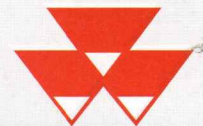


# 304 Series S & F

Special and Fruit ranges (3 & 4 cylinder engines)



MASSEY FERGUSON



## MASSEY FERGUSON: THE RIGHT MODELS WITH THE RIGHT SIZES

Massey Ferguson sells more tractors and offers a wider range of models than any other tractor manufacturer. The 304 S and F ranges confirm Massey Ferguson's undisputed leadership in demanding special purpose, orchard, and vineyard cultivation.

### MF 374 S (62 DIN HP)

10 gears covering the 4 to 10 km/h speed range. Hydraulically operated oil bath multidisc brakes. 3 independent hydraulic circuits for a total delivery of up to 85 l/min. New cab (photo right). ROPS frame (photos below).



- **PERKINS ENGINES FOR MAXIMUM RELIABILITY**

High power, low fuel consumption, and high torque at low speed feature the Perkins engines used in Special and Fruit range tractors.

- **55° STEERING FROM THE 4WD FRONT AXLE**

The 4WD front axle has a steering angle of 55°, enabling Special and Fruit range tractors to manoeuvre easily in close row orchards and vineyards without damaging the crop.

- **UP TO 3 HYDRAULIC CIRCUITS**

Up to 3 independent hydraulic circuits can be fitted, giving a total oil delivery of up to 85 l/min for an instantaneous, powerful response from all sorts of hydraulic applications.

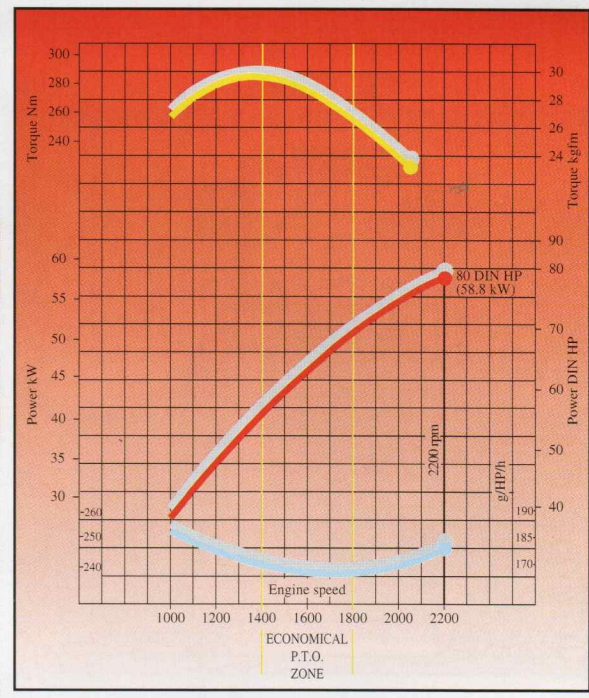
- **24 SPEED GEARBOX WITH REVERSE SHUTTLE**

The silent running, helical tooth gearbox provides 24 well spaced forward gears and 12 reverse gears through the full synchromesh reverse shuttle. 12 + 12 is also available as option.



### MF 374 S-GE

Only 1.23 m at bonnet! Easy access, uncluttered driving position. The ideal model for work under low branches and canopy-like cultivations.



**P**erkins engines are the world's favourite agricultural diesels, renowned for:

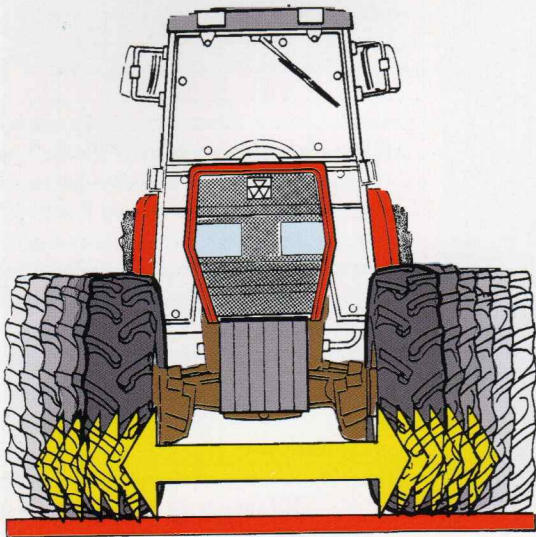
- Rated power and maximum torque at low engine speeds.
- Dry liners.

Perkins diesels are designed for long life and low fuel consumption. Hinged bonnet for quick access to the engine and easy maintenance.



## PRECISION TRACK ADJUSTMENT

### "S" SERIES



### 3 and 4 cylinder engines

MF 354 S/F and G.E.  
34.6 Kw (47 DIN HP) - 170 Nm

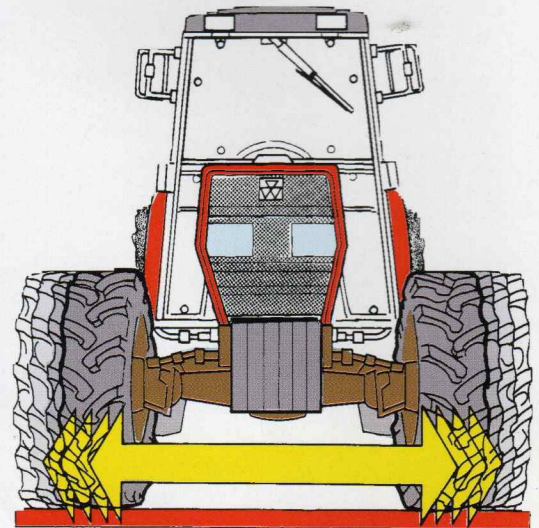
MF 364 S/F and G.E.  
42.6 Kw (58 DIN HP) - 202 Nm

MF 374 S/F/A and G.E.  
45.6 Kw (62 DIN HP) - 268 Nm

MF 384 S/F/A and G.E.  
55.2 Kw (71 DIN HP) - 289 Nm

MF 394 S/F/A and G.E.  
58.8 Kw (80 DIN HP) - 309 Nm

### "F" + "A" SERIES



FRONT TRACK: 1.09/1.39 m (4 WD)

REAR TRACK: 0.98/1.53 m (2 WD)

Fruit tractors are ideal for vineyards and fruit crops cultivated in most row widths.

