

# How to Identify Ferguson Agricultural Tractors

Determining a tractor model and year of manufacture is relatively simple if it has both tractor and engine serial number (SN) plates. The SN plate, made of aluminum or brass, is located at different positions on the instrument console, depending on the model. The plate includes the model (TE; TEA or various other derivatives such as TEC, TED, TEK, etc.; TO-20; TO-30; TO-35; FE-35; or F-40) followed by a number from one to six digits. If the SN begins with TE or FE, it was built in the UK; all TO models and the F-40 were built in the US. The TE/TEA and TO-20 models are very similar and share many common parts.

**Note:** in this article, the word "standard" is used in three different contexts (don't blame us, blame MHF):

- Standard as in **chassis type** (a TO-20 has a standard chassis vs. a F-40 Hi-Crop wide-front which is *not* a standard chassis type)
- Standard as in **model** (such as TO-35 *Standard* vs. TO-35 *Deluxe* vs. TO-35 *Special*)
- Standard as in **engine manufacturer** (Standard Motors in the UK).

All TO-35 agricultural tractors have a standard chassis; some are also designated as *Standard* models. The early TO-35 Standard (1955 - early 1956) is identified by an "S" preceding the serial number (it has a single-stage clutch). Later versions of the TO-35, the FE-35, and the F-40 have SNs with prefix letters to designate chassis configuration, engine type, and clutch type. Some of the prefixes below apply only to UK-built tractors and others are applicable only to early MF tractors. They are included for your information.

- S** - Standard chassis/wide front
- C** - High clearance/wide front chassis
- R** - Row crop/twin wheel front chassis
- T** - Row crop/single wheel front chassis
- J** - Industrial or multiple purpose chassis
- V** - Vineyard chassis
- U** - Utility or turf chassis
  - G** - Gasoline
  - H** - High altitude gasoline
  - D** - Standard Diesel
  - K** - Vaporizing oil (TVO)
  - L** - Lamp oil
  - P** - Perkins Diesel
  - B** - LP Gas
    - M** - Dual-stage clutch
    - F** - Single-stage clutch
    - W** - Multi-Power

Serial numbers of Ferguson tractors, by year of manufacture, can be found in Issue 16 of *Ferguson Furrows* or on the FENA web site.

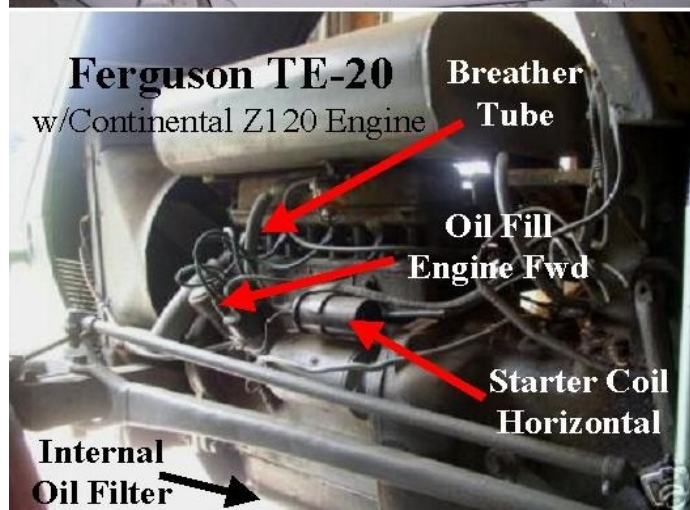
[www.fergusonenthusiasts.org](http://www.fergusonenthusiasts.org)

## WHEN THE TRACTOR SERIAL NUMBER PLATE IS MISSING (SOME INITIAL DISTINGUISHING FEATURES TO LOOK FOR)

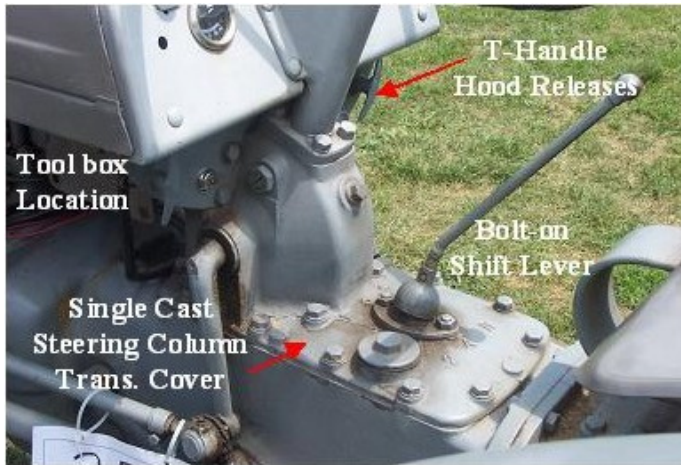
### If equipped with a Continental engine:

