

Built for farmer and contractors who think Big

MF 510 Combine Harvester

811,000 Corn

85,053 Corn



combine with big ideas

Doesn't just cut all kinds of crops – it also cuts all kinds of risks.

On hilly ground the saddle tank, which sits astride the machine like a man astride a horse, increases your safety factor.

You can fill one leg at a time to improve your balance.

And the tank is low to keep the centre of gravity low.

This booklet deals with all the aspects of the combine stage by stage.

But if you know any maize farmers who'd like to increase their crop by up to 15%, tell them to turn straight to the section on cornheads.



For the big harvest - a

In large-scale harvesting the stakes are high. The MF 510

The table detaches in a few minutes.
It's a swift one-man operation.
The man doesn't need tools.
And he can put it back on as fast as he takes
it off.

Your reel adjusts hydraulically in every
direction; up, down, forwards and back.
New improved controls enable you to feed
the machine evenly under all conditions.



This is the Massey-Ferguson

If you can unhitch a trailer from a tractor you
4 attachment points and 4 hydraulic hoses

A couple of seasons ago when detachable
tables were the latest thing, we had to make a
big decision.

Should we announce our version or spend
another season testing, testing, testing?

There was a big discussion with our engineers:
they won.

So instead of putting our company efforts into
selling an idea, we put them into testing it.

Three years of refinements and
simplifications followed.



Massey-Ferguson 'Quick Attach' table

You won't have any difficulty with this design.
It's so simple to disconnect. There's nothing else to it

Removing the table is now so simple, there is very little to say about it.

It's as reliable as the traditional table.

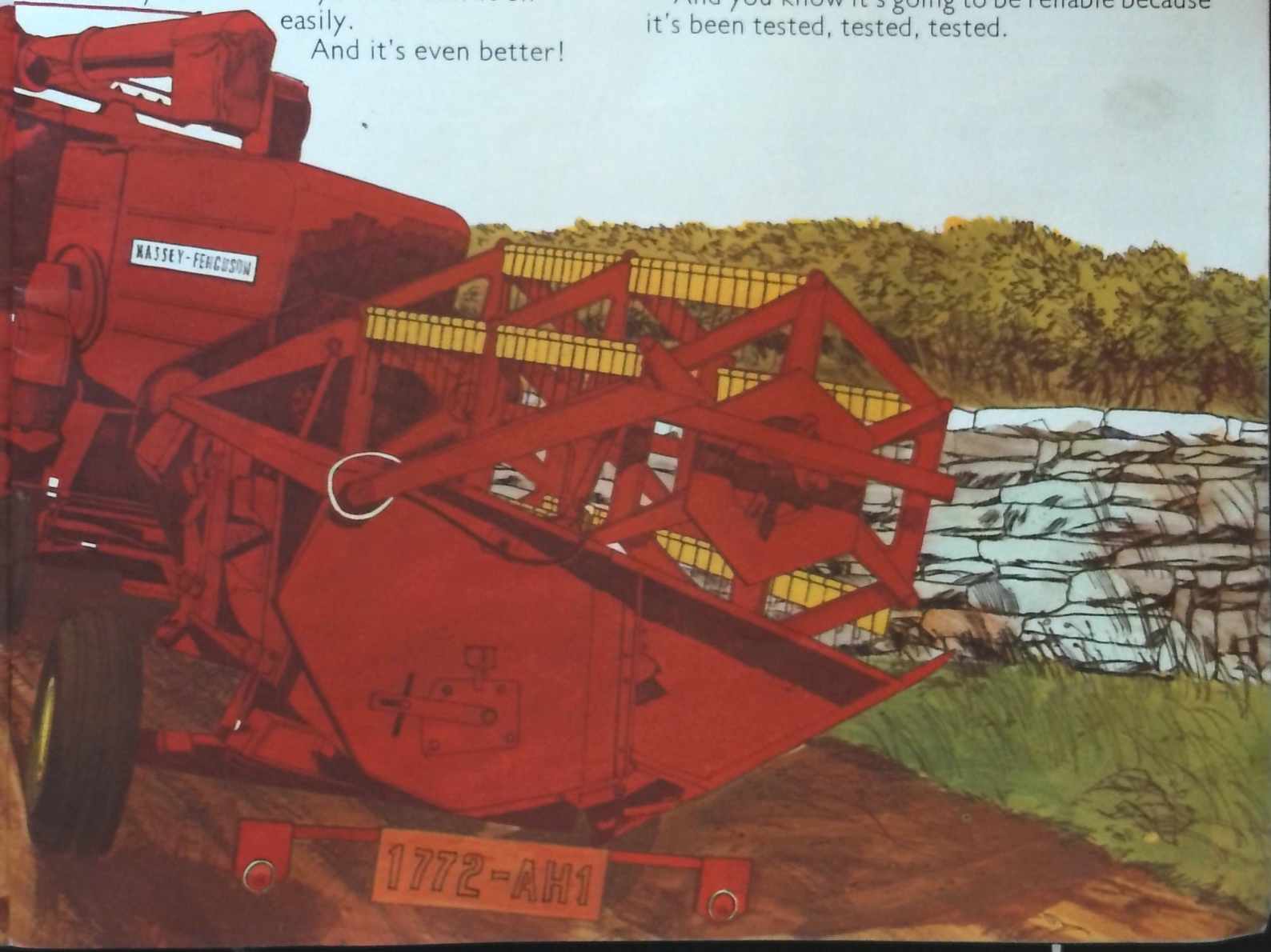
The only difference is you can take it off easily.