With 13.6-28 tyres, minimum overall width is only 1.33 m.

FRONT TRACK: 1.25/1.55 m (4 WD)

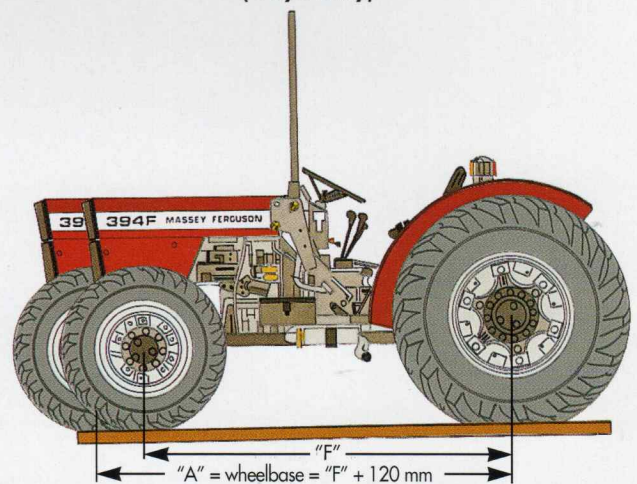
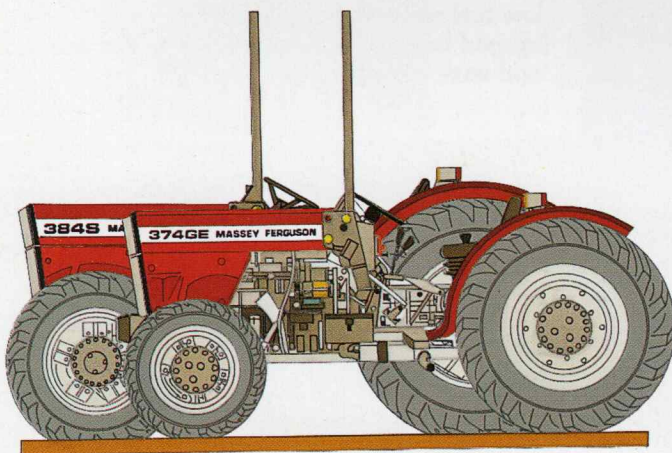
REAR TRACK: 1.14/1.69 m (2 WD)

Fruit tractors are ideal orchard and general purpose tractors. With 13.6-28 tyres, minimum all out width is only 1.49 m.

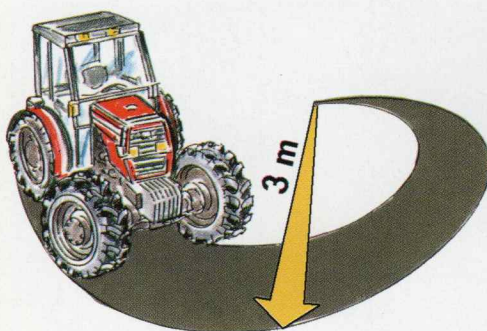
## CHOOSING THE RIGHT HEIGHT AND WIDTH

"S" SERIES : Special-narrow-  
"SGE" SERIES : Special Ground Effect-narrow low profile

"F" SERIES : Fruit wide  
"A" SERIES : Fruit wide + longer wheel base (4 cyl. only)



## MASSEY FERGUSON'S NEW 4WD FRONT AXLE: UNRIVALLED MANOEUVRABILITY



Massey Ferguson's new 4WD front axle gives unrivalled performance:

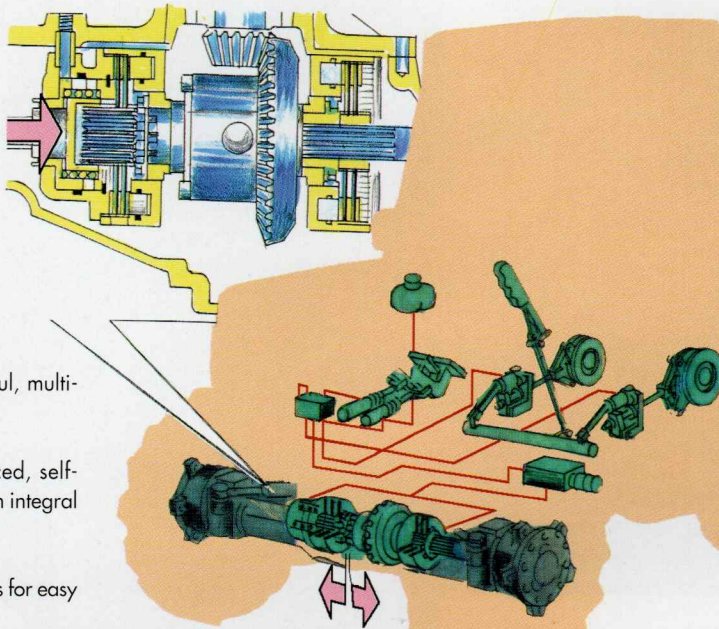
- Steering angle: 55°
- Turning radius: 3 m
- Pivot angle: 12°
- Jointless drive shaft
- IBS four wheel braking
- Electro-hydraulic diff lock



