

Scientific Distribution of Weight calls for ever increasing attention on the part of the designer and careful thought here is reflected in final performance.

While still satisfying the present day demand for a handy, manoeuvrable tractor which does not unduly compact the soil, IH engineers have built extra weight into all models of the D-line.

The extra weight is skilfully distributed in order to achieve maximum performance under the most difficult operating conditions.

Some figures of the extra built-in weight of the new models is compared below with those of the previous corresponding models:

Model	Axle		Total
	Front lbs.	Rear lbs.	
D-212	968	1,307	2,275
DLD-2	750	1,235	1,984
Increase	218	72	291
D-320	1,178	1,702	2,880
DED-3	1,025	1,687	2,712
Increase	153	15	168
D-430	1,278	1,817	3,095
DGD-4	1,091	1,764	2,855
Increase	187	53	240

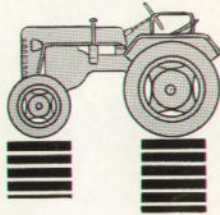
From these figures it will be readily seen that a far greater proportion of the total extra weight is distributed over the front end.

This counteracts the tendency of heavy, rear mounted implements to raise the front end of the tractor, thus ensuring the retention of good steering control.

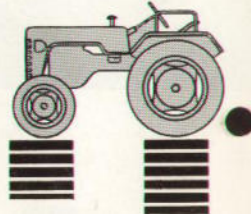
At the same time the overall extra weight is nicely balanced between both axles for high traction characteristics.

The diagrams on the right show pictorially the front and rear axle weights of the 5 D-line models in units of 2 cwts. (224 lbs.).

