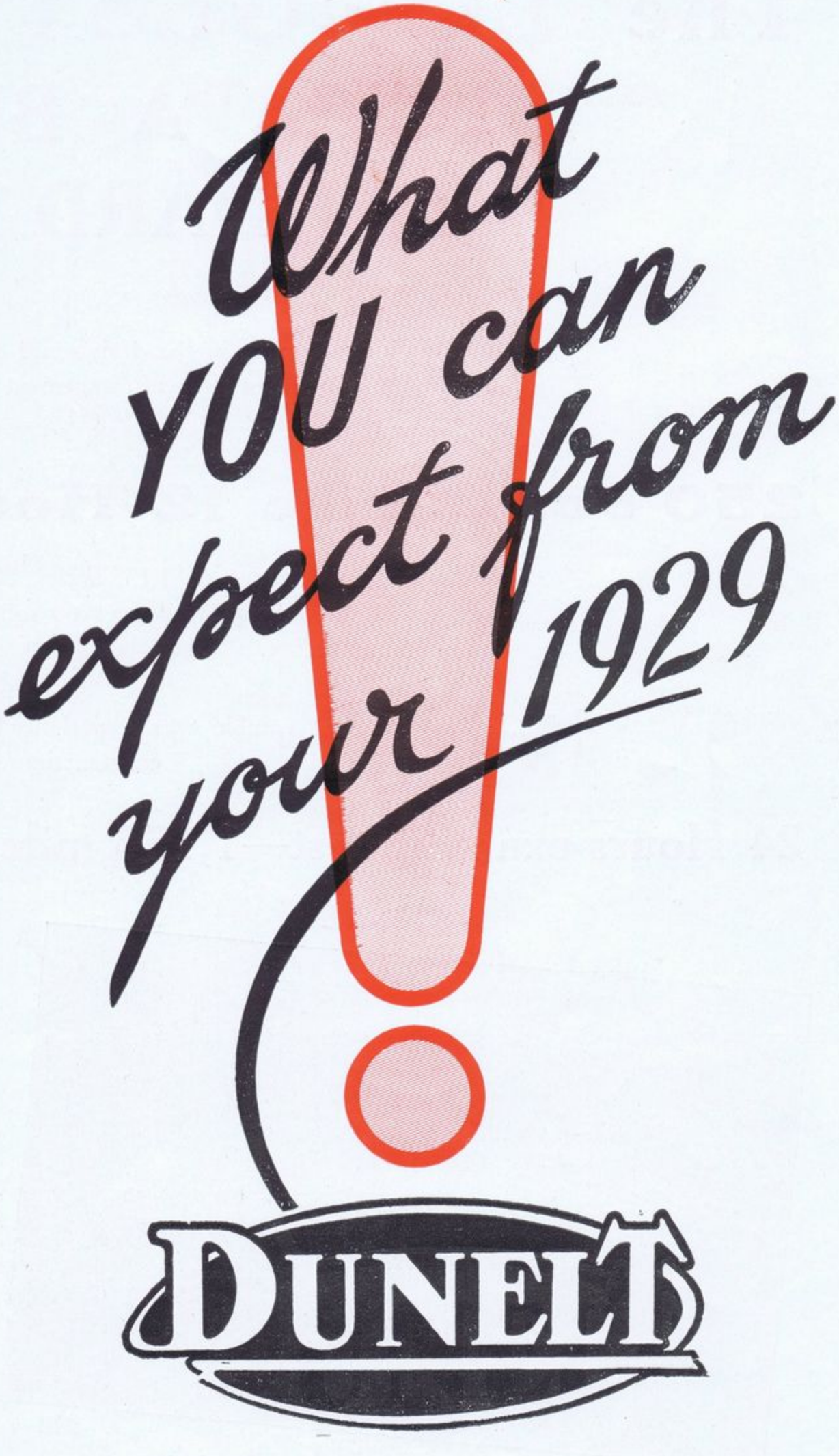
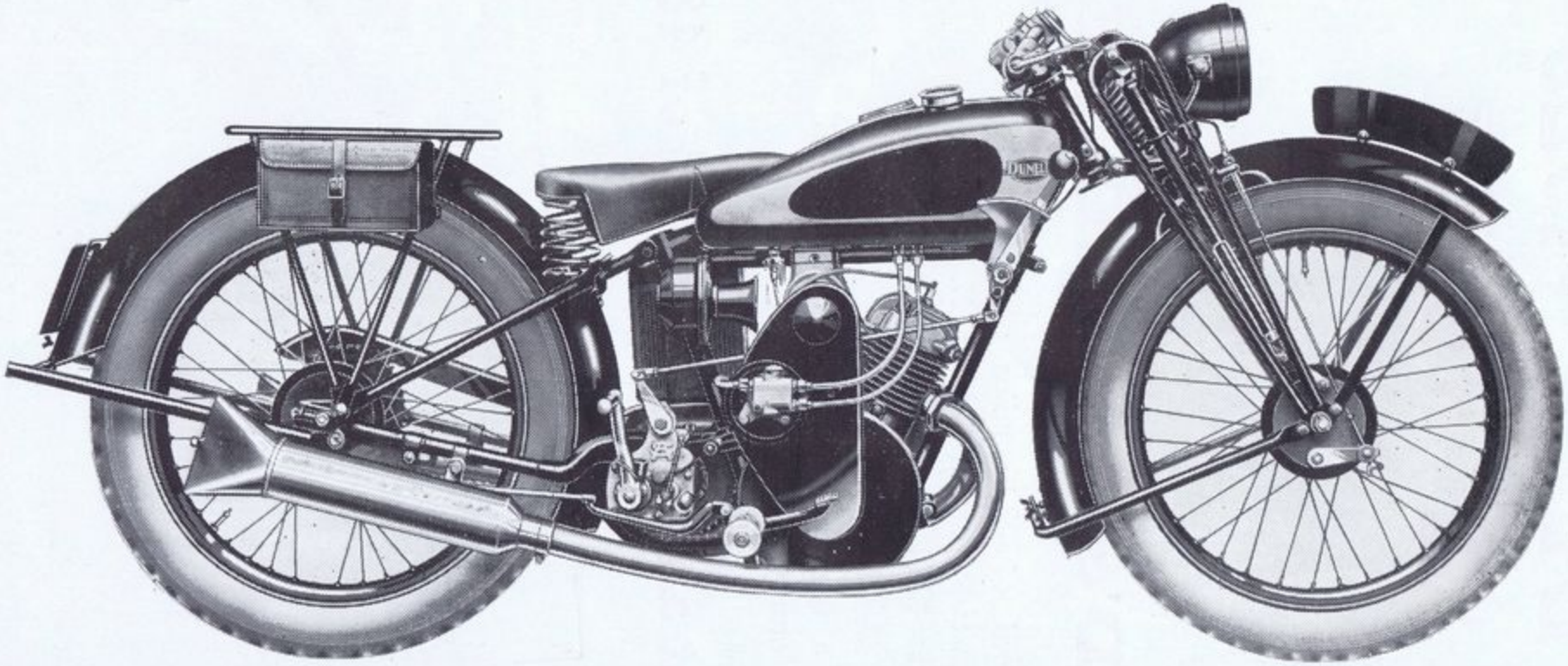