And it's even better!

Removing the table reduces the width from 4.80 metres to under 3 metres for driving along highways and through narrow gateways.

It's easier to service, house or transport.

And you know it's going to be reliable because it's been tested, tested, tested.



Don't buy MF because they're the world-buy them for the advantage

Even if you never need to detach the table – why not work out

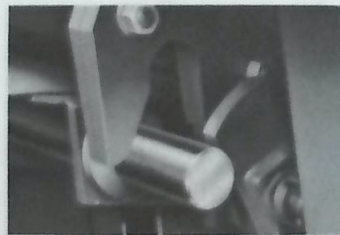
No trouble

- A** Lower table onto trailer and disconnect 2 table latches.
- B** Disconnect 4 hydraulic pipes and fasten 4 trailer attachment points.
- C** Uncouple drive shaft.
- D** Lower elevator to clear jaws. Reverse the combine.
- E** All table sizes fit securely on the trailer.
- F** The trailer is quickly attached and ready for the road.

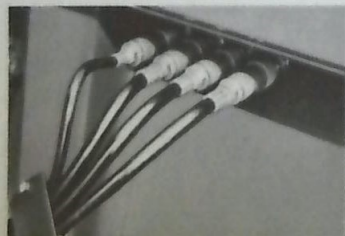
To connect up you simply reverse the procedure.



A



D



B



E



C



F

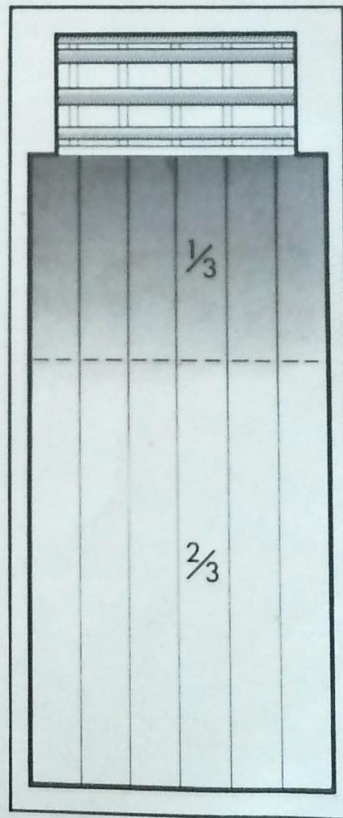
1 Wide straw walkers

Tests show that up to 80% of separation occurs in the first third of the straw walker area. It's separation area near the cylinder that counts.

So the MF 510 gives you six straw walkers with a total width of 1.42 metres (56 in.).

Exceptionally wide, they project 14 cm (5½ in.) either side of the cylinder and extend forward, close to the concave.

This new 'wide bustle' design enables the mass of straw to spread in a thin even layer across the full width of the combine for maximum separation.



I

2 Precise cylinder control

The speed of the 56 cm. (22 in.) diameter rasp bar cylinder can be varied from 195 to 1,255 r.p.m.