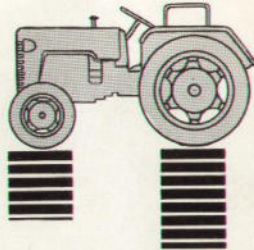
D-212



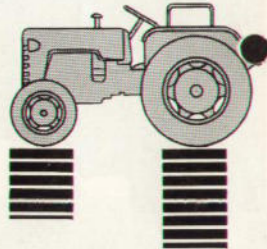
D-217



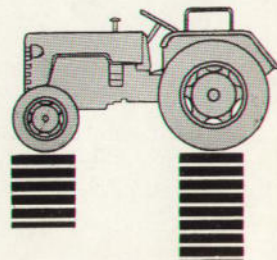
D-320



D-324



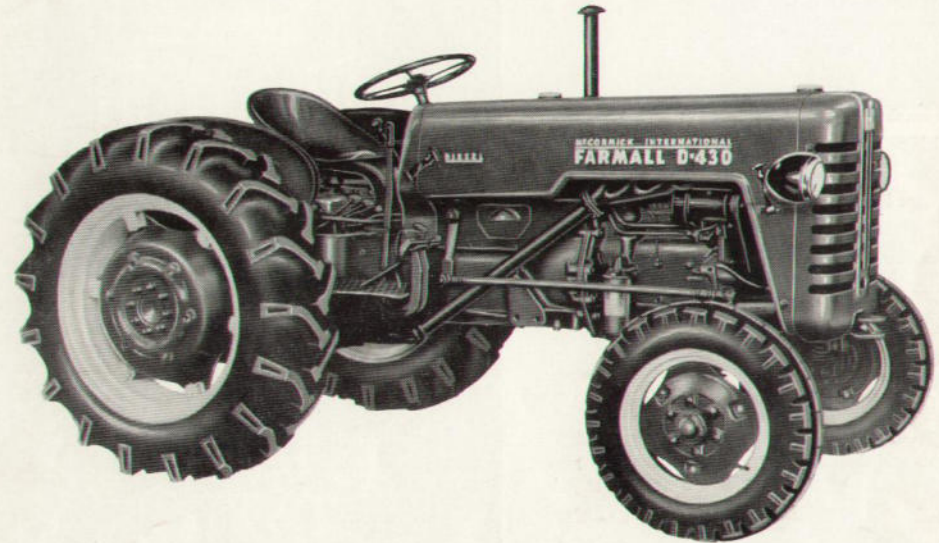
D-430



# Sales Bulletin

## THE NEUSS LINE OF TRACTORS

No. 1 - 1957



- \* RUGGED, MODERN GOOD LOOKS
- \* UNIT CONSTRUCTION

- \* HEAVY DUTY CAST OIL PAN
- \* SCIENTIFIC DISTRIBUTION OF WEIGHT

"First Impressions are most important", so runs an old sales axiom. A farmer involuntarily forms his first opinion of a tractor from its outward appearance. This is not without a certain justification. Just as he gains a fund of knowledge concerning the condition of livestock from their appearance, so too does he "weigh up" a tractor.

Their Rugged, Modern Good Looks convey at a glance the impression of power, efficiency and dependability. These are the qualities which a farmer seeks in his tractor.

And these qualities are not only inherent in the design of the Neuss line of tractors but are also reflected in their appearance.

It won't take your customers long to make up their mind about the 2, 3 and 4 cylinder tractors from Neuss.

It is only a short step from first impression to final sale with the D-line tractors from Neuss on Rhine.

## UNIT CONSTRUCTION

All the D-line tractors are built on the Unit Construction principle, a type of construction in which individual, self-contained units having in themselves maximum rigidity are assembled together to make one harmonious, sturdy unit.

The crankcase, clutch housing and transmission case are all high quality, massive castings strengthened with numerous reinforcing webs of generous proportions. Advantage has been taken of the functional shapes to break up large plain surfaces and impart added strength to the castings.

The illustrations here and on the following pages, taken from underneath the tractor, show photographically the individual units, the well proportioned flanged joints and the unit construction method employed.

It will be seen that all mating surfaces have large contact areas.

These surfaces are accurately machined within fine limits on modern precision machines to ensure exact register, and perfect contact over their entire area.

The units are bolted together with a sufficient number of bolts to provide absolute rigidity; this, combined with robust construction and mechanical accuracy, guarantees long life and dependability in the most exacting of working conditions.

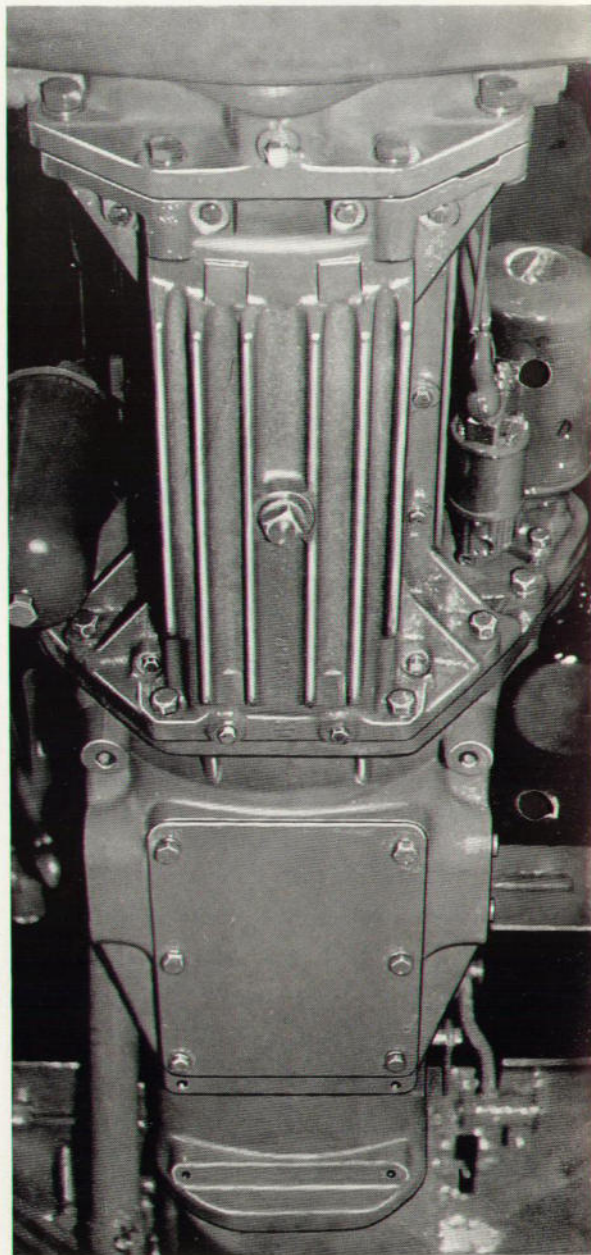
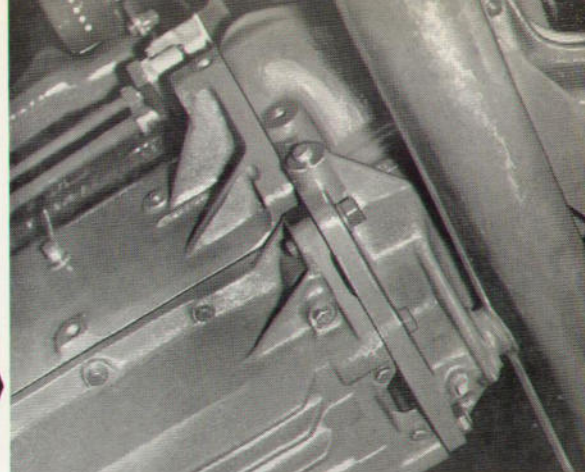