The aluminum engine SN plate, fastened to the block with four small course-threaded rivets, will be located near the top of the left side of the engine block between the coil and the distributor. The engine model (all Z-series) will be found on the plate, preceding the engine number, and will help determine the tractor model (assuming no modifications to the tractor have been made, such as cobbling together a tractor from parts of several different models).

- A **TE-20** has a Z120 series engine with an oil filter inside the oil pan with a round access hatch in the bottom of the pan; it has "Z120"



cast into the left side of the block and is equipped with Lucas electrical components; it has two T-handle hood release levers under the instrument console, one on either side; there is a rod on each side of the oil pan for extra support between the front axle carrier and the clutch housing; and the shift lever is bolted on to the transmission cover.



### TE & TEA Identifying Features

- A **TO-20** also has a Z120 series engine, but is equipped with Delco electrical components; it will have one hood release lever under the instrument console on the left side; and the shift lever knob is small and chromed.
- A **TO-30** has a Z129 series engine with "Z129" cast into the left side of the block; it has an external oil filter on the right side of the engine, horizontally positioned, and parallel to the engine; and has a larger, hard-rubber shift lever knob.
- A **TO-35** has a Z134 series engine with "Z134" cast into the left side of the block; the front axle is in three pieces and is angled, similar to the TO-20/30; and steering arms and radius rods to support the axles are found on both sides of the tractor (in contrast to the F-40).
- A **F-40** also has a Z134 series engine; one steering arm only on the left side, and four large bolt holes in a square pattern on each side of the front steering pedestal platform. (This description could also fit a MH/MF 50. However the sheet metal is different, including side grill panels on the 40 having vertical ribs and 50s having horizontal ribs).

### If equipped with a Standard Motors gasoline or Diesel engine:

Standard Motors engines have no SN plate. The engine data is stamped into the block on a flat surface. On engines with carburetors, the num-

bers are located between the oil filler and the coil on the left side of the engine. On Diesels the numbers are just above the generator on the right side of the engine.

- A **TEA** has a gasoline engine whose SN begins with "S" and ends with "E." A SN of 1 through 100204 indicates an 80mm (bore) engine. Engines from 100501 through 117000 are 85mm engines. Engines with SN SC1E - SC102519E are later 85mm engines. Engines up to S112390E are 6V; engines from that point on are 12V with the air intake on the right side of the instrument console. Some late engines may have "EVR" as a suffix, indicating it has rotating exhaust valves.
- A **TEF** has a Standard 20C Diesel engine with a "SA" prefix and an "E" suffix.
- A **FE-35 gasoline** model is equipped with a 87mm Standard engine having a SN *prefix* of "SF." However, various *suffices* were included:
  - "EHS" (6.6:1 compression ratio with single-stage clutch)
  - "EHD" (6.6:1 compression ratio with dual-stage clutch)
  - "ELS" (6.0:1 compression ratio with single clutch - High Altitude above 5000 ft.)
  - "ELD" (6.0:1 compression with dual clutch-High Altitude above 5000 ft.)



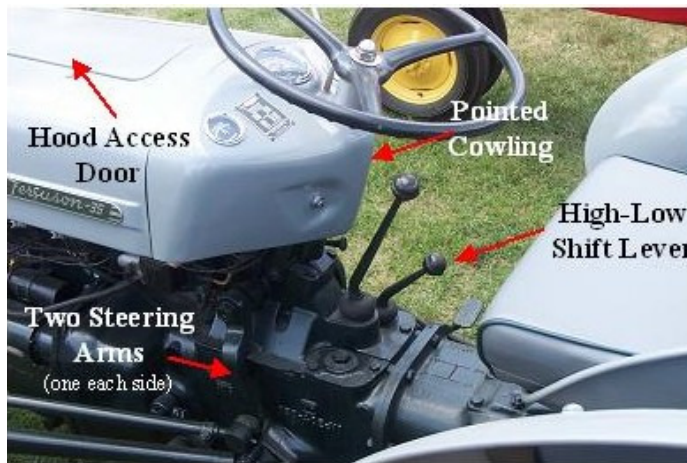
### TO-20 & TO-30 Identifying Features

- A **TO-35 Diesel** or **FE-35 Diesel** has a Standard 23C Diesel engine with a "SJ" *prefix*. An "ES" *suffix* is used for a single-stage clutch and "ED" for the dual-stage clutch.
- **French-built** Ferguson tractors have Standard gasoline engines with an "EF" suffix which were made in England but fitted to French-assembled tractors.