A glance at the rev. counter keeps you fully informed.

The front concave settings range from 1.6 mm. to 32 mm. ($\frac{1}{16}$ – $1\frac{1}{4}$ ins.).

3 Wide track – big tyres

The MF510 keeps going on ground that should make a combine of this size bog down.

Like to know why? Take a look at two features.

The wide-track – 2.08 metres (6 ft. 10 in.) of it – to spread weight and the large 15.26 10 ply tyres.



2



3

the largest-selling combines in antages that have made them No.1

how much time and money these other features will save you?

4 Relax—it was made for easy driving

Comfort

We guarantee you won't find a more dust-free platform and it's all done by a blast of air from the engine cooling system.

All the controls are within easy reach.

Visibility

Your seat is right over the edge of the crop you want to cut.

You don't have to overlap to make sure of getting every stem so you reduce the number of times you cross the field.

Furthermore, Massey-Ferguson engineers believe you can't feel confident when you can't see behind the machine.

That's why they set the tanks low.

This means you have no problems when reversing.

Engine Power

Powered to keep ample torque in reserve.

A 104 b.h.p. Perkins diesel was selected for the job.

Why Perkins?

Because Perkins have the reliability that farmers know they can trust.

5 Reel adjusts four ways – hydraulically

Raise it.

Lower it.

Bring it back.

Shift it forward.

Hydraulically.

Can you think of another combine in this class with 4-way control?

6 Power steering and brakes

Does your own car have power steering and power brakes?

You wouldn't be the first to find the MF510 is no more tiring than driving an ordinary vehicle.

7 Want to see the sample? – look down into the tank

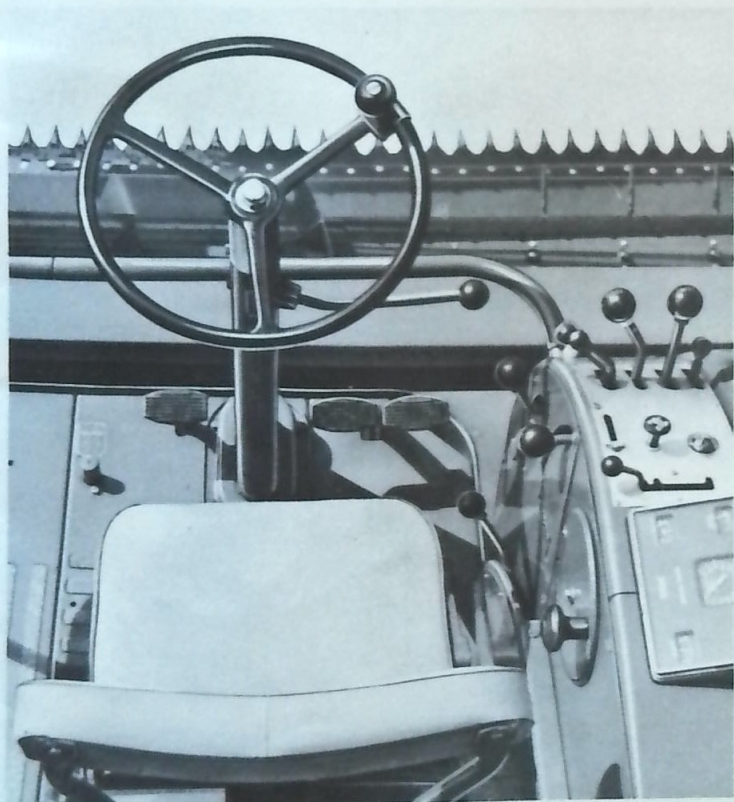
And there's nothing to stop you from reaching in.

If any grain cracking or bad threshing is taking place you know about it right away, and can make adjustments to correct it immediately.

8 Saddle tanks. Better balance. Increased safety.

The saddle tank straddles the combine to spread the weight.

On steep ground you can substantially increase the safety margin by filling one section at a time!