Figure 1.

A

Figure 1. shows the crankcase, clutch housing and transmission case. Note how the cast oil pan knits the front axle bolster, crankcase and clutch housing into one massive unit. "A" shows the forward flanged joints in detail.

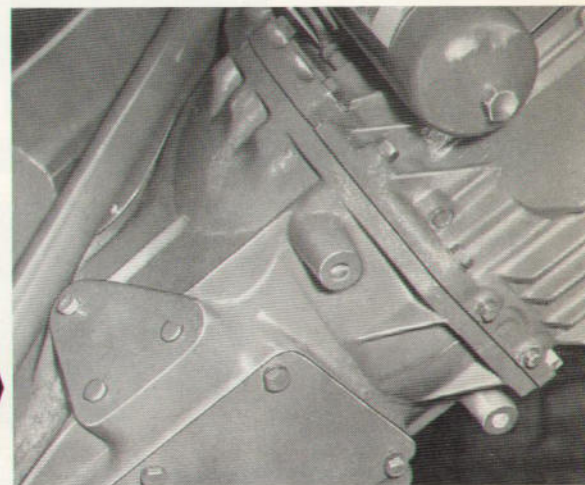
A



B

"B" highlights the junction of the clutch housing with the crankcase and oil pan. The numerous reinforcing webs and the good proportioning are very evident here. How the functional shape of the units has been fully utilised to add strength is also well depicted.

B



C

"C" close up of clutch housing to transmission case joint. The units merge into one so cleanly that they give an immediate impression of strength and good design. The farmer seldom sees the underside of a tractor, point out to him that, although out of sight, it received full attention in the D-line design.

C

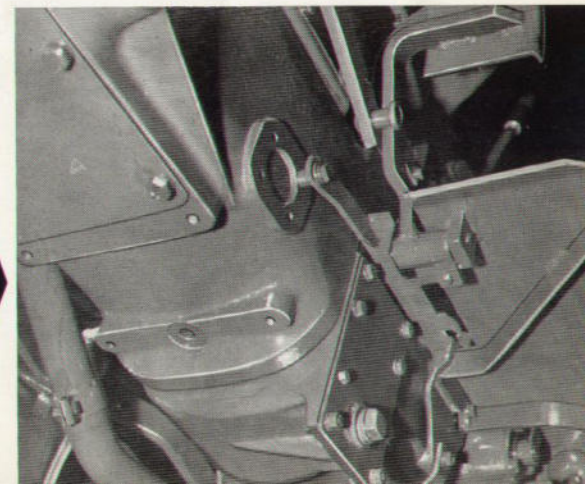


Figure 2.

The crank case and oil pan shown below are exceedingly sturdy, rugged castings.