Later, when the TE-20 series was discontinued in the UK, they continued to produce this tractor in France for a few years as the **FF-30**. The engines were fitted in France but they had a suffix of "F." These FF-30 tractors were almost identical to the TEA-20 series, apart from the color scheme and the engines, which were modified to produce about 30 hp. The carburetor engines were the same 87mm-type as the ones used in the FE-35. The Diesels were the same engine used in the TEF but enlarged to 2.3 liters.

The FE-35 was never manufactured in France. It did manufacture versions of the MF-35 which were numbered differently (835) and used the same carburetor engines as used in the FE-35/MF-35. The Diesel engine was a modified version of the Standard 23C used in the FE-35/TO-35. Later ones had 3-152 Perkins Diesels.

Ferguson tractors were also assembled in India from knock-down kits. They are not covered in this article.



**TO-35 Identifying Features**

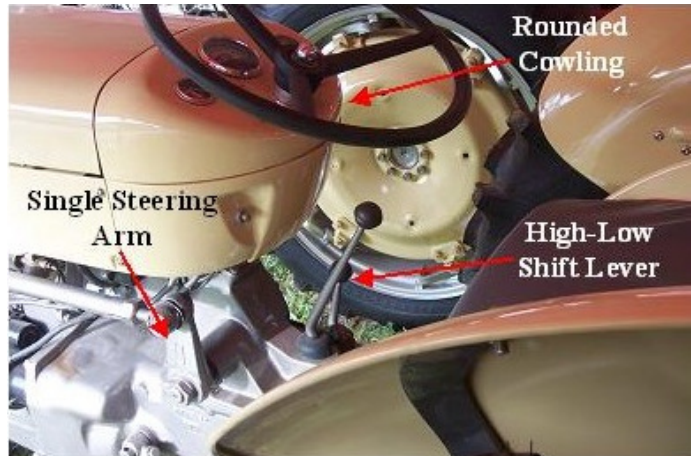
**WHEN BOTH TRACTOR AND ENGINE SERIAL NUMBER PLATES ARE MISSING (SOME ADDITIONAL DISTINGUISHING FEATURES TO LOOK FOR)**

One of the first things to look for is whether or not the tractor has a high/low range transmission with three forward gears. If it does, you narrow your choices down to the TO-35, FE-35, and the F-40. If there is an opening in the hood to access the fuel tank and the battery, you limit your choices to the TO-35 and the FE-35. Also, if the hood tilts forward for access to the fuel tank/battery and has one or two hood release latches under the instrument console, you can eliminate the TO/FE-35 and the F-40. In addition to distinguishing features listed under engines above, the

following additional characteristics will help identify the model.

**TE-20:**

- The intake opening for the air cleaner will *not* be through the instrument console.
- The grill is comprised of three separate pieces; the two side panels separate from the rest.
- The top of the side hood panels (dog legs) extend all the way to the instrument console.



**F-40 Identifying Features**

- The lower steering gear housing and the transmission cover are one piece.
- The transmission and lower steering gear housing are made of "Electron," a non-magnetic material commonly mistaken for aluminum.
- The brakes are adjusted with a large square nut, unlike the TO series tractors which are adjusted with a screwdriver in a slot (some early ones were modified to adjust with a screwdriver).

**TEA and its variations**

- The oil filler cap is located on the left side of the engine near the top of the block toward the rear.
- The grill is comprised of three separate pieces the two side panels separate from the rest.
- The top of the valve cover is not flat, but lower on the right-hand side
- The electrical components are Lucas.
- Sheet metal and hood release latches are virtually the same as for the TE-20.
- The brakes are adjusted with a large square nut, unlike the TO series tractors which are adjusted with a screwdriver in a slot (some early ones were modified to adjust with a

screwdriver).