4



5



6



7



8

Basic lo

Stop here. Take one minute to g

56 cm. (22 in.) diameter
infinitely variable control

Totally enclosed 104 b.h.p. Perkins diesel engine

Simple, well laid out control platform

Finger-light power steering

Concave clearance can be adjusted on the move

Air blast from engine keeps dust out of driver's face

Twin-speed cylinder drive gearbox

Retractable auger fingers prevent danger of 'wrapping'

Table height automatically controlled

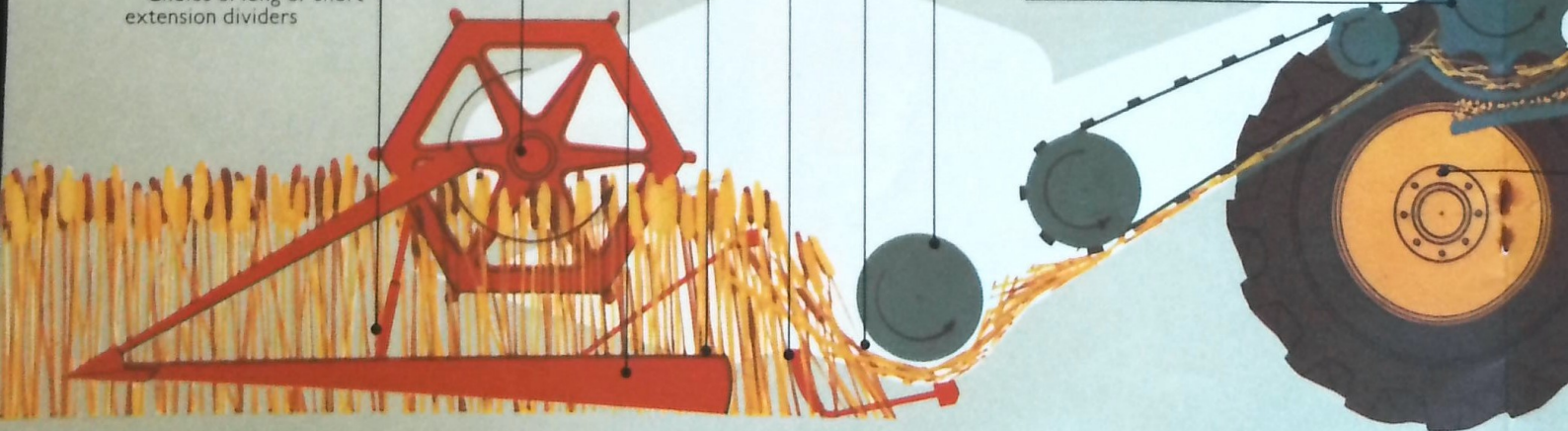
Whole table detachable

Replaceable table skids cut maintenance costs

Fast knife drive mechanism provides a cutting speed of 535 cycles per minute

Speed, horizontal and vertical positions of reel can be adjusted from seat while machine is on the move

Choice of long or short extension dividers



ayout

get the picture – technically

crasp bar cylinder with
over wide speed range

Hydraulic disc brakes make it possible
to stop safely and turn quickly

Large diameter tyres for easy going on
soft or bumpy ground

Clear view into grain tanks
from driving position

Large saddle tanks for better stability
when harvesting on hillsides

Unique Massey-Ferguson rethresher ensures that
returns do not overload cylinder

Six open bottom walkers with pan below ensure
even feed onto grain pan and shaker shoe

Long discharge auger is situated at convenient
height and hydraulically controlled from seat

Inclined grain pan
feeds evenly onto
sieve

Wide range of fanning
speeds which can
easily be set to
obtain clean grain
sample under all
conditions