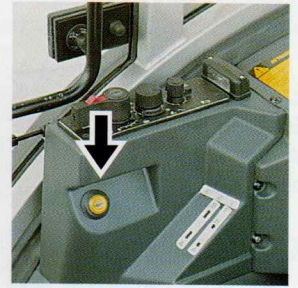
# "INTEGRAL BRAKING SYSTEM" (IBS) FOUR WHEEL BRAKING SYSTEM

TOTAL SAFETY FROM THE "IBS"

ELECTRO-HYDRAULIC FRONT AND REAR DIFF LOCKS



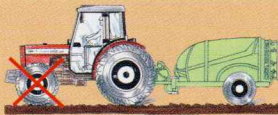
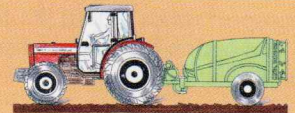
- 4 fade-free, powerful, multi-disc oil bath brakes.
- Progressive, balanced, self-adjusting brakes with integral hydraulic control.
- Pendant brake pedals for easy foot action.



Simple operation:

- Electro-hydraulic push-button control for simultaneous engagement of front and rear diff locks.
- A light touch on the brakes is all that is needed to disengage the diff locks.

TESTED STOPPING DISTANCES: Tractor with "IBS" : x metres - 50 %



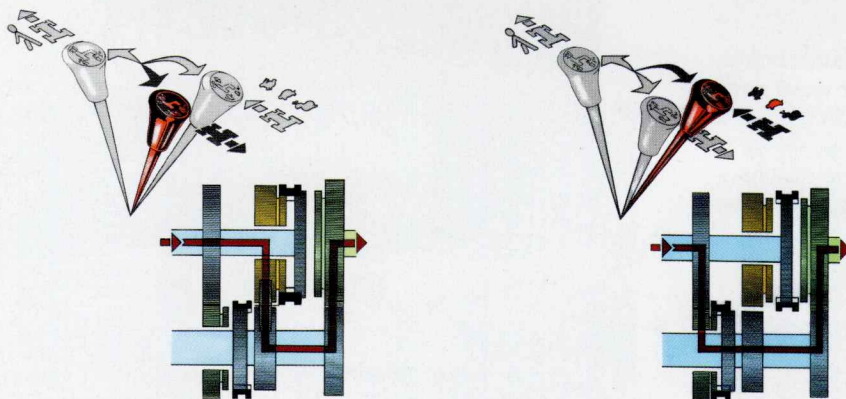
Tractor without "IBS" : x metres

Tests show that "IBS" halves stopping distances.

## 24 SPEED GEARBOX WITH REVERSE SHUTTLE: OPTIMUM GEAR SPACING

Prestige transmission features:

- 10 gears for speed between 4 and 10 km/h to suit all applications.
- Full synchromesh standard box, reverse shuttle, underdrive and overdrive.
- Silent, smooth running helical gear teeth.
- Reverse shuttle.
- Creeper option for speeds from 340 m/h.



### REVERSE SHUTTLE

The full synchromesh reverse shuttle gives matching 12 reverse gears, and makes easy work of manoeuvring and applications like pallet handling etc....

### UNDERDRIVE

The underdrive range reduces each forward gear speed by 17% for increased torque. Underdrive doubles the number of gears available from the standard gearbox.

### OVERDRIVE

The overdrive range increases forward gear ratios by 29%, giving top speeds up to 40 km/h. Overdrive is clearly ideal for transport work where travel times can be significantly reduced and productivity increased.



MF 374 S-GE (62 DIN HP)

MF 394 - F (80 DIN HP)  
ELECTRONIC SYSTEM



MF 374 S (62 DIN HP)



MF 374 S (62 DIN HP)

## ELECTRONIC LINKAGE CONTROL FOR MAXIMUM PRODUCTIVITY

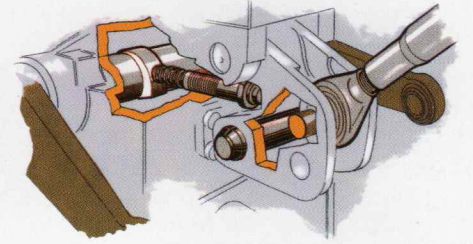
LIFT/LOWER SWITCH  
 RATE OF DROP CONTROL  
 POSITION CONTROL  
 LIFT HEIGHT LIMITER  
 RESPONSE (SENSITIVITY) CONTROL  
 DRAFT/POSITION INTERMIX CONTROL SELECTOR



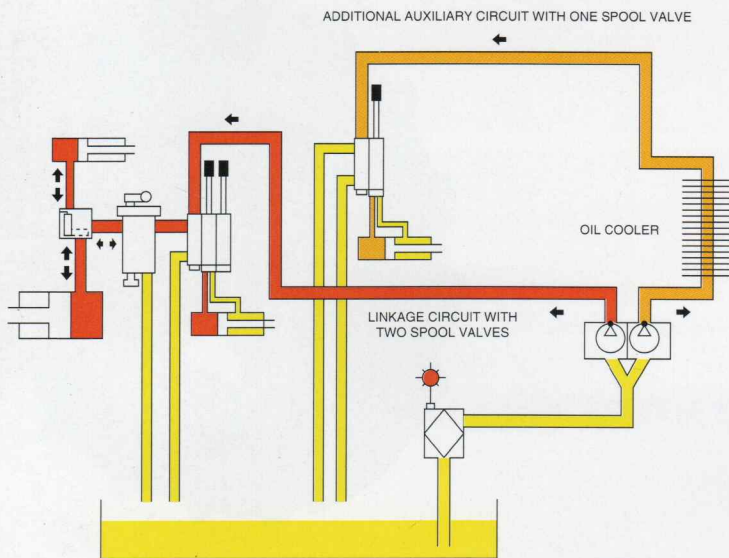
The electronic linkage control panel conveniently groups together all linkage controls in an easy to operate layout. As a most frequently needed control, the main lift/lower switch is located at the front of the panel. The control panel itself is conveniently located to the driver's right hand side.



