

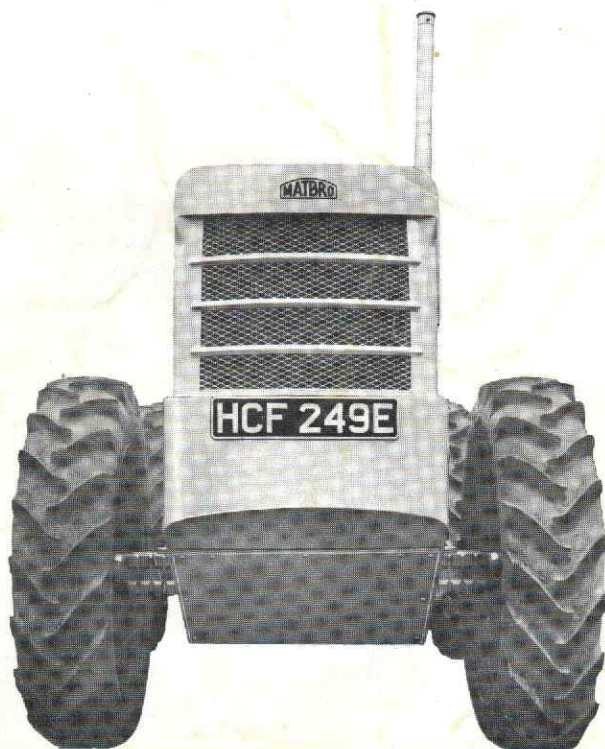
MATBRO MASTIFF

128

HP



TRACTOR



4 

**WHEEL DRIVE
WHEEL STEER
WHEEL BRAKE**

and using

MATBRO PATENTED CENTRE PIVOT-STEER SYSTEM

GIANT TRACTOR

One of the most powerful four-wheel-drive tractors in the country is currently undergoing trials in East Anglia prior to its market debut later this year.

Most notable feature is its unconventional steering system, the design of which allows the front and rear sections of the tractor to pivot about a centre point. A hydraulic ram on one side of the pivot controls the angle relationship of the two sections.

Makers of the 128hp Mastiff, as the new model is to be known, are Matbro of Horley, Surrey, better known up till now for their activities in the industrial field. This latest model is a development of a smaller model which has been on the market for two or three years. No

price has yet been fixed for the latest model.

Most of the parts used in the Mastiff's construction are made by Ford. The engine, gearbox and axles are all standard equipment on the Ford tractor and truck range, but the chassis frame, transfer drive box and hydraulics are all designed by Matbro.

The steering system, which allows the rear wheels to follow the path of the front ones, is operated by turning the steering wheel in the normal way. This alters the pressure in a double acting hydraulic ram (on one side of the pivot point) which "pushes" the two sections in either direction.

Power is supplied from a six-cylinder

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OUT ON TRIAL

diesel engine through a gearbox and transfer drive box to two double universal joints and then to the wheel axles. These are both Ford back axles which face each other and pass the power to the 12-38 wheels.

At present, 4th and 5th gears give the same performance—as they did on the early type Ford models, but the production series will have a box similar to those on the 5000.

Hydraulics are equipped for Cat II linkage only. The lower arms have been strengthened and two rams added to cope with the extra weight expected to be used with a tractor of this power.

In trials with the pre-production model it has been difficult to assess the unit's performance because there has usually

been so much power in reserve that its peak has yet to be found.