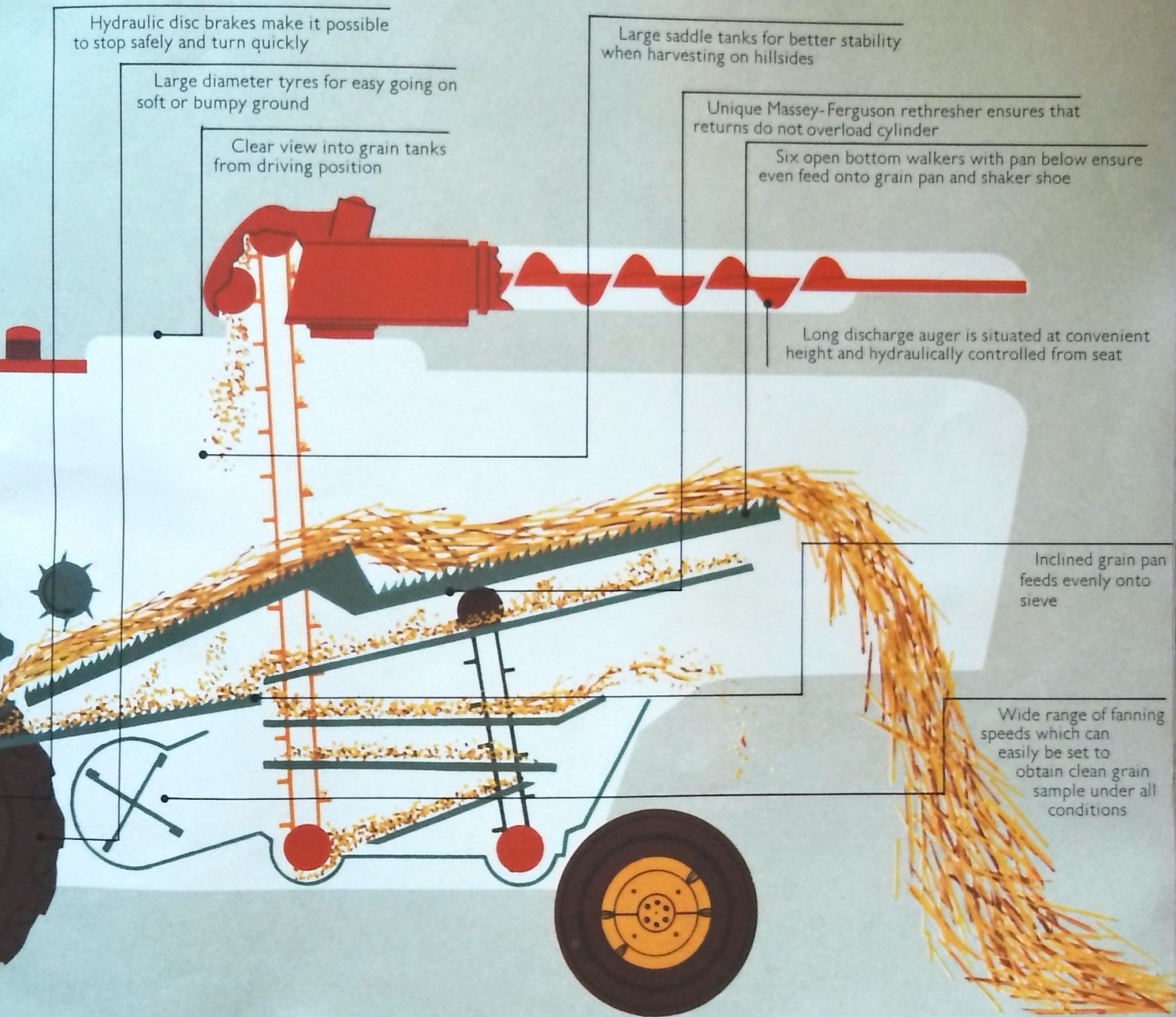


Table height adjusts autom

Beneath the table special sensing fingers feel out the

Your table raises and lowers to cut at the optimum level of efficiency leaving you free to concentrate on driving and threshing adjustments.

You pre-set your cutting height from 6.35 cm (2½ in.) to 25.4 cm (10 in.).

Then forget about ground contours and table controls until you want to cut in with the manual overrider.



atically to bumps and dips

contours and relay commands to the hydraulic system

Output: 6100-11200 kilograms an hour.
Knife speed: 535 cycles per minute, sufficient speed for any crop especially in low yield areas. There's no stopping for off-loading. The trailer draws up alongside. The unloader auger swings out, hydraulically.

The crop is discharged at 36.4 litres (1 bushel) per second (at 15% moisture content).
All done with levers from the driving seat.



Rice

Ruggedly built for the toughest conditions

Most of the advantages which the MF510 offers with ordinary crops become more important in the harsh, swampy conditions of rice harvesting.

Safe weight distribution.

High knife speed.

Good ground clearance.

Low forward speeds.

Now add the extra advantages devised for the rice farmer.

Track plates designed to improve traction, reduce ground friction, permit better steering with less use of independent brakes.

