

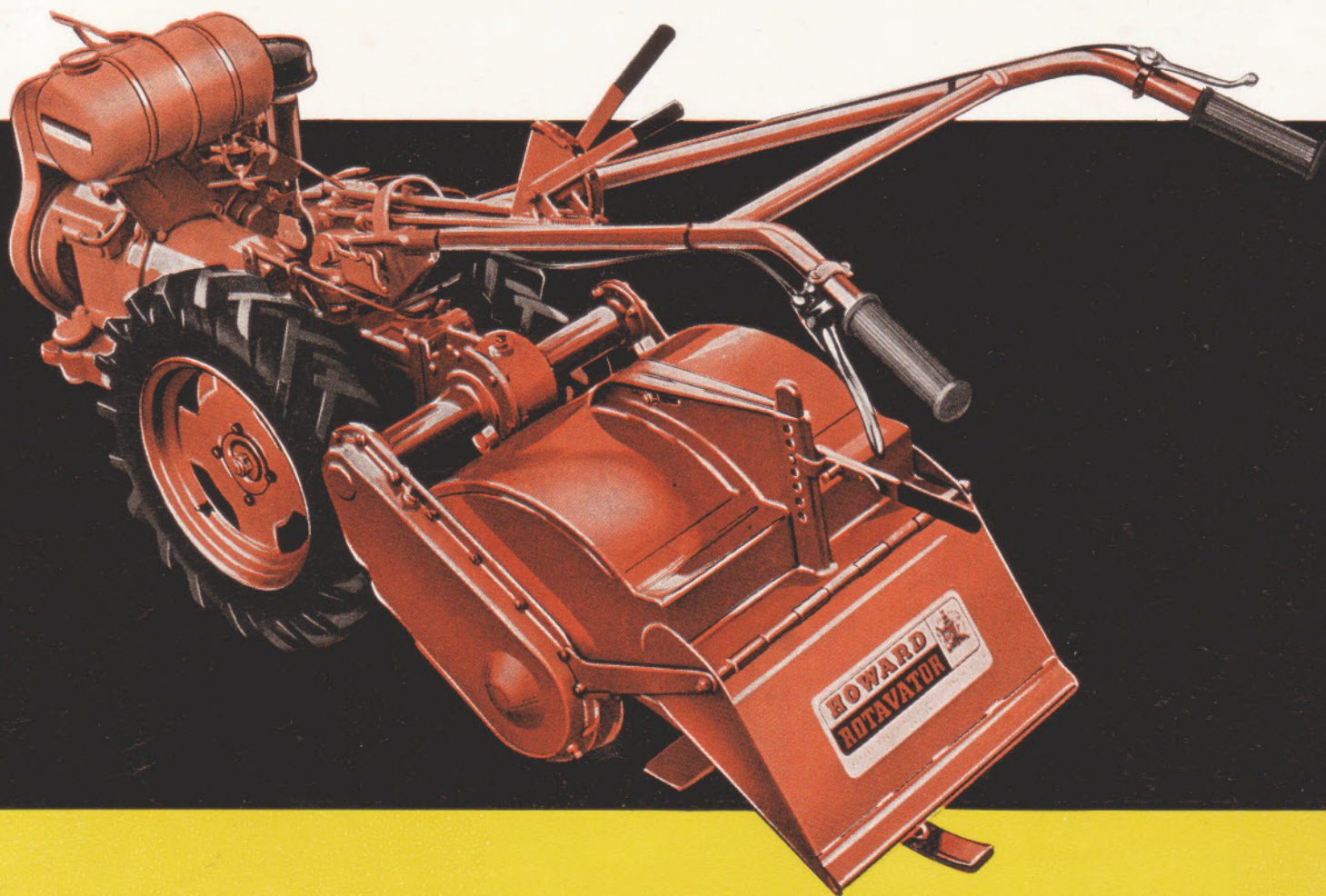
Howard 400 Rotavator Leaflet

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Howard-Clifford **ROTAVATOR**

Regd. Trade Mark

400



Strong - Simple - Reliable

A real HOWARD ROTAVATOR

AGENT:-
E. B. H. DAVENPORT
THE BATTLEFIELD GARAGE,
NR. SHREWSBURY.