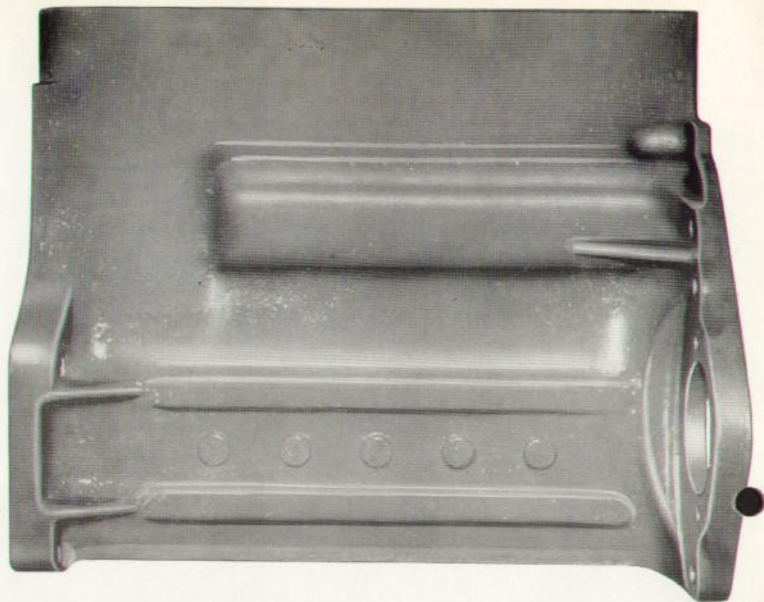
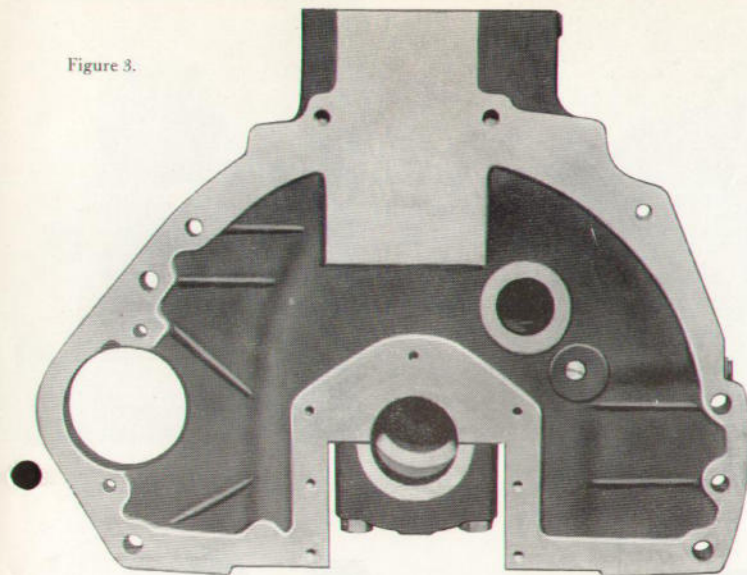
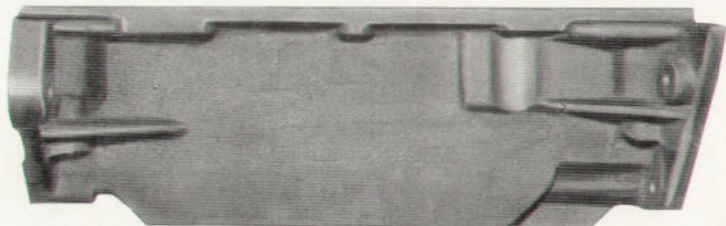


Figure 3.



Note the large contact surfaces of the crank case and oil pan and the many strengthening webs and ribs.

Figure 4.



#### HEAVY DUTY CAST OIL PAN

In figures 4, 5, 6 & 7 can be seen the New Heavy Duty, Cast Oil Pan which serves simultaneously as an additional stress-bearing member.

It is cast from high quality iron alloy and is securely bolted to the crankcase, front bolster and clutch housing, knitting these components together to form an exceptionally sturdy mid-section.