MODEL "K"

DUNELT

The "1929" "K" ROYAL



The machine that broke the Double 12 Hour World's Record

Clinton-Wall Publicity Ltd.

The LONGEST WORLD'S RECORD
in Class A BROKEN BY a "1929"
STANDARD DUNELT "K" ROYAL

(Subject to confirmation).

The striking advance in the design and construction of the "1929" DUNELT was convincingly demonstrated by its wonderful performance at Brooklands, September 18th and 19th, when a standard machine, selected from stock by the A.C.U., was successful in breaking, by nearly three miles per hour, the

250 c.c. Double 12 Hour WORLD'S SPEED RECORD

—covering a distance of 1,155 miles, 350 yards, at an average speed of 48.13 miles per hour, the maximum speed being well over 60 miles per hour. Only two riders took part in the test, N. Anderson and R. B. Talbot. The average speed for the first 12 hours was 49.24 m.p.h., and the record was beaten with 1½ hours in hand.

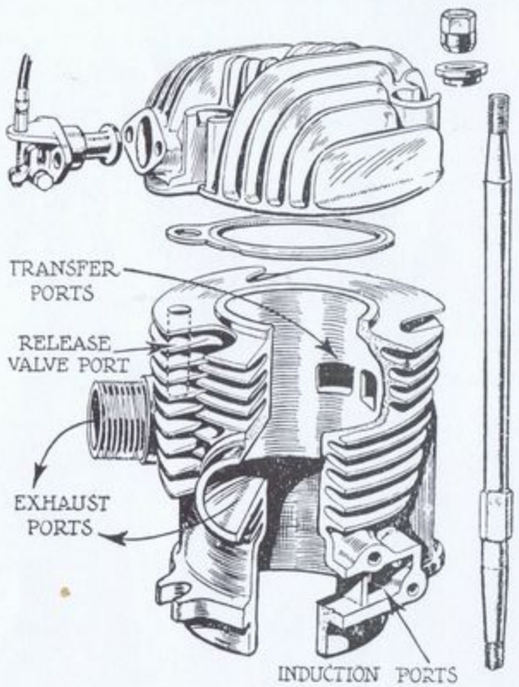
No mechanical trouble was experienced throughout the run—truly a remarkable tribute to the sound construction of a standard DUNELT Motorcycle.