### **TO-20**

- "Z120" is cast into the engine block on the left side.
- The oil filter is inside the oil pan with a round access hole on the bottom of the pan.
- The intake opening for the air cleaner is *not* through the instrument console.
- The top of the hood side panels (dog legs) extend only about 1/3 of the way to the instrument console.
- The lower steering gear housing is separate from the transmission cover.

### **TO-30**

- "Z129" is cast into the engine block on the left side.
- The intake opening for the air cleaner is through a screened opening on the right side of the instrument console.
- The lower steering gear housing is separate from the transmission cover.

### **TO/FE-35**

- Both have a three-speed, high/low transmission.
- Both have a three-piece, angled front axle.
- Both have two steering arms, one on either side.
- Both TO-35 and FE-35 have one-piece front grills; the grill on the FE-35 is more rounded than that on the TO-35; the TO-35 grill more closely resembles that of the TE/TO-20 and TO-30.
- **TO-35 gasoline** models have an external oil filter, perpendicular to the right side of the engine and Delco electrical components.
- **FE-35 gasoline** models have an external, inclined oil filter on the left side of the engine.
- **TO-35 Diesel** and **FE-35 Diesel** models have Standard Diesel 4-cylinder engines with Lucas electrical components.

### **F-40**

- It has a Z134 engine.
- It has only one steering arm (left side).
- There are four large bolt holes in a square pattern on each side of the front steering pedestal platform (this description could also fit a MH/MF 50; however, the sheet metal is different, including side grill panels on the 40 with vertical ribs and 50s with horizontal ribs).

- It comes in four chassis configurations: Standard/wide front, High Clearance/wide front, Row Crop/twin wheel front, and Row Crop/single wheel front.

### **CLUES TO HELP APPROXIMATE THE YEAR OF MANUFACTURE OF A US-PRODUCED TRACTOR WHEN THE TRACTOR SERIAL NUMBER PLATE IS MISSING.**

#### **TO-20**

See information on casting codes in next section.

#### **TO-30**

Go to the FENA web site at [www.fergusonenthusiasts.org](http://www.fergusonenthusiasts.org), click on "Restoration Helps", then click on "Z129 Engine SN vs. TO-30 Tractor SN." This chart will give you an approximation of when your TO-30 may have been built.

#### **TO-35 and F-40 (Continental Gasoline)**

Call Montes Equipment Co. in Chicago (1-800-228-2625) or e-mail them at

[engine@montesequipment.com](mailto:engine@montesequipment.com)

and give them your Continental Z134 engine model prefix and SN (example: Z134 444444). Ask them to provide you the date the engine was manufactured (such dates are available only for the Z134 engines). This date will help you estimate when your tractor was built. Dates toward the end of a year may mean your tractor was built early in the following year.

### **CLUES TO HELP APPROXIMATE THE YEAR OF MANUFACTURE OF A TRACTOR WHEN BOTH TRACTOR AND ENGINE SERIAL NUMBER PLATES ARE MISSING**

#### **US-Produced Ferguson Tractors**

- Casting codes can be helpful in estimating when a tractor might have been assembled. There was usually a 1-3 month (sometimes longer) time lapse between the time of casting and the date the tractor was assembled.
- Casting codes on engines, transmissions, differential center housings, and rear axles often follow a particular format, usually with a letter of the alphabet representing the month, a one or two-digit number for the day of the month, and a one-digit number for the year of the decade. For the months the letter "I" (as in India) is not used since it can be too readily confused with the letter "L" so "I" is not used (A = Jan, J = Sep, M = Dec). For example, a casting code of "C.23.5" would mean the piece was cast at the foundry on March 23, 1955.

# Gallery of selected Ferguson agricultural tractor models



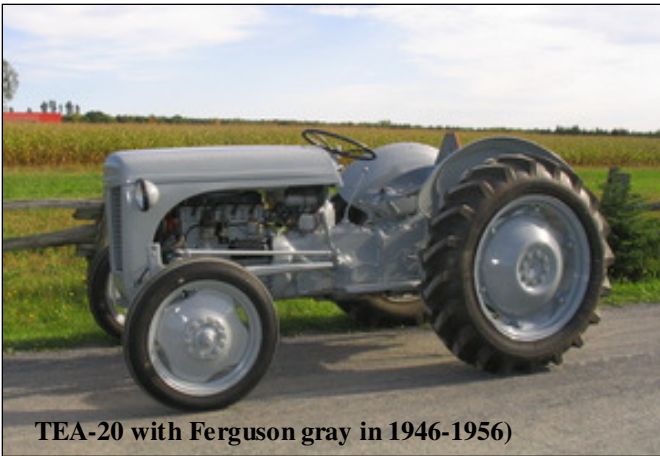
**TE-20 (with Ferguson Vintage gray in 1948-51)**