400 DESIGNED FOR WORK — BUILT TO LAST

A REAL COMMERCIAL MACHINE

The Howard-Clifford '400' is a compact, powerful Rotavator designed for the market gardener, nurseryman, plantation owner, garden contractor and rental-yard.

For the market gardener or smallholder, the '400' will prepare perfect seedbeds for all crops from potatoes to onions; it will turn in manure or crop residues, weed between rows or drive a pump or sawbench with its powerful engine.

For the nurseryman or plantation owner, the '400' will keep his rows of trees and shrubs, or tea, coffee, pineapple, etc. in immaculate order. Only 20" wide overall, the 16" side-driven Rotavator leaves no untilled strips even when working at very shallow depths to prevent damage to delicate feeder roots. With its low centre of gravity the '400' is easy to control and light to handle. Where used on large acreages a depth control wheel makes handling even easier.

For the garden contractor and landscaper, the '400' is tough and reliable and can be put into the worst ground with confidence. Turf is well broken up, obstructions can be treated with contempt and a fine seedbed for grass made from the most unpromising wasteland. The narrow overall width allows passage through the most restricted entrances yet the wide swing of the handlebars gives excellent control on the most uneven ground.

For the Rental Yard, the '400' is a machine that can be hired out with confidence, since not only is it tough but it is simple to use. Beginners can master this machine in a few minutes. Maintenance is simple and quick. There are no complications to confuse the user and be a source of damage through mishandling, yet here is a mansized Rotavator that will really do the job. This is the machine to bring you profitable business.

SOLID AND SOUND — STRESSED FOR HEAVY DUTY

Tough Transmission. The Howard-Clifford '400' is no toy. Designed through and through to give years of service, its broad alloy steel gears and toughened shafts are built to last.

Choice of Engines. Powered by a $5\frac{1}{2}$ h.p. 4-stroke petrol engine or a $6\frac{1}{2}$ h.p. 2-stroke Diesel engine, the '400' gives a choice of the greatest economy in capital outlay or in running costs.

Range of Speeds. Deep digging, hoeing and reverse gears, independent of P.T.O. and rotor speed, give the right speed for the job and are easy to select.



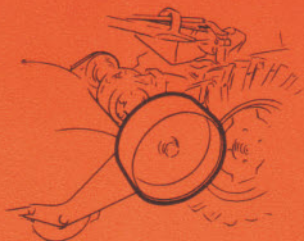
Howard Rotavator. The Rotavator is a true Howard design, capable of working to 8" depth and side-driven to give full coverage with accurate depth control. Weed-cutting blades prevent grass binding round the rotor on even the toughest land and the strong box-section shield will withstand a heavy battering from stones.

Sold and Serviced throughout the world by a network of dealers equipped with spare parts and service facilities and backed by the technical resources of the world's largest manufacturers of Rotary Tillage Equipment.



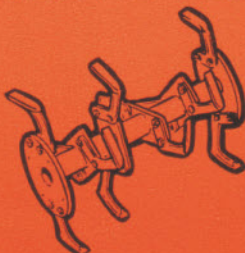
P.T.O. UNIT

Easily attached to the Stay tube, the 10" diameter 3½" face width pulley turns at 630 r.p.m. (at 2,800 r.p.m. engine speed) to give a belt speed of 1,650 feet per minute. Used for driving sawbenches, pumps, grinding mills, etc.



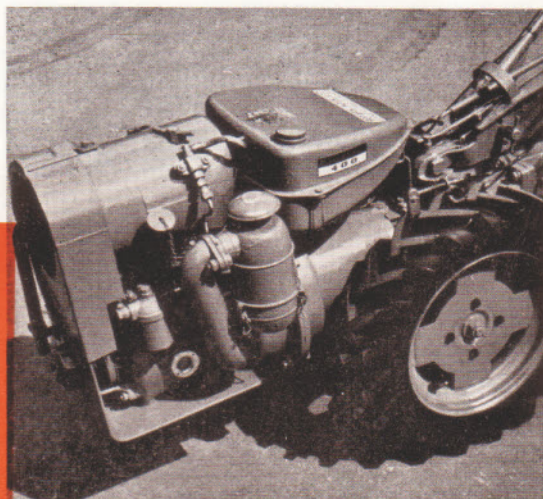
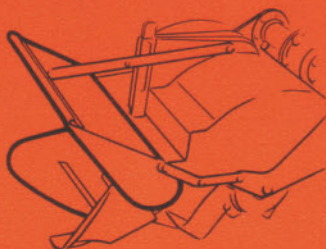
PICKTINE ROTOR

Fitted in place of the standard rotor the picktine rotor carries heavy forged chisel tines capable of breaking up heavily compacted and hard baked soil, gravel paths or exceptionally stoney land.