Implement hitching is simplified by the provision of external push-buttons on both sides of the tractor to lift and lower the linkage from the ground.



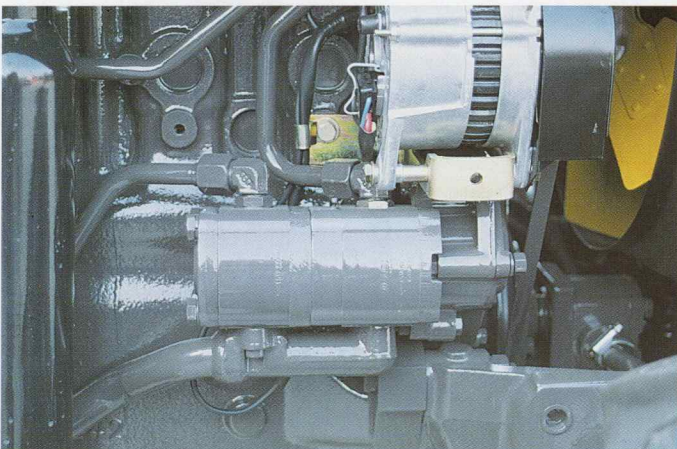
Precision draft and position sensors detect any variation in implement forces and relay information to the control unit for instantaneous, precision implement management.



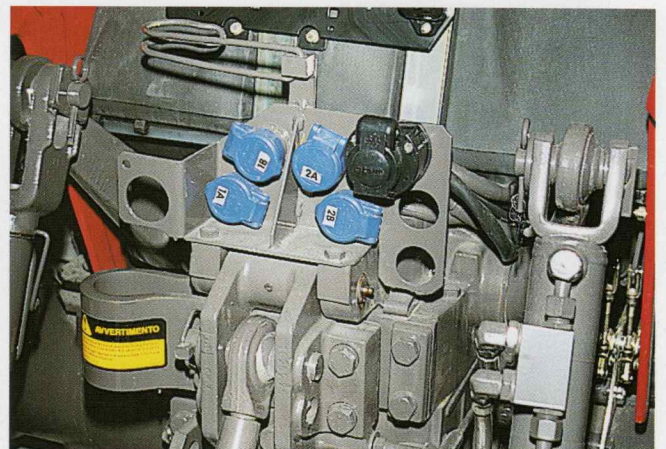
### UP TO 3 INDEPENDENT HYDRAULIC CIRCUITS FOR A MAXIMUM DELIVERY OF 85 l/min

- Independent 19 l/min hydrostatic steering pump.
- Independent 28 l/min pump for linkage and spool valves ("S"+GE up to 2 "F"+"A" up to 3).
- Independent 38 l/min pump for auxiliary hydraulic circuit with oil cooler and up to 3 external spool valves.

**Massey Ferguson hydraulics mean precision, power, and instant action.**



Engine mounted dual pump for linkage and auxiliary hydraulic circuits. The independent steering pump is driven by engine pulley.



Both "S" and "F" tractors are equipped as standard with combination single/double acting spool valves. The first spool valve is a detent/kickout valve with float function.

## 1. ENGINES

Powerful Perkins A4.248 engines are renowned for high torque back up, excellent fuel economy and low running costs.

## 2. STEERING

Balanced hydrostatic steering with 55° steering angle gives tightest turning circle for impressive manoeuvrability, versatility and productivity.

## 3. DIFFERENTIAL LOCKS

Maximum productivity and safety under difficult conditions are achieved through electro-hydraulically controlled front and rear differential locks. Engaged by simply pressing a button and disengaged simultaneously by pressing one or both the brake pedals.

## 4. FRONT BRAKES

Balanced hydraulically operated front and rear multiplate disc brakes are fitted to 4WD MF 304 models. Oil immersed brakes also ensure that heat is rapidly dispersed, giving constant and effective braking under difficult conditions.

## 5. GEARBOX

24 forward and 12 reverse gears are offered standard and incorporate a synchronised reverse shuttle facility. Four gears are selected on the main lever, three ranges provide slow, field and transport ratios, whilst the third lever provides the reverse shuttle and option facilities. Helical cut gears ensure smooth running and quiet operation.

## 6. PTO FUNCTIONS

The Independent PTO is engaged via a hand lever operating the transmission dual clutch. MF 304 Series tractor offer 540 and 540 economy (750 rpm) via the 6 spline shaft standard. Proportional ground speed PTO drive is also provided, and there is even a direct engine speed take off point, so all requirements are covered.

## 7. HYDRAULIC LIFT POSITION CONTROL PUSH BUTTONS

On models equipped with ELC implement, fitting is made simple and safe by using the push button on the fenders.

## 8. CAB FOR SAFETY AND PRODUCTIVITY

MF 304 Series tractors are fitted with a modern comfortable, low noise level safety cab. Ergonomic controls and a quiet environment ensure that the driver stays fresh - keeps productive. Roll over structure and carbon filters ensure that the driver is working in a safe environment, whilst the optional air conditioning unit and heater ensure that the driver is comfortable under the most severe climatic conditions.

