

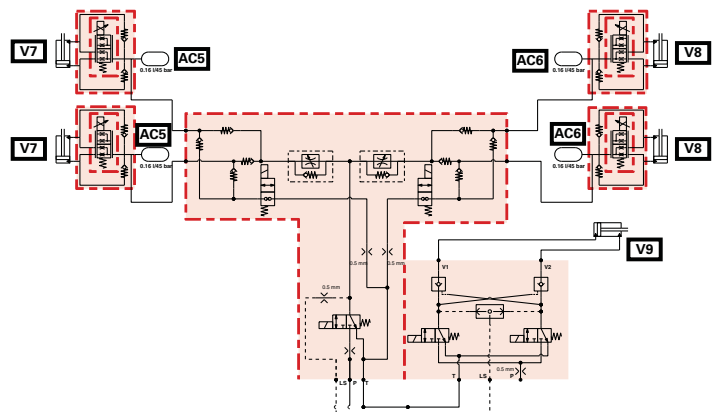
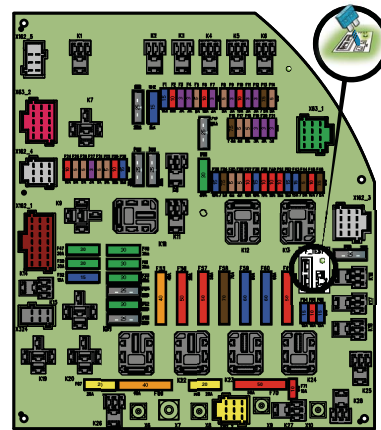
# Workshop Service Manual

# Technician Service Book -

# MT600E series tractors

HA260 T4f  
ML260 T4f

Electrical and hydraulics diagrams





# Technician Service Book - MT600E series tractors

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# 1 - General

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## **A - General specifications**

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**1 General specifications - MT600E tractors**

| Engine   |   |           |           |           |           |
|--|---|-----------|-----------|-----------|-----------|
| Model  | MT645E  | MT655E    | MT665E    | MT675E    | MT685E    |
| Brand  | AGCO Power  |           |           |           |           |
| Type   | 84 AWF-4f   |           |           |           |           |
| Maximum EPM power hp ISO (kW) at an engine speed of 2100 rpm | 300 (221)   | 325 (239) | 350 (257) | 380 (279) | 400 (294) |
| Maximum torque (Nm) at an engine speed of 1500 rpm           | 1220  | 1300      | 1390      | 1530      | 1540      |
| Maximum EPM torque (Nm)                                      | 1300  | 1390      | 1500      | 1590      | 1600      |
| Idle speed with ParkLock engaged                             | 750 rpm   |           |           |           |           |
| Idle speed with ParkLock disengaged                          | 1000 rpm  |           |           |           |           |
| Maximum speed  | 2160 rpm  |           |           |           |           |
| Engine weight  | 1000 kg (2205 lb)   |           |           |           |           |
| Number of cylinders  | 6   |           |           |           |           |
| Engine displacement (in litres)                              | 8.4   |           |           |           |           |
| Piston travel  | 145 mm (5.7 in)   |           |           |           |           |
| Compression ratio  | 16,7 bar (242 psi) ± 0,5 bar (7 psi)                            |           |           |           |           |
| Compression pressure   | 24 bar (348 psi)  |           |           |           |           |
| Injection pump brand   | Bosch   |           |           |           |           |
| Fuel injection type  | Common rail HFR20   |           |           |           |           |
| Firing order   | 1-5-3-6-2-4   |           |           |           |           |
| Maximum pressure in the high-pressure system                 | 2000 bar (29008 psi)  |           |           |           |           |
| Injector brand   | Bosch   |           |           |           |           |
| Injector type  | CRIN 3.20   |           |           |           |           |
| Charge pump type   | Manual  |           |           |           |           |
| Fuel prefilter filtration capacity                           | 10 µ  |           |           |           |           |
| Main fuel filter filtration capacity                         | 5 µ   |           |           |           |           |
| Low-pressure system pressure at minimum speed                | 0,5 bar (7 psi) to 8,5 bar (123 psi)                            |           |           |           |           |
| Low-pressure system pressure at maximum speed                | 0,5 bar (7 psi) to 8,5 bar (123 psi)                            |           |           |           |           |
| Recommended oil:   | API CJ4 or ACEA E9  |           |           |           |           |
| Maximum operating tilt (precautions)                         | 25° pitch   |           |           |           |           |
|  | 20° roll  |           |           |           |           |
| Oil/fuel consumption   | Maximum 0.1 %   |           |           |           |           |
| Lubrication system   | Gear pump at the bottom of the timing                           |           |           |           |           |
| Oil cooling system   | Cooler integrated into the engine (left side)                   |           |           |           |           |
| Oil pressure at minimum speed                                | 1 bar (15 psi)  |           |           |           |           |
| Oil pressure at maximum speed                                | 2,5 bar (36 psi) at 5 bar (73 psi) depending on the temperature |           |           |           |           |
| Relief valve adjustment pressure                             | 5 bar (73 psi) (spring pressure)                                |           |           |           |           |
| Air suction type   | Bi-turbo air/air intercooler and air/water intercooler          |           |           |           |           |
| Air preheating type  | Grid heater with relay controlled by the ECU                    |           |           |           |           |