This is particularly important in view of the fact that the development of front- and midmounted implements places more and more strain on this section of a tractor.

The practical combination of unit construction and heavy duty oil pan provides extraordinary resistance to vertical, lateral and torsional stresses, impact loads, and other forces to which tractors are daily subjected in agricultural and construction work.

Figure 5.



Figure 6.

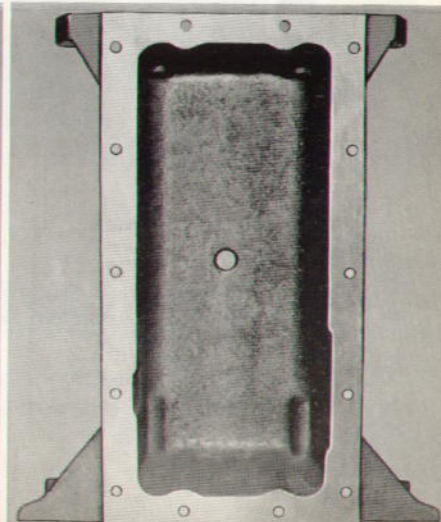
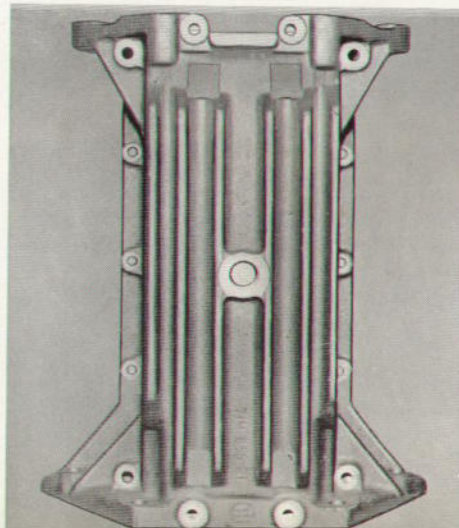


Figure 7.



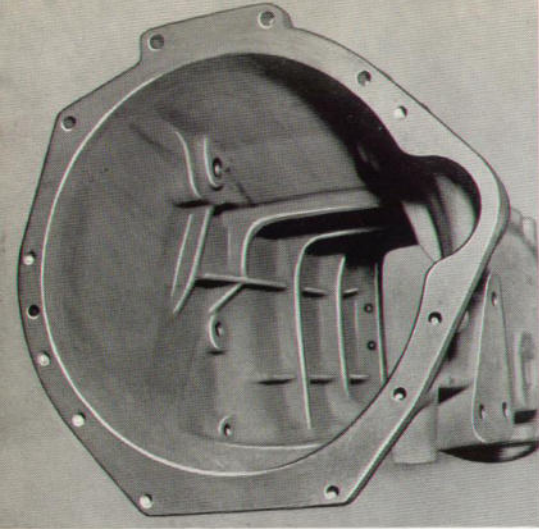


Figure 8.

The machined face of the clutch housing which mates with those of the cylinder block and oil pan.

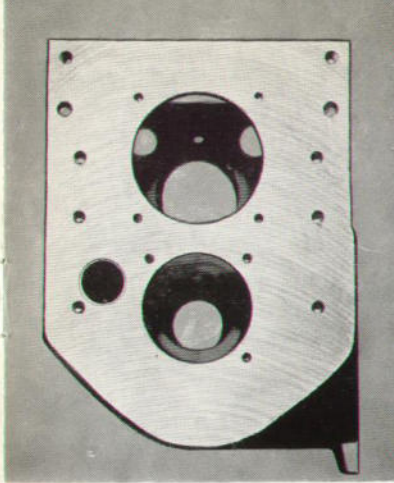


Figure 11.

Forward machined face of transmission case. Note the numerous tapped holes to take the sturdy bolts which join it rigidly to the clutch housing, and the very large contact area.