24 Hours exacting test—1,155 miles, 350 yards—at an average speed of 48.12 m.p.h.

Aerial view of Brooklands.
Each circuit is 2¾ miles.

The DUNELT restarting after replenishments.
N. Anderson in the saddle.

Details of the "SUPER-CHARGED" engine and the new DUNELT patented "BI-METAL" PISTON



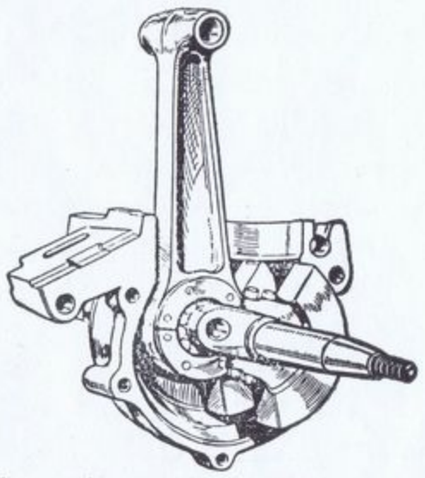
1. Detachable aluminium head and two-diameter cylinder of the Dunelt; on the right is one of the holding down bolts, and the compression release valve is shown on the left, detached from the head.

ESTABLISHED SINCE 1920. That the DUNELT SUPER-CHARGED engine DOES develop increased power and gives added efficiency, over that of the ordinary 2-stroke, has been an established fact since 1920, when it was first introduced in the form of a 500 c.c. Model, the success of which laid the foundation of the present DUNELT business.

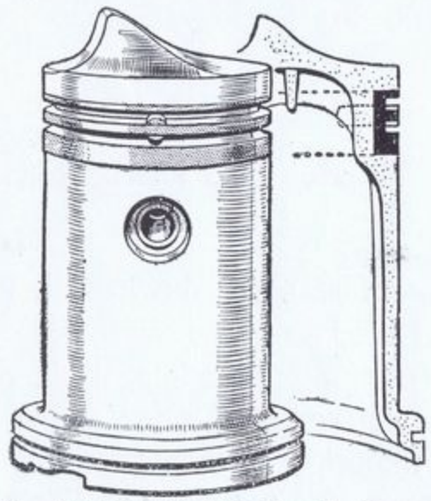
Constant experimental work and tests developed the original design to such a point, that it became evident the ideal type of engine to embody this supercharging principle was the 250 c.c. We are therefore now concentrating on this type, and the result is an engine capable of such a wonderful power output, as to give a road performance superior to that of any other similar capacity engine. PROOF of this is found in its innumerable successes achieved at Home and Abroad, often in competition with machines of higher c.c.—and in the Double 12-Hour World's Record here described.

THE SECRET. The main secret of this achievement lies in the patented design of piston and cylinder, whereby a supercharging effect is obtained in transferring the gases from the crankcase to the cylinder. It will be seen from the illustration that the piston, consisting of two diameters, in practice displaces 50 per cent. more charge than can be accommodated in the combustion chamber. The result is that not only is the combustion chamber more efficiently charged, but also a better scavenging of the exhaust gases obtained. By this is meant that the exhaust gases, which rely partly on their own velocity to leave the cylinder when the exhaust ports are opened, and partly by the force of the incoming gases, are more completely driven out by the rush of fresh mixture due to the increased force behind them. Consequently, the explosion mixture is less diluted with exhaust gases and a more efficient charge obtained.

10%—15% INCREASED EFFICIENCY. It may be thought that by this means a great amount of fresh gas will be lost through the exhaust ports; but this again is governed by crankcase compression, deflector shape and height, size and shape of ports, etc., all of which have been subjected to very careful tests, to determine their correct relative values. Tests have shown that between 10 per cent. and 15 per cent. increase in efficiency is obtained by the use of our super-charged design of engine.