Low pivot point of track equipment gives easy manoeuvrability over bunds and banks.

You get access to areas you thought were impossible to combine.

Furthermore, the MF510 is easily adaptable from rice to grain. All you need do is order the necessary parts.



Rear axle extended – better control

Steering axle is another 30 cm. (12 in.) further back.

Stability is increased.

Bigger tyres are fitted.

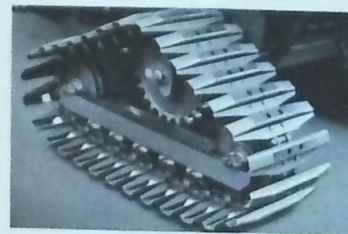
You get good control in bad conditions.



Peg toothed cylinder

This is factory balanced to prevent vibration.

The peg toothed cylinder and concave strip rather than rub the crop, producing a first-class sample in the tank.



Broad plate tracks – longer brake life

The open design of the tracks has a self cleaning effect when working in wet, muddy conditions.

The plates are concave in design to reduce ground friction when turning, thus reducing brake wear.

Corn

Reap 15 per cent more crop per acre

That's right.

The reason is simple.

You change to a narrower row spacing.

Fit the new 'Quick-Attach' 4 row MF43 or 6 row MF63 narrow row corn heads.

Your local conditions will dictate whether you are able to use a wide 92 cm (36 in.) or narrow 76 cm (30 in.) row spacing.

MF can harvest either.

Just choose the wide or narrow row corn head.

Fit it to your MF510 and harvest up to 730 bushels an hour with a 4 unit row with ease.

The floating snouts hug the ground.

Even laid and tangled stalks are guided into the combine.

Then spiral points and a fluted feeder roller steer the stalks to the adjustable snapping plates.

Where lack of moisture rules against narrow rows, the same harvesting advantages can be gained from the 3 row MF34 or 4 row MF44 corn heads.



High speed snapping units

Snap the cobs cleanly from the stalks.

Snapping rolls, plates, chain guides and gathering chains all adjust from the top of the unit.

Dividers have hinged panels for easy servicing.



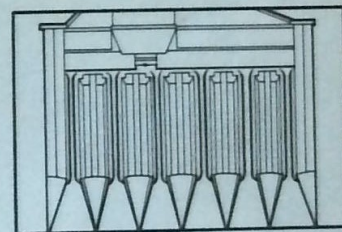
Low floating snouts – bigger harvest

The floating snouts are so close to the ground that they pick up everything you've grown including the most laid and tangled crops.



Two safety slip clutches

If the gathering chains become blocked – slip clutches in the drive unit will protect the whole machine.



Two sizes: 4 or 6 row model

When fitted, they are offset.

The combine runs exactly between the close rows.

Easily manoeuvred in all conditions.

Changing from a normal table to these corn heads can be done in minutes, both features have 'Quick Attach' fittings.

Do they ever need attention?

Of course.

All combines need attention sometimes.
But when it happens to a Massey-Ferguson
2 things work in your favour:

1 It's designed for easy servicing

The parts are all get-at-able.
Most can be fixed in the field.
There is no need to tow the MF510 to a workshop.
You can reach the part that needs fixing without dismantling half the machine!

MF believe a machine must be quick to service or it doesn't get serviced at all.

This year, the number of grease points have been reduced to so few that it's no effort to keep this machine well looked after.

Good maintenance means less repairs, extra years of work - it's as simple as that.

2 You've got the support of a really good Dealer service

Only half our efforts go on building machines.

The other half goes on building a first-rate service network (ever noticed how farmers with other makes of combines still bring their repair work to MF dealers?).

This isn't just a harvest time service either, this is in operation all year round.