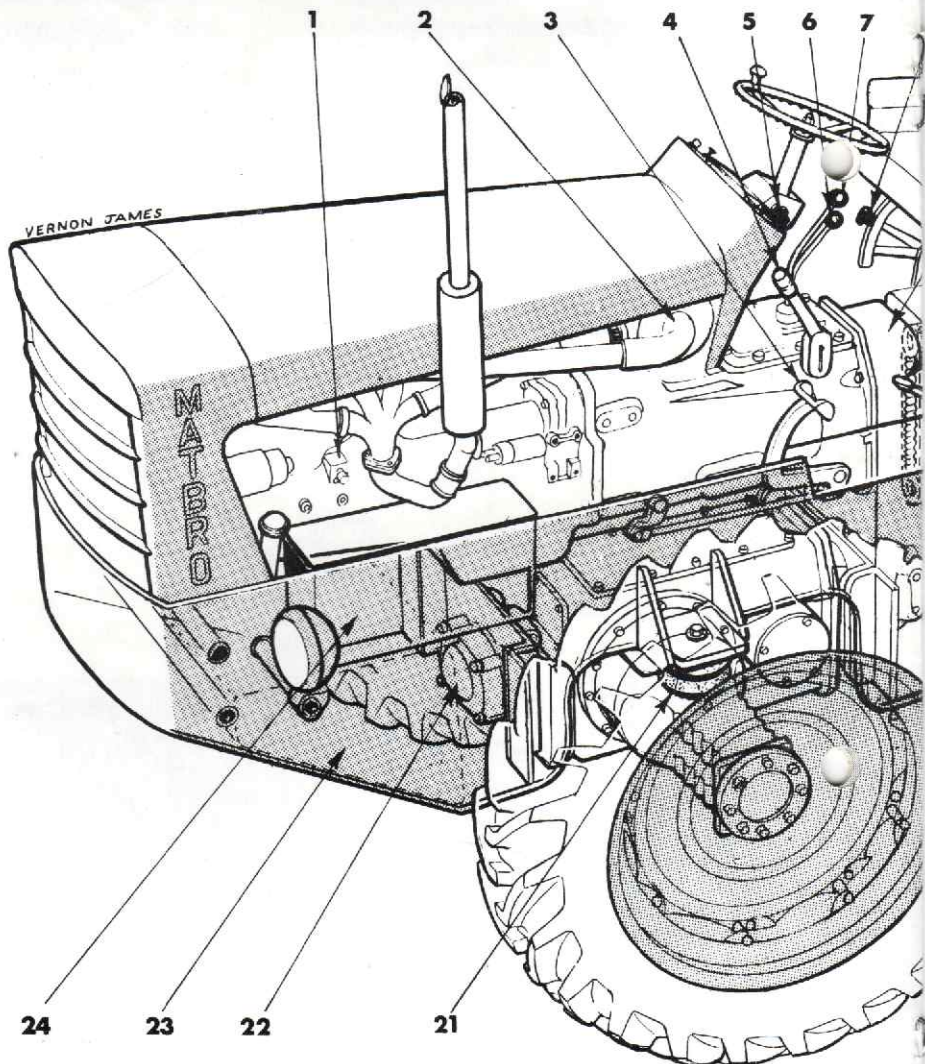
Mr. Frank Reeve has been trying out the Mastiff on his Home Farm, Sewards End, Suffolk, and is full of enthusiasm for it.

Using a three-furrow reversible and a five-furrow plough, he has been able to go as deep as he wanted (about 10in in some cases) without the engine showing any sign of overwork. It has also been used with a 14ft wide chisel plough, again without stress.

Some power is naturally lost in pulling the tractor over the land. With a full 45-gallon fuel tank and no ballast, the Mastiff weights just over five tons, $3\frac{1}{4}$ tons to the front wheels and about $1\frac{3}{4}$ tons to the rear.



MASTIFF FOUR WHI



1 128hp diesel engine

2 Air cleaner

3 Clutch pedal

4 Hand brake

5 Steering wheel rake adjustment

6 High/low range gear lever

7 Main gear lever

8 Hydraulic control

9 Suspension seat

10 Transfer drive box

11 Toothed belt drive to pto

12 Diff. lock

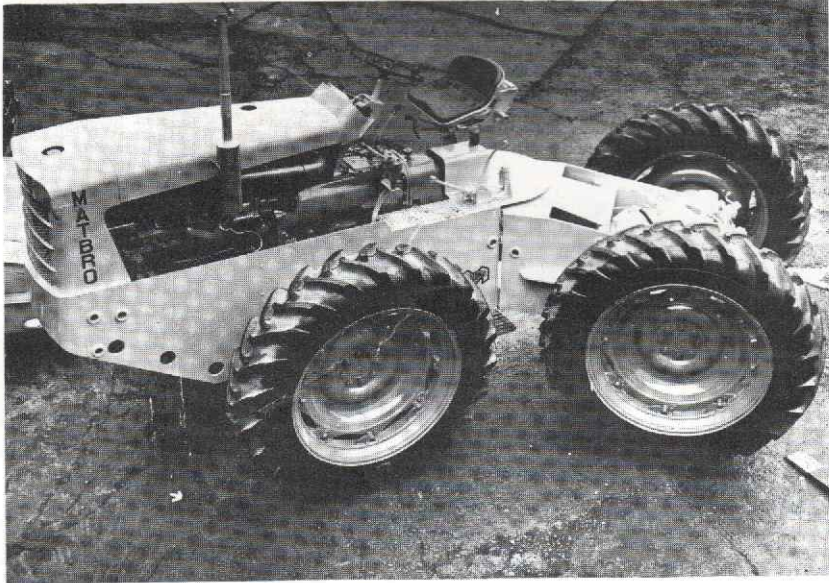
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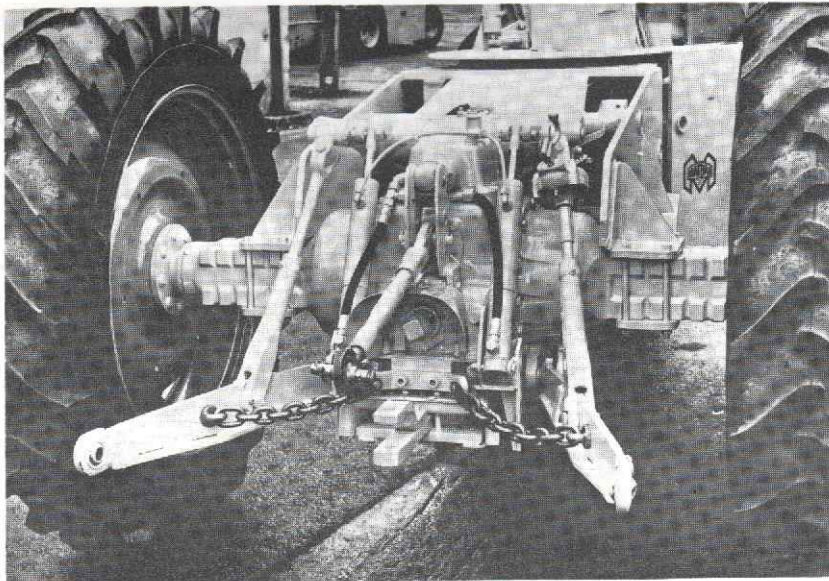
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THE TRACTOR