*Up to SN 48000, the TE-20 (with a Continental engine and Lucas electrical components), was built in 1946-48 side by side on the Coventry, UK assembly line with the TEA-20 (below) that had a Standard engine and Lucas electrical components.*



**TO-20 (with Ferguson gray in 1948-51)**

*Production of the TO-20 in Detroit ran from 1948-51. Very similar to the TE-20 with many interchangeable parts, it also had a Continental Z120 engine as did some of the TE-20s, but used Delco electrical components. 60,000 were produced.*



**TEA-20 with Ferguson gray in 1946-1956)**

*The TEA-20 and its many derivatives (e.g. TED,TEF, etc.) was produced through 1956, with many refinements. It utilized five different Standard engines, including Diesel. Over 500,000 TE-type tractors, were produced during this period.*



**TO-30 (with Ferguson gray in 1951-54)**

*Very similar to the TO-20, the TO-30 featured a larger Continental Z129 engine with the oil filter moved to the outside of the engine, improved rear axle seals, and heavier rear-end components. The air intake was moved to the dash.*



**FF 30 with Ferguson gray/red in 1953-1958)**

*The FF-30 was assembled with knocked-down components shipped from the UK. It utilized some French components, including engines. It had gray sheet metal and wheels and red castings. It was available with gasoline or Diesel engine.*



**FE-35 (with Ferguson light gray in 1956-57)**

*The FE-35. UK-version of the TO-35 (see next page) was available with Standard Diesel, gasoline, or kerosene engine. It's grill easily differentiates it from its American "cousin." Colors were changed in 1958 and it was re-badged as the MF 35.*

- If the casting date is late in the calendar year, it could mean the tractor was assembled in the early part of the next year. All this assumes the tractor has its original castings. Keep in mind that not all castings have codes. Sometimes they are missing, illegible, and occasionally someone has ground them off.
- Date casting codes on Continental engines and on transmission housings are found on the *left* side. On differential housings they are found on the *right* side. Date casting codes are usually found on rear axle housings as well.

### UK-Produced Ferguson Tractors

Date casting codes on UK-built Ferguson tractors normally follow a format of day/month/year. No alphabet letters are used for the month as they are in the US. For example, a casting code of "15 9 1" would mean 15 September, 1951.

- **TE-20** casting code numbers are found on the *left* side of the differential/hydraulic housing, just forward of the round port.
- **TEA-20** casting code numbers are found on the *right* side of the differential/hydraulic housing, just forward of the round port, on most, but not all, tractors.
- **FE-35** casting code numbers are found on the *right* side of the differential/hydraulic housing, just forward of the round port.

---

### CONTRIBUTORS:

The late **Phil Fenner** was a retired Boeing Aircraft engineer and a Ferguson collector and restorer.

**John French** is a retired, long-time representative of a Massey Ferguson distributor in the UK. (fergusontractors@tiscali.co.uk)

**David Lory** is a internationally noted Ferguson restorer, collector, and historian. (davelory@centurytel.net)

**Jeff Miller** is a lead design engineer for General Electric Aircraft. (TE20Ferguson@aol.com)

**Paul Nelson** is a retired editor of Ferguson Furrows magazine. (pnelson239@aol.com)

Illustrations on pages 1 and 2 were created by Jeff Miller.

See model gallery on pages 6 & 7.

Revised: 11/29/14

**Note:** Additional information on various Ferguson tractor models may be found at either of the two FENA web site addresses:

[www.fergusonenthusiasts.org](http://www.fergusonenthusiasts.org)

[www.fergusontractors.org](http://www.fergusontractors.org)

Two articles in particular may be found in back issues of *Ferguson Furrows*

Issue 11, (May 2003) "Our British Ferguson Cousins"