Back to basics

Here are the specifications that put the MF 510 out front

Dimensions	Overall transport width	3.15 m. (10 ft. 4 in.)
	Overall transport length (towing 14 ft. table)	11.3 m. (37 ft. 1 in.)
	Overall working length (dividers to rear hood)	8.63 m. (28 ft. 4 in.)
	Overall height	3.13 m. (10 ft. 6 in.)
	Ground clearance	0.33 m. (1 ft. 1 in.)
	Wheel base	3.00 m. (9 ft. 10 in.)
	Turning radius	5.79 m. (19 ft.)
	Weight with 3.6 m. (12 ft.) table	5,883 kg. (12,970 lb.)
Unloading height (standard auger)	3.15 m. (10 ft. 4 in.)	
Cutting and feeding components	Table	3 m. (10 ft.), 3.6 m. (12 ft.), and 4.2 m. (14 ft.) reel, bat or pick-up type available. 4.8 m. (16 ft.) reel, bat type only available. Table cushioned. Raised and lowered hydraulically, readily attached or detached by 4 locking latches. 1.0 m. (3 ft. 3 in.) standard dividers or optional 1.2 m. (3 ft. 11 in.) long dividers. Automatic table height control is optional equipment.
	Reel	Adjustable for speed and vertical and horizontal movement hydraulically from driving seat. Speed infinitely variable within each of four ranges between 11 and 58 r.p.m. (maximum range). Tine rake angle adjustable.
	Cutterbar	Double knife fingers. Knife stroke .076 m. (3 in.). Speed 535 cycles/min.
	Auger	Adjustable retracting fingers, with vertical, forward and backward adjustment. Alternative speeds: 150 or 180 r.p.m.
	Elevator	Chain and slatted bar. Sprocketless drum at front end. 'Floating' design.
	Stone trap	Protecting cylinder and concave.
Threshing and separating components	Cylinder	Width 1.14 m. (3 ft. 9 in.). Diameter .56 m. (1 ft. 10 in.). Eight rasp bars. Infinitely variable mechanical speed adjustment 195-1,255 r.p.m. Two-speed gearbox.
	Concave	Front to rear clearance ratio, 2.5:1. Range fully adjustable .0016 m. -.032 m. ($\frac{1}{16}$ in. to $\frac{1}{4}$ in.) front. Pre-rub plates. Blanking-off plates available.
	Rear beater	With replaceable blades. Spiked beater available.
	Straw walkers	Six open bottom type with open ends. Length 2.9 m. (9 ft. 6 in.). Wide layout with overall width of 1.42 m. (4 ft. 9 in.) This is .28 m. (11 in.) wider than threshing cylinder. Area 4.06 sq. m. (6,300 sq. in.). Straw walker extensions of .18 m. (7 in.) fitted as standard, giving 0.26 sq. m. (392 sq. in.) extra separating surface.
Cleaning components	Grain pan	Beneath concave; reciprocating and corrugated, forward sloping.
	Shaker Shoe	Top and bottom reciprocating sieves finely adjustable. Total area 2.50 sq. m. (3,877 sq. in.).
	Fanning Mill	Variable speed drive. Infinite speed adjustment between 488 r.p.m. and 766 r.p.m. Adjustable air deflectors.
	Re-thresher	All returns are passed through re-thresher unit and returned to the straw pan. Ten paddle arms. Serrated concave with blanking plate.
	Returns auger	Has slip clutch coupled to warning hooter.
Grain tanks	Two saddle type. Independent or simultaneous filling. Adjustable restrictor plates over cross discharge auger. Capacity: 2,818 litres (77½ bushels). Inspection plate fitted at junction of horizontal and vertical discharge augers. Discharge auger capable of discharging at 36.4 litres (1 bushel) per second at 15% moisture content. Extension auger for 14 ft. and 16 ft. tables.	
Engine	A 6.354 direct injection diesel engine, 6-cylinder. Capacity 5.8 litres (354 cu. in.). 104 b.h.p. at 2,000 r.p.m. Air cleaner: pre-cleaner and oil bath. Rotary self-cleaning radiator air intake screen. Fuel tank capacity 175 litres (38 gallons).	
Gearbox	3 forward, 1 reverse gear. Forward speed range on 15-26 front tyres from 1.3-16.6 k.p.h. (0.8-10.3 m.p.h.).	
Wheels and tyres	Front tyres 15-26 10-ply, rear tyres 7-50-16 6-ply. Front wheel track adjustable 2-13 m. or 2-36 m. (7 ft. or 7 ft. 9¼ in.). Brakes. Independent hydraulic disc foot brakes.	
Massey-Ferguson reserves the right to make design and specification changes without prior notice.		

Designed by Le Bon Studio

Printed in England by St. Clements Fosh and Cross

EX MF/105