SHOWING CENTRE PIVOT-STEER SYSTEM



SHOWING POWER TAKE-OFF UNIT

SPECIFICATION



Engine: Six-cylinder Ford diesel

Max. power: 128hp at 2,800rpm.

Max. torque: 276.5lb/ft at 1,600 rpm.

P.t.o.: 50hp at 1,900rpm engine speed, giving shaft speed of 540rpm.

Hydraulics: Three-point linkage (Cat II).

Wheelbase: 102in.

Tyre size: 6 ply 12-38 front and rear.

Min. ground clearance: 16 in.

Turning radius (outside): 175 in. with wheels at 80 in. track width.

Standard equipment: Suspension seat with armrests. 45-gal. fuel tank, 12v battery, head, side and tail lights with power point for ploughing light.

Overall length: 190"

Angle of Attack: 40°

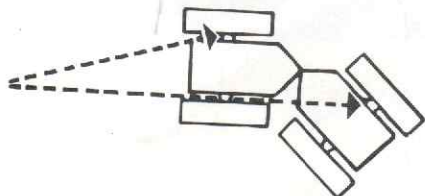
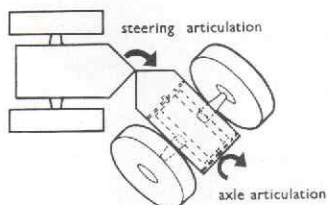
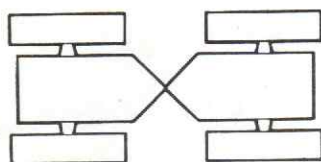
Angle of Departure: Tyre Radius

Angle of Axle articulation: -10° +10°

Gearbox: Eight forward and two reverse gears.

Maximum speed and tractive effort.

1st	1.76 m.p.h.	22489 lb.
2nd	2.77 m.p.h.	14361 lb.
3rd	4.63 m.p.h.	8579 lb.
4th	6.47 m.p.h.	6296 lb.
5th	6.47 m.p.h.	6296 lb.
6th	9.86 m.p.h.	4032 lb.
7th	16.52 m.p.h.	2407 lb.
8th	22.48 m.p.h.	1769 lb.



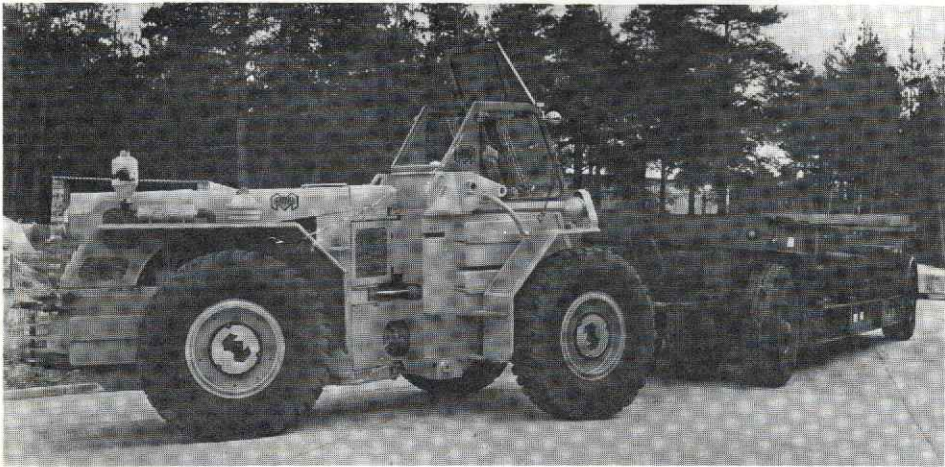
Centre point articulated steering outmodes old type steering with hub universal joints. Thus in one step all the old troubles of "wind up" between axles, power loss, wheel spin, excessive tyre or transmission wear are eradicated.

There is no relative movement between wheel and chassis when turning.

The transmission lines and controls go through only one plane of movement when turning and articulating, resulting in one universal joint only in the whole of the transmission train. The driver is placed forward for maximum visibility and the control system of a simple type operates without twist or compound motions.

AND ALSO

THE 128 HP MASTIFF TOWING TRACTOR WITH THE



CENTRE PIVOT-STEER SYSTEM



MATBRO (SALES) LTD.

MATBRO HOUSE · HORLEY · SURREY

HORLEY 5522

Telex: 87120

Grams: MATBRO Horley