINATION—CARRIAGE PAID.

#### PRICES ARE SUBJECT TO ALTERATION WITHOUT NOTICE

Prices and specifications subject to alteration without previous notice.

NORTON MOTORS LIMITED
BRACEBRIDGE STREET, BIRMINGHAM, 6, ENGLAND