## 9. QUICKLY REMOVABLE CAB

Unique removable cab enhances the appeal of the MF 304 Series. It only takes a few minutes to remove the 4 bolts and disconnect the electrical and heater connections to remove the cab where circumstances permit.

## 10. ELECTRONIC LINKAGE CONTROL

ELC provides an absolute enhanced performance. In addition to the normal draft and position control, ELC provides intermix, rapid implement entry and controlled rate of drop, sensitivity and lift height. The control panel is illuminated for night work.

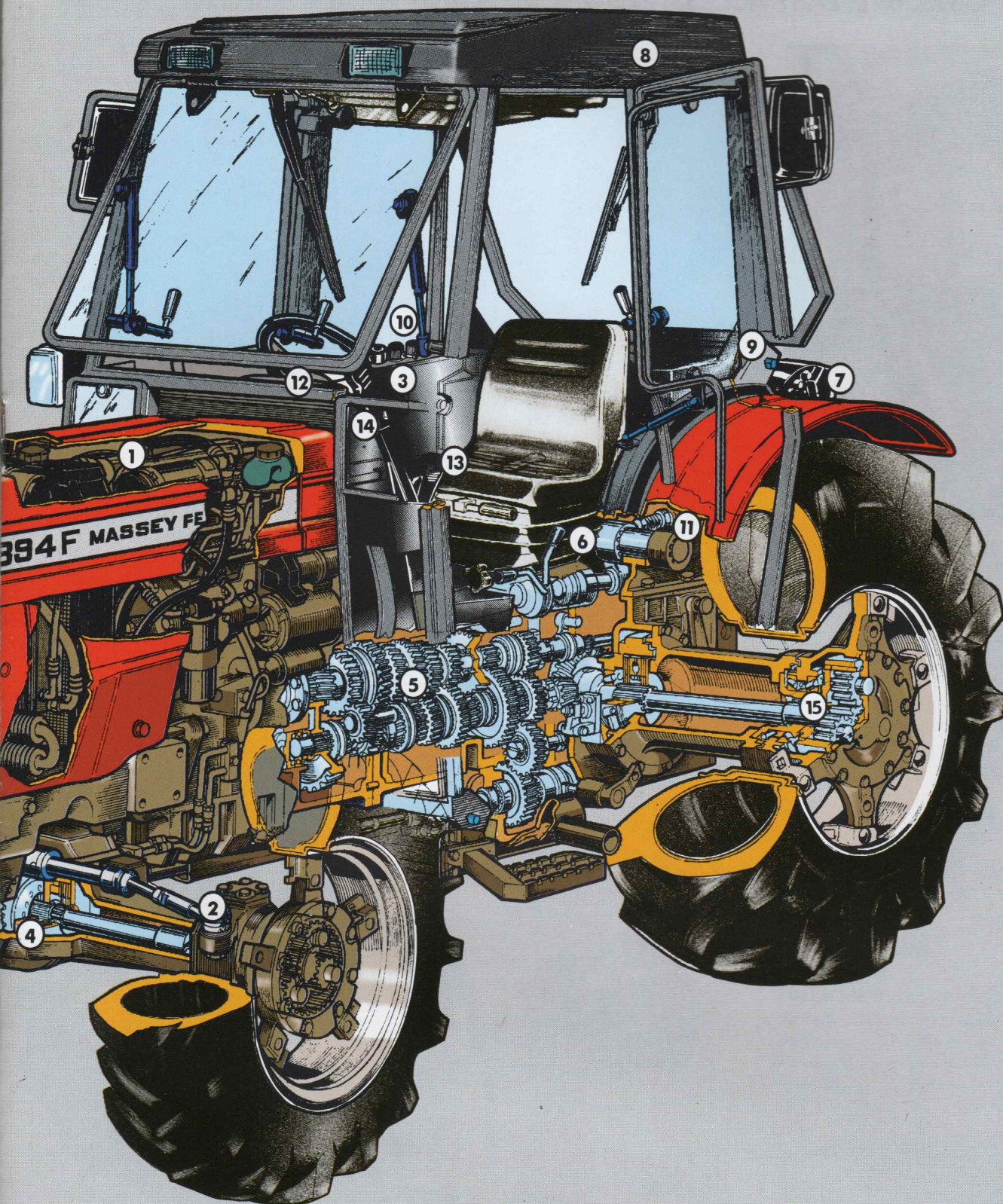


## 11. SENSOR

A special sensor fitted to the top link mounting makes it possible to benefit instantly of draft signals from ground engaged mounted implements. Two position top link mounting further enhances the sensitivity of the system to improve versatility and performance.

## 12. INSTRUMENT PANEL

Digital instruments are easy to read and highly accurate. 17 separate indicators provide information on all the tractor systems.



### 13. GEAR LEVERS

Centrally mounted gear levers permit access from either side of the tractor, important when working in restricted areas. Synchromesh gears permit smooth and effortless gear selection.

### 14. PTO ENGAGEMENT LEVER

Minimal effort is needed to engage and disengage the independent PTO.

### 15. ROBUST REAR AXLE

Heavy duty rear axle fitted with outboard epicyclic reduction units gives a trouble free and efficient long life.



## 5 PTO FUNCTIONS AND PRECISION LINKAGE CONTROL

### PTO

A range of 5 PTO functions:

- 540 + 540 economy
- 540 + 1000
- 2 ground speed proportional PTOs
- 1 direct engine speed PTO

Exceptional PTO power. The PTO drive train features a single gear pair with no permanent meshing to eliminate power loss.

### Three point linkage

The three point linkage has a high lifting capacity of 2600 Kg and is fitted with hydraulic levelling ram as optional.

Category 1 and 2 rear linkages are available, each with ball hitches. Class C tow hook and drilled cross bar also fitted as optional (UK as std).

Quick adjustable hitch option.

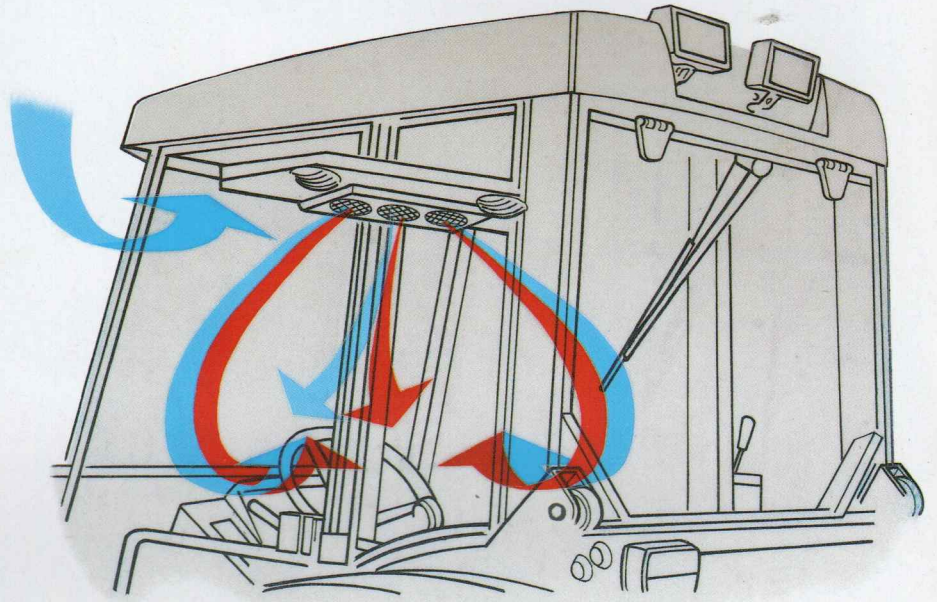


## OBJECTIVE: EASY ACCESS, ERGONOMICS AND TOTAL COMFORT



### EASY ACCESS

Superb access is ensured by 2 wide opening, full height doors. Forward mounted gear levers, dashboard mounted PTO clutch and parking brake mean an uncluttered transmission tunnel and plenty leg room.

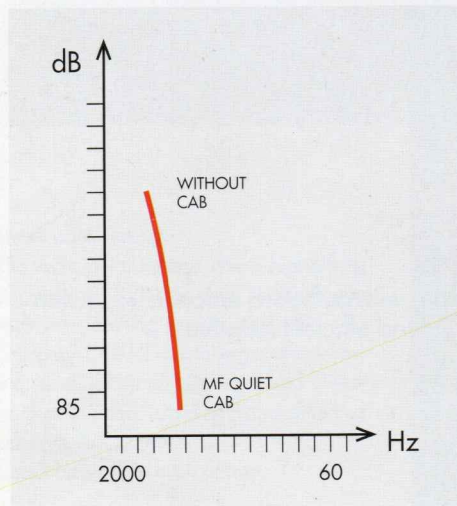


### TOTAL COMFORT

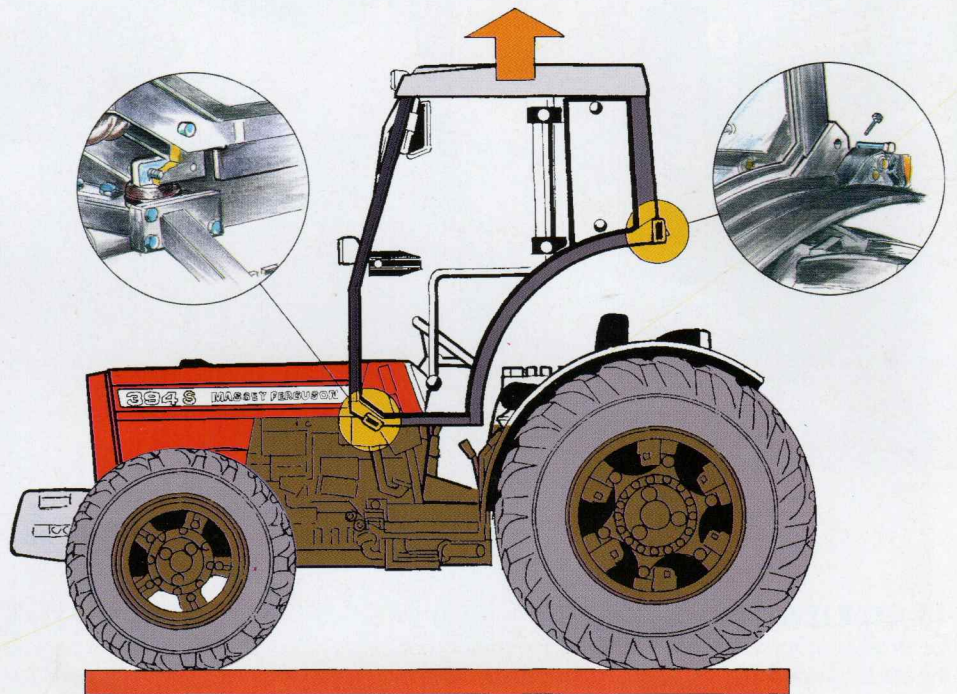
The new generation platform and seat are specially designed to complement the cab. All windows are openable. Hinged access panels at the bottom corners of the rear window provide airtight passage for electrical cables and hydraulic hoses. The standard active carbon filter complies with the strictest official standards for protection against airborne toxins.

### QUIET CAB

MF set new standards in cab noise levels. The MF 304 Series feature a platform mounted cab on silent block suspension units. Technically advanced acoustic panels in the bulkhead and over the transmission absorb sound. The result: 86 dB (A) maximum noise level at drivers ear.



### QUICK RELEASE



### EASY REMOVAL AND INSTALLATION

Extremely quick removal and installation thanks to:

- 4 quick-fit mounting bolts
- Push-pull connectors for electrical and heating circuits

## THE "ELECTRONIC SYSTEM" CAB



# TECHNICAL SPECIFICATIONS: MF 304 S - F - A & G.E.

	354 S/F	364 S/F	374 S/F/A	384 S/F/A	394 S/F/A
<b>ENGINE PERFORMANCE</b>					
- Rated power                   DIN HP/KW	47/34.6	58/42.6	62/45.6	71/55.2	80/58.8
- Rated power speed           rpm	2250	2250	2200	2200	2200
- Maximum torque               daNm	17	20,2	26,8	28,9	30,9
- Maximum torque speed       rpm	1350	1500	1400	1400	1400
<b>ENGINE TYPE</b>					
- Model	A 3.152	T 3.152	A 4.236	A 4.236	A 4.248
- Displacement                   cc	2500	2500 Turbo	3860	3860	4070
- Bore/stroke                   mm	91,4/127	91,4/127	98,4/127	98,4/127	101/127
- Dry filtre (dual element)	●	●	●	●	●
<b>CLUTCH</b>					
- Transmission clutch ø / PTO clutch ø	11/11	11/11	12/12	12/12	12/12
- garnitures	organic	organic	cerametallic	cerametallic	cerametallic
<b>SYNCHROMESH GEARBOX &amp; REVERSE SHUTTLE</b>					
- 12 forward/12 reverse	●	○	○	○	○
- 24 forward/12 reverse, Underdrive	○	○	△	○	△
- 24 forward/12 reverse, Creeper	○	○	○	○	△
- 24 forward/12 reverse, Overdrive (40 km/h)	-	○	○	○	△
<b>POWER TAKE OFF</b>					
- 540/540 Eco/direct PTO/2 ground PTOs.	△	△	△	△	△
- 540/1000/direct PTO/2 ground PTOs.	△	△	△	△	△
- Standard 1 3/8" (35 mm), 6 spline shaft	●	●	●	●	●
<b>HYDRAULIC SYSTEM</b>					
- Independent 19 l/min hydrostatic steering pump	●	●	●	●	●
- External spool valves (up to 2 "S" up to 3 "F"/"A")	○	○	○	○	○
- 3rd independent 38 l/min pump with up to 3 spool valves and oil cooler (not available on 3 cylinder models)	-	-	○	○	○
<b>ELECTRONIC LINKAGE CONTROL (ELC) (except SGE)</b>					
- Draft, position, intermix, and float functions	}				
- Lift/lower switch	}				
- Rapid implement soil engagement, rate of drop and lift height limit controls	○	○	○	○	○
- Remote controls on both sides	}				
- Electronic sensing of draft effort, response, and position	}				
<b>MECHANICAL LINKAGE CONTROL</b>	●	-●	●	-●	●
<b>THREE POINT LINKAGE</b>					
- Hydraulic levelling RAM	○	○	○	○	○
- Category 1 and 2 ball hitches + height adjustable "C" hook	●	●	●	●	●
- Quick height adjustable "C" hook	○	○	○	○	○
- Drilled cross bar	● (1)	● (1)	● (2)	● (2)	● (2)
- Maximum lifting capacity           daN	2600	2600	2600	2600	2600
<b>55° STEERING 4 WD FRONT AXLE</b>					
- Double rod balanced action steering cylinder)	●	●	●	●	●
- Epicyclic outboard final drives	●	●	●	●	●
- Electro-hydraulic diff lock	○	○	○	○	○
- "IBS" 4 wheel braking system	●	●	●	●	●
- Multidisks oil bath brakes	●	●	●	●	●
<b>BRAKES</b>					
- multidisc oil bath brakes	●	●	●	●	●
- Hydrostatic control, self adjusting	●	●	●	●	●
- Pendant pedals	●	●	●	●	●
<b>REAR AXLE</b>					
- Epicyclic final drives	●	●	●	●	●
- Electro-hydraulic diff lock	○	○	○	○	○

△ As alternative    - Not available    ○ Optional    ● Standard

	354 S/F		364 S/F		374 S/F/A		384 S/F/A		394 S/F/A			
<b>ELECTRICAL SYSTEM</b> - 12 Volt battery - 45 Amp alternator	● (72 Ah) ●		● (72 Ah) ●		● (95 Ah) ●		● (95 Ah) ●		● (95 Ah) ●			
<b>BODY</b> - Hinged bonnet - Fuel tank capacity SGE   S   F   - Side exhaust outlet under body - Vertical exhaust	● 46 53 53 ● ○		● 46 53 53 ● ○		● 46 53 62 ● ○		● 46 53 62 ● ○		● 46 53 62 ● ○			
<b>"ELECTRONIC SYSTEM" CAB</b> + Platform suspended on silent blocks + Digital instruments*(speed, etc.) + Adjustable steering column + PTO speed selection from driver seat + 4 work lights (2 front, 2 rear)	}		}		}		}		}			
<b>DIMENSIONS/WEIGHTS (TYRES)</b> - Length 2WD & 4WD m - Wheel base 2WD & 4WD m - Height at steering wheel m - Height at cab roof m - Ground clearance at 4WD front axle m - Ground clearance at tow hook m	(13.6-24) 3.33 1.96/1.90 1.41 2.20 0.35 0.37		(13.6-24) 3.33 1.96/1.90 1.41 2.20 0.35 0.37		(14.9-24) 3.45 2.07/2.02 1.46 2.26 0.39 0.42		(14.9-24) 3.45 2.07/2.02 1.46 2.26 0.39 0.42		(380/70-28) 3.45 2.07/2.02 1.48 2.28 0.40 0.44			
	S	F	S	F	S	F	S	F	S	F		
(With tyres as specified):												
- Minimum width m	1.33	1.49	1.33	1.49	1.33	1.49	1.33	1.57	1.41	1.57		
- Min/max front width 2WD m	1.09/1.49	-	1.09/1.49	-	1.09/1.49	-	1.09/1.49	-	1.09/1.49	-		
4WD m	1.09/1.39	1.25/1.55	1.09/1.39	1.25/1.55	1.09/1.39	1.25/1.55	1.09/1.39	1.25/1.55	1.09/1.39	1.25/1.55		
- Min/max rear width (2WD) m	0.98/1.53	1.14/1.69	0.98/1.53	1.14/1.69	0.98/1.53	1.14/1.69	0.98/1.53	1.14/1.69	0.98/1.53	1.14/1.69		
- 4WD steering radius												
with differential braking m	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.7		
without differential braking m	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.1	3.1	3.2		
- Approximate weight** 2WD kg	2180	-	2210	-	2400	-	2400	-	2450	-		
4WD kg	2330	2410	2380	2440	2500	2550	2500	2600	2550	2650		
- Front tyres 2WD	7.50-15	-	7.50-15	-	6.50-16 7.50-16	-	7.5 L15	-	7.50-16	-		
4WD	8.25-16	250/80-18	8.25-16	250/80-18	250/80-18	7.50-20	250/80-18	7.50-20 12.4-16 7.50-20	260/70-18	12.4-16 9.50-20 260/80-20		
- Rear tyres	13.6-24	13.6-28	13.6-24	14.9-24	14.9-24	13.6-28	14.9-24	13.6-28 16.9-24 13.6-28 16.9-24	380/70-28	16.9-24 14.9-28 14.9-28		
- Front 2WD / front 4WD / rear (Height at bonnet: 1.23 m)	SGE: 9.00-10/9.00-75-16/14.9-LR-20 (Height at bonnet: 1.23 m)											
SPEED CHART: Since the gearbox system is modular, the number of gears available is always a multiple of 12. In order to save space the table below only shows the standard forward and individual option speed: (Speed in km/h with 13.6 - 28 tyres).												
<b>VERSION GEAR</b>	1	2	3	4	5	6	7	8	9	10	11	12
Standard gearbox	1.69	2.66	3.36	4.04	4.96	6.36	8.03	9.98	11.84	15.68	19.81	29.20
Reverse shuttle	1.71	2.69	3.39	4.08	5.01	6.42	8.11	10.08	11.96	15.84	20.01	29.50
Creeper	0.33	0.52	0.66	0.79	0.97	1.24	1.57	1.96	2.31	3.07	3.88	5.77
Underdrive	1.40	2.21	2.79	3.35	4.11	5.27	6.65	8.27	9.82	13.00	16.42	24.20
Overdrive	2.18	3.43	4.33	5.21	6.39	8.19	10.34	12.85	15.26	20.20	25.52	37.62

\* Digital instrument adopted as standard on Q cab "Electronic System" and on foot step versions equipped with "ELC"

\*\* For cab version add 200Kg

N.B. Specifications are subject to change without notice and may vary from country to country.  
Pls check with your distributor or dealer at the time of placing your order.

# Massey Ferguson On top of any job

Massey Ferguson is the world's leading manufacturer of farm tractors. This prestigious position has been won over decades of tractor development, with constant improvement and tailoring of models to suit general purpose and specialist farming needs all over the world.

- **20 Special models**

(Foot step and Q cab version)

The Massey Ferguson 304 Special range is the perfect choice for vineyard and fruit crops with traditional row arrangements (rows spacing of 1.2 metres and more). Track is wider than usual vineyard tractors. All models provide 10 gears covering a speed range from 4 to 10 km/h, and are equipped with oil bath multidisc brakes and up to 3 independent hydraulic circuits (for a total delivery of 85 l/min).

- **20 Fruit models**

(Foot step and Q cab version)

The models in the Fruit range are extremely efficient in a wide variety of applications. The MF 304 F range can tackle both orchard and traditional field work.

- **6 Alpine models**

"A" tractors are suitable for every terrain, soil condition and type of farming, although their real strengths as all-round tractors really come to the fore in hillside areas and greenland farming.

Their extended wheelbase gives them exceptional longitudinal stability. This combines with the proven lateral stability shared with the orchard "F" models to offer unsur-

passed performance with high safety margins, high productivity and real "global" versatility.

- **10 S-GE. models**

These specially low profile tractors, available with a choice of engines from 47 to 80 DIN HP have a bonnet height of only 1.23 m - ideal for work under low branches and canopy-like cultivations.

- **1933 MASSEY FERGUSON introduced the Ferguson linkage.**

**1993 MASSEY FERGUSON introduces "ELECTRONIC SYSTEM" electronic linkage control on narrow track and orchard tractors.**

Electronic linkage control guarantees exceptional operating precision. "IBS" four wheel braking featuring multidisc oil bath brakes on all wheels halves stopping distances compared to traditional two wheel braking.

The "Electronic System" cab can be removed and installed in next to no time, enabling you to choose the most practical and comfortable configuration for each job.



MASSEY FERGUSON