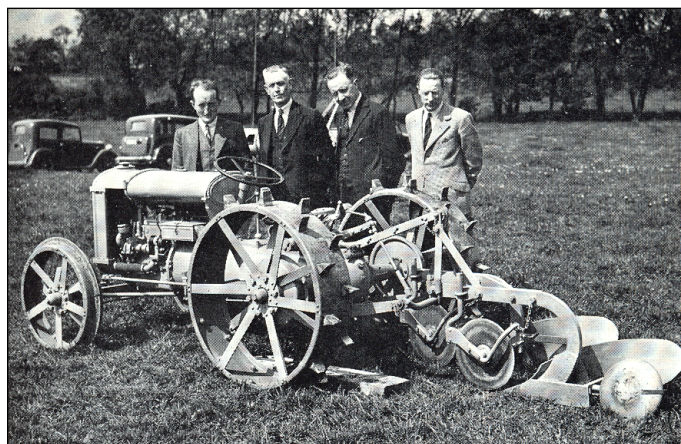
Issue 39 (Jan 2009) "TO-35 Model Comparison"

Reprints are available from FENA. Contact the editor of *Ferguson Furrows*.

### Predecessors to the modern Fergusons



The "Black Tractor" was Ferguson's first prototype, built in 1933 to test his "Ferguson System" three-point linkage/draft control concepts. It proved to be less than satisfactory.



The first production tractor utilizing the "Ferguson System" was the Brown-Ferguson A. 1350 units were built by the David Brown Co. between 1936 & 1939. Shown here (l. to r.) are John Chambers, Archie Greer, Willie Sands, and Harry Ferguson with a 1937 tractor. Ferguson demonstrated the tractor to Henry Ford in 1938. The "Handshake Agreement", lead to the Ford-Ferguson 9N and ultimately to the TE-20.



**TO-35 (Ferguson light gray/green metallic in 1955-56)**

*The TO-35 was a complete re-design. New features included a larger engine, a re-designed steering box, dual-range transmission, A Deluxe model was added, with a two-stage clutch.. The hydraulic system & rear end were also beefed up. Power steering became available as an option.*



**TO-35 (a few with beige/green metallic in 1956)**

*For reasons that not generally known today, a limited number of tractors were built during 1956 that featured these colors. Anecdotal data that are available suggest that most of them were standard models without the two-stage clutch. This particular tractor has factory-installed power steering.*



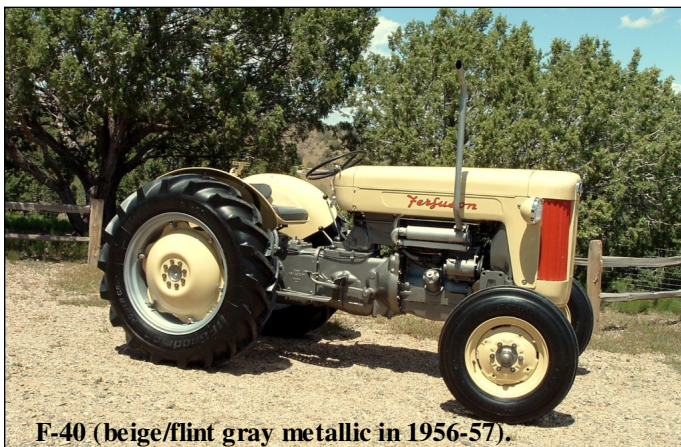
**TO-35 (beige/flint gray metallic in 1956-57)**

*Changes in 1956 took place in late spring. They included a heavier hydraulic lift cover. The colors were changed from gray/green metallic to beige/flint gray metallic. Three-letter model prefixes on the tractor SN plate were introduced.*



**TO-35 (red/flint gray metallic in 1958-60)**

*The venerable TO-35 became red/flint gray metallic in 1958. New models included the Standard 4-cylinder Diesel and the Special. The metal side hood emblems were replaced by vinyl decals. Later in 1960, the TO-35 was re-badged as the MF 35.*



**F-40 (beige/flint gray metallic in 1956-57).**

*Based on the TO-35, the F-40 was introduced in the spring of 1956. With a longer chassis, a heavy-duty front, end a single steering arm on the left side, the 40 came in four models. It is an "under-the-skin" twin to the MH 50. In late 1957 the F-40 and MH-50 were discontinued but re-immersed as the MF 50.*



**Hi-40 wide-front with beige/flint gray metallic paint.**

*MHF modified the TO-35 to become the F-40 and the MH-50. High clearance models were needed to compete with Ford and other manufacturers. The Ferguson Hi-40 models included a wide-front, a tricycle front, and a single-wheel front. As with the 1956 TO-35, a few 1956 F-40s were painted beige/green.*