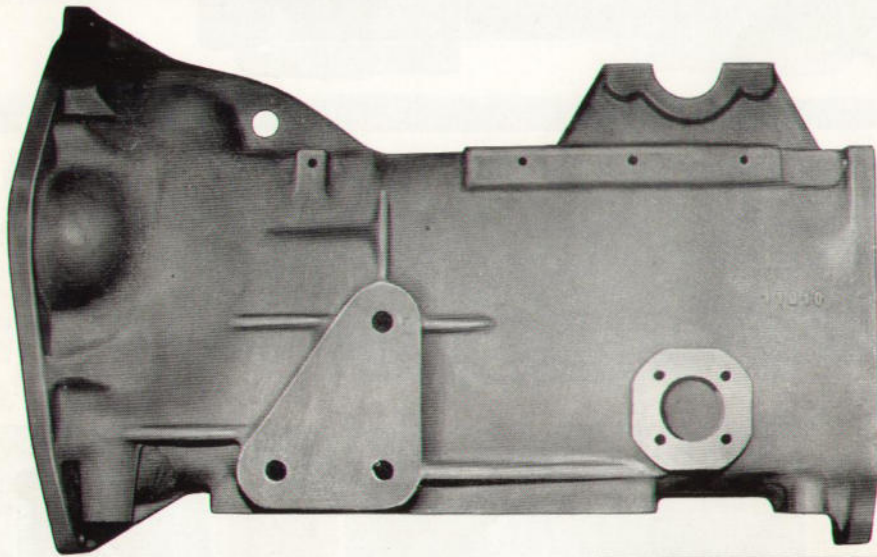


Figure 9.

The clutch housing forms the main mid-section between engine unit and transmission case.

Figure 10.

The machined rear face of the clutch housing showing the internal reinforcing ribs.

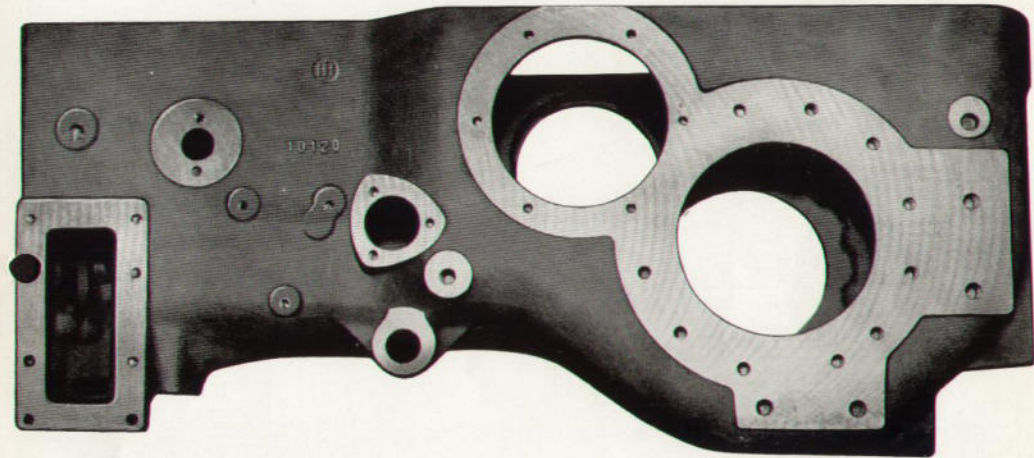
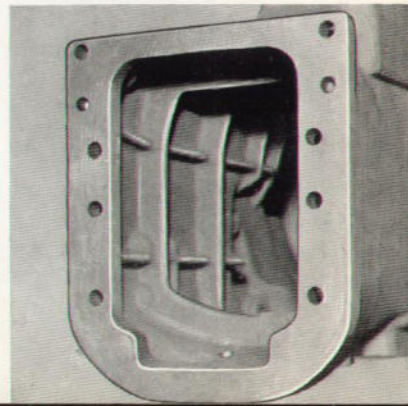


Figure 12.

The final unit of the tractor's "backbone". It completes a trio of three main units in which quality, strength and rigidity are skilfully combined.

The "unit" method of construction employed is particularly advantageous.

It ensures sufficient weight to provide good traction while providing maximum resistance to stresses.