FURROWER

Quickly fitted to the depth control skid the furrower can make drills or furrows up to 8" deep for potato planting and ridging, making small irrigation channels, etc. An indispensable attachment for every user.



DIESEL ECONOMY AVAILABLE AT MINIMUM COST

The air cooled HIRTH 2-stroke diesel engine provides real economy as well as great pulling power at low engine revolutions. Beautifully engineered, with a 22:1 compression ratio, it produces 6½ h.p.



SPECIFICATION

ENGINE

J.A.P. 4/3B 4-stroke Petrol model, Bore 70 mm. Stroke 75 mm. Displacement 288 c.c. 5.5 b.h.p. maximum at 2,000 r.p.m. (Maximum engine speed 3,800 r.p.m.). Splash type lubrication. Centrifugal type governor, handle starting.

or:—

HIRTH DIESEL

Type D.24 447 c.c. 6.5 b.h.p. at 2,200 r.p.m. 2-stroke diesel. Governor controlled.

CLUTCH

2 plate, dry type.

GEARBOX

Two speed and reverse incorporating worm and heavy-duty spur wheel drive.

SPEEDS PETROL MODEL:

1st gear—8.5 m.p.h. (1.4 k.p.h.).
2nd gear—1.8 m.p.h. (2.9 k.p.h.).
Reverse gear—7 m.p.h. (1.1 k.p.h.) at 2,800 r.p.m.

Note: Speeds of the diesel model will be approximately 30% less at normal engine operating speeds.

FUEL CAPACITY

Petrol Model 1 gallon (4.5 litres).
Diesel Model 14 pints (7.9 litres).

OIL CAPACITIES

Main gearbox—2½ pints (1.5 litres).
Bevel gearbox—¾ pint (0.4 litres).
Chaincase—½ pint (0.3 litres).

DIMENSIONS

Overall length 72" (183 cms.).
Overall width 20" (51 cms.).
Overall height (to control lever tips) 42" (107 cms.).

WEIGHT

Petrol Model approx. 422 lbs. (192 kgs.).
Diesel Model approx. 485 lbs. (220 kgs.).

WHEELS

20" dished wheels fitted 400 x 12 traction tread tyres.

Tyre pressure 14 lbs./sq. in. (0.98 kg./cm.).

Wheel centres—12" (30 cms.) in narrow position (16" overall) 14½" (32 cms.) in wide position (18½" overall).

CONTROLS

1. Gear control by lever and connecting rod.
2. Rotor engagement control by lever and connecting rod.
3. Handlebar control by handgrip and connecting rod.
4. Engine clutch via Bowden cable with external adjustment.
5. Engine speed control via Bowden cable.

ROTAVATOR

Drive by bevel pinion, crownwheel and ¾" pitch roller chain.

Speed: PETROL Model 226 r.p.m. at rated engine speed (2,800 r.p.m.).

Speed: DIESEL Model 179 r.p.m. at rated engine speed (2,200 r.p.m.).

Depth control by adjustable skid in ¾" stages.

Weedcutter blades fitted at rotor extremities to prevent weed bind-up. 16" (41 cms.) working width.

P.T.O. (Optional fitment).

10" dia. pulley 3½" width.

630 r.p.m. at rated engine speed (2,800 r.p.m.).

Belt speed 1,650 f.p.m.

HOWARD—CLIFFORD LIMITED . WEST HORNDON . ESSEX

TELEPHONE: HERONGATE 361 CABLES: ROTAVATOR, BRENTWOOD

One of the Rotary Hoes Group of Companies.

Telex No.: 1961, Rotavate, BRNTWD.

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