2. Connecting rod and crank case details.

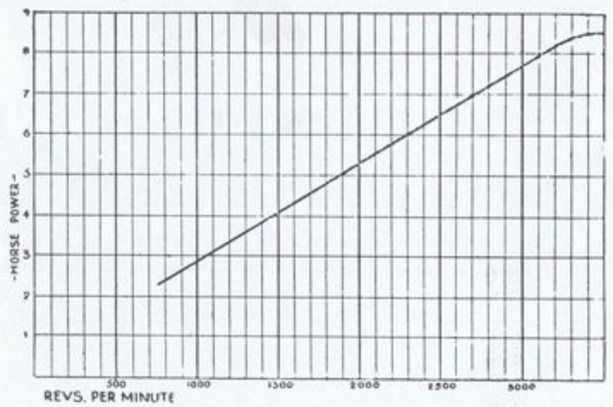


The DUNELT "Bi-Metal" Piston.
Illustration by courtesy of "The Motor Cycle."

OVERHEATING IMPOSSIBLE. A further advantage with this type of piston is that, except when the piston is right at the top of its stroke, its sides are cooled externally by fresh mixture in the annular space formed by the truncation. The cooling effect obtained is further assisted by the use of a detachable aluminium cylinder head, and two port exhaust outlets. Messrs. Dunford & Elliott Ltd., were the first manufacturers to adopt the former as standard, which, together with the other two features mentioned, ensure rapid and correct dissipation of the heat, and allow the increased power developed by the engine to be made use of, without any suspicion of overheating.

A "1929" IMPROVEMENT IN PISTON DESIGN. An improvement of a far-reaching nature has been adopted in the piston of the "1929" DUNELT. The piston apart from being made to a special aluminium specification has an IRON BAND CAST ROUND ITS UPPER PORTION which carries the piston rings —therefore it embodies all the advantages of the aluminium piston, while overcoming its well-known weaknesses. We claim that the patented DUNELT Bi-Metal Piston to have eliminated piston slap, wear on piston ring grooves, the sticking of piston rings, and the possibility of damage in the event of engine seizure. The clearance between the piston and cylinder can be considerably reduced, resulting in a more efficient engine.

The most up-to-date practice is employed in the details of the engine construction. The crankshaft is a solid alloy steel drop forging, the balance weights being bolted on after assembling the connecting rod. The crankshaft is mounted on ball bearings, and the big end bearing is of the roller bearing type. The connecting rod is also drop forged in alloy steel.



TYPICAL POWER CURVE OF 1929 STANDARD 249 c.c. DUNELT ENGINE.

WHAT A TEST LIKE THE DOUBLE 12 MEANS

TRY and visualise what a 24-HOURS HIGH SPEED TEST of this nature means—just imagine taking out your DUNELT on Saturday morning and driving 1,155 miles at an average speed of 48 miles per hour—this would land you (if such a thing was possible) somewhere in Montenegro on the following Sunday morning. A flight of fancy, granted, but—such a journey would be less severe a strain than the "Double 12-hour Record," which involved no less than 417 laps at Brooklands.

The wear and tear of such a test would be equivalent to at least TWELVE MONTHS ORDINARY SERVICE—yet your DUNELT could do it without a falter—because EVERY DUNELT is designed and built to the same standard as the machine which achieved this feat.

A NOTE re BROOKLANDS

To those unacquainted with Brooklands it is necessary to explain that the track is by no means smooth—its uneven surface and many curves place a tremendous strain upon the machine at high speed—and to run continually for long periods on such a track is to test to the utmost every constructional detail of the Motorcycle. Hence the reason why a record of this nature is so seldom attempted—it has only been broken twice since 1922, and each time by a DUNELT standard stock machine.

YOU CAN BUY A "1929" DUNELT CAPABLE OF EXACTLY THE SAME PERFORMANCE FROM ANY DUNELT DEALER for £39 - 0 - 0

and—having bought and tested a DUNELT, you will realise why it is capable of such an outstanding performance.

STOP PRESS NEWS!

A TYPICAL DUNELT SUCCESS.

GERMAN CLUB CHAMPIONSHIP RACE,
AVUS TRACK, SEPTEMBER 16th, 1928.

3 STANDARD STOCK 249 c.c. DUNELT machines entered and finished at the following speeds :—

No. 52	**94.7 k.p.h.**
No. 53	**86.2 k.p.h.**
No. 54	**94.2 k.p.h.**

Out of 63 starters only 25 completed the 160 km., proving the severity of the test.

DUNELT

"The STANDARD TOURING MOTORCYCLE that BREAKS WORLD'S RECORDS."

For Specifications and Prices of all DUNELT "1929" Models see Illustrated List.

DUNFORD & ELLIOTT (Sheffield) LTD.

DUNELT WORKS, BATH STREET, BIRMINGHAM.

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