| Engine   |  |        |        |        |        |
|--|--|--------|--------|--------|--------|
| Model  | MT645E   | MT655E | MT665E | MT675E | MT685E |
| Number of valves                                       | 24   |        |        |        |        |
| Valve clearance value                                  | 0,35 mm (0.01 in) (inlet and exhaust)  |        |        |        |        |
| Engine cooling system                                  | Coolant  |        |        |        |        |
| Fan type   | Vistronic fan  |        |        |        |        |
| Thermostat begins to open at                           | 82 °C (180 °F)   |        |        |        |        |
| Coolant temperature                                    | -35 °C (-31 °F) to 108 °C (226 °F)   |        |        |        |        |
| Air compressor brand for the brake system              | Knorr Bremse   |        |        |        |        |
| Type of compressor                                     | Piston   |        |        |        |        |
| Pressure range:  | 6,5 bar (94 psi) to 8 bar (116 psi)  |        |        |        |        |
| Block preheater  | 110 or 220 volts   |        |        |        |        |
| Fuel preheater   | Not available  |        |        |        |        |
| Urea preheater   | Tank and gauge: coolant<br>Pump module and supply lines: electric  |        |        |        |        |
| Exhaust fumes recirculation system                     | DOC + SCR + EGR system   |        |        |        |        |
| DOC + SCR system (injection of DEF)                    | DOC with metal substrate (exhaust fumes oxidation catalyser)<br>SCR with two ceramic substrates (exhaust fume treatment) |        |        |        |        |
| Safety system  | NOx sensors at exhaust inlet and outlet  |        |        |        |        |
| Device brand   | Bosch Denox 2.2+   |        |        |        |        |
| Type of control  | Engine controller EEM4   |        |        |        |        |
| Urea solidification temperature                        | -11 °C (12 °F)   |        |        |        |        |
| Oil vapour recirculation system                        | Closed system breather (CCV)   |        |        |        |        |
| Belt: Air conditioning compressor/left-hand alternator | Poly V belt  |        |        |        |        |
| Belt: Fan/right-hand alternator                        | Poly V belt  |        |        |        |        |
| Belt: Air compressor                                   | Poly V belt  |        |        |        |        |

| Rear axle transmission                  |   |
|---|---|
| Model                                   | MT645E/MT655E/MT665E/MT675E/MT685E                                |
| Gearbox type                            | Continuous variation  |
| Transmission type                       | ML 260  |
| Number of ranges                        | 2 ranges (high speed range (Hare) and low speed range (Tortoise)) |
| Maximum speed                           | 40 km/h (25 mile/h) or 50 km/h (31 mile/h)                        |
| Number of creeper gears                 | No creeper gears  |
| Rear axle type                          | HA 260 F  |
| Number of pinion/ring gear teeth        | 12/43   |
| Rear axle ratio (crownwheel and pinion) | 32.967  |
| 4WD ratio                               | 0.68  |
| Final drive type                        | Epicyclic   |
| Final drive reduction ratio             | 9.2 (123+15/15)   |
| Maximum 4WD clutch torque               | 350 daNm (2581 lbf ft)  |
| Number of 4WD discs                     | 7 discs   |

| Rear axle transmission                     |   |
|--|---|
| Model                                      | MT645E/MT655E/MT665E/MT675E/MT685E                    |
| Main brake type                            | 10" oil-immersed disc                                 |
| Number of discs per side                   | 6 discs   |
| Braking pressure                           | 0 to 60 bar (870 psi)                                 |
| Parking brake type                         | ParkLock (electrical/hydraulic)                       |
| Trailer brake type                         | Hydraulic and pneumatic with built-in antifreeze pump |
| Pneumatic trailer braking pressure         | 6,5 bar (94 psi) to 8 bar (116 psi)                   |
| Hydraulic trailer braking pressure         | 0 to 150 bar (2176 psi)                               |
| Maximum operating tilt                     | 25° pitch (front/rear)                                |
|  | 20° roll (right/left)                                 |
|  | 17° combined  |
| Total loaded weight supported by rear axle | 11500 kg (25353 lb)                                   |

| Front axle                                  |  |
|---|--|
| Model                                       | MT645E/MT655E/MT665E/MT675E/MT685E   |
| Front axle brand                            | DANA   |
| Axle type                                   | Suspended or fixed   |
| Supplier reference                          | Fixed:<br>– 770/504 (standard)<br>– 770/510 (option)                       |
|   | Suspended:<br>– 770/618 (standard)<br>– 770/624 (option)                   |
| Rotational direction                        | Clockwise  |
| Front axle weight                           | Fixed:<br>– 770/504: 770 kg (1698 lb)<br>– 770/510: 830 kg (1830 lb)       |
|   | Suspended:<br>– 770/618: 1077 kg (2374 lb)<br>– 770/624: 1230 kg (2712 lb) |
| Total loaded weight supported by front axle | 9000 kg (19841 lb)   |
| Recommended oil type (beam and final drive) | SAE 85 W 90 (API GL4)  |
| Total ratio for front axle                  | 16.862   |
| Number of teeth on final drive              | 14 x 35 x 85   |
| Final drive ratio                           | 7.071  |
| Number of pinion/ring gear teeth            | 13/31  |
| Number of differential discs                | 15 discs   |
| Maximum steering angle                      | 55°  |
| Oscillation angle                           | ± 9°   |
| Type of oscillation stop                    | Mechanical   |

| Front axle                              |  |
|---|--|
| Model                                   | MT645E/MT655E/MT665E/MT675E/MT685E                                 |
| Steering ram diameter                   | 90 mm (3.5 in) x 45 mm (1.8 in) (front axles 770/504 and 770/618)  |
|   | 110 mm (4.3 in) x 60 mm (2.4 in) (front axles 770/510 and 770/624) |
| Steering ram stroke                     | 2 x 143,5 mm (5.7 in) (front axles 770/504 and 770/618)            |
|   | 2 x 146 mm (5.8 in) (front axles 770/510 and 770/624)              |
| Suspension type                         | Hydraulics   |
| Suspension ram diameter                 | 90 mm (3.5 in) x 100 mm (3.9 in)                                   |
| Suspension ram stroke                   | 100 mm (3.9 in)  |
| Hydraulic control unit brand            | Husco  |
| Hydraulic control unit nominal pressure | 200 bar (2901 psi)   |
| Number of accumulators                  | 2  |
| Accumulator pressure                    | Left 1 l (0.3 gal (US)) : 10 bar (145 psi)                         |
|   | Right 1,4 l (0.4 gal (US)) : 50 bar (725 psi)                      |
| Suspension sensor type                  | Angular potentiometer.   |
| Steering sensor type                    | Angular potentiometer.   |
| Brake type                              | Combined with the rear brake                                       |
| Factor K                                | 1.331  |

| Spool valve  |   |
|--|---|
| Model  | MT645E/MT655E/MT665E/MT675E/MT685E                          |
| System type  | Load Sensing  |
| Flow rate  | 205 l/min (54.2 gal/min (US))                               |
| High-pressure pump type                              | Bosch piston pump   |
| High-pressure pump displacement                      | 85 cm <sup>3</sup>  |
| High-pressure pump rotational speed                  | 2500 rpm  |
| High-pressure pump maximum flow rate                 | 205 l/min (52.8 gal/min (US))                               |
| High-pressure pump maximum pressure                  | 200 bar (2901 psi)  |
| Maximum quantity of oil                              | 120 l (31.7 gal (US))                                       |
| Maximum exportable oil quantity (without adding oil) | 40 l (11.1 gal (US)) continuous                             |
|  | 60 l (16.9 gal (US)) temporary (example: emptying a bucket) |
| Charge pump type                                     | Suction   |
| Main relief valve adjustment pressure                | 200 bar (2901 psi) ± 10 bar (145 psi)                       |
| Number of spool valves (maximum)                     | 8   |
| Number of front "push-pull" connectors               | 4 connectors i.e. 2 spool valves                            |
| Number of rear "push-pull" connectors                | 12 connectors i.e. 6 spool valves                           |
| Maximum flow rate per spool valve                    | 100 l/min (26.4 gal/min (US)) ± 10                          |
| Spool valve control type                             | Electric  |
| Recommended oil:                                     | According to MF CMS M1145 specification                     |

| Steering                                  |  |
|---|--|
| Model                                     | MT645E/MT655E/MT665E/MT675E/MT685E   |
| Steering type                             | Hydrostatic  |
| Type of control                           | Steering wheel (standard)  |
|   | Steering wheel + electrohydraulic spool valve (Tru Trak and Auto-Guide™ options) |
| Orbitrol displacement                     | 315 cm <sup>3</sup> (front axles 770/504 and 770/618)                            |
|   | 400 cm <sup>3</sup> (front axles 770/510 and 770/624)                            |
| Steering ram diameter                     | 90 mm (3.5 in) x 45 mm (1.8 in) (front axles 770/504 and 770/618)                |
|   | 110 mm (4.3 in) x 60 mm (2.4 in) (front axles 770/510 and 770/624)               |
| Steering ram stroke                       | 2 x 143,5 mm (5.7 in) (front axles 770/504 and 770/618)                          |
|   | 2 x 146 mm (5.8 in) (front axles 770/510 and 770/624)                            |
| Working pressure                          | 175 bar (2538 psi) ± 5 bar (73 psi)  |
| Pressure relief valve adjustment pressure | 175 bar (2538 psi) ± 5 bar (73 psi)  |
| Shock valve adjustment pressure           | 235 bar (3408 psi) ± 10 bar (145 psi)  |
| Oil recommended for steering              | According to MF CMS M1145 specification  |

| Linkage   |                                      |
|---|--------------------------------------|
| Model   | MT645E/MT655E/MT665E/MT675E/MT685E   |
| Rear lift ram diameter                          | 105 mm (4.1 in)                      |
| Rear linkage travel                             | 788 mm (31.0 in) or 860 mm (33.9 in) |
| Maximum lifting capacity at ball joints (rear)  | 12000 kg (26455 lb)                  |
| Operating pressure (rear)                       | 180 bar (2611 psi)                   |
| 3-point linkage category (rear)                 | 3 or 4                               |
| Front lift ram diameter                         | 100 mm (3.9 in) x 50 mm (2.0 in)     |
| Front linkage travel                            | 826 mm (32.5 in)                     |
| Maximum lifting capacity at ball joints (front) | 5000 kg (11023 lb)                   |
| Operating pressure (front)                      | 190 bar (2756 psi)                   |
| 3-point linkage category (front)                | 3                                    |

| Rear power take-off (PTO)  |                                    |
|--|------------------------------------|
| Model  | MT645E/MT655E/MT665E/MT675E/MT685E |
| Number of selections possible for rear PTO                       | 540E/1000 - 1000/1000E             |
| Maximum permissible power 540E in 1"3/8 (21 splines)             | 100 hp                             |
| Maximum permissible power 540E in 1"3/4 (20 splines)             | 160 hp                             |
| Maximum permissible power 1000/1000E in 1"3/8 (6 and 21 splines) | 180 hp                             |

| Rear power take-off (PTO)                                  |  |
|--|--|
| Model  | MT645E/MT655E/MT665E/MT675E/MT685E   |
| Maximum permissible power 1000/1000E in 1"3/4 (20 splines) | MT645E: 293 hp<br>MT655E: 262 hp<br>MT665E: 283 hp<br>MT675E: 300 hp<br>MT685E: 300 hp |
| Engine speed for 540E PTO                                  | 1577 rpm   |
| Engine speed for 1000E PTO                                 | 1605 rpm   |
| Engine speed for 1000 PTO                                  | 1970 rpm   |
| Rotational direction                                       | Clockwise  |
| Clutch type  | Hydraulics   |
| Number of clutch discs                                     | 8 discs  |
| Control pressure   | 18 bar (261 psi)   |
| Splined shaft type   | 6 and 21 in 1"3/8 and 20 in 1"3/4  |

| Front power take-off                        |  |
|---|--|
| Model                                       | MT645E/MT655E/MT665E/MT675E/MT685E   |
| Number of selections possible for front PTO | 1000 rpm   |
| Maximum permissible power                   | Clockwise: 147 hp<br>Anti-clockwise: 221 hp  |
| Maximum permissible input-output torque     | Clockwise: 507 Nm (374 lbf ft) - 1032 Nm (761 lbf ft)<br>Anti-clockwise: 762 Nm (562 lbf ft) - 1551 Nm (1144 lbf ft) |
| Rotational direction                        | 2 directions of rotation   |
| Engine speed if PTO 1000                    | 2040 rpm   |
| Ratio                                       | 2.04   |
| Clutch type                                 | Hydraulics   |
| Splined shaft type                          | 6 and 21 in 1"3/8  |

| Electric                                   |                                    |
|--|------------------------------------|
| Model                                      | MT645E/MT655E/MT665E/MT675E/MT685E |
| Battery brand                              | TAB                                |
| Battery specifications (2 batteries)       | 12 V - 105 A                       |
| Maximum current at start-up (IEC standard) | 1010 A                             |
| Starter type                               | 12 V noseless                      |
| Starter power                              | 4.2 kW                             |
| Alternator type                            | 2 x 14 V/120 A (240 A)             |
| Current available on ISOBUS connector      | 50 A                               |

| Electronics                       |  |
|-----------------------------------|--|
| Model                             | MT645E/MT655E/MT665E/MT675E/MT685E   |
| instrument panel                  | Instrument panel   |
| EXT Lite                          | Transmission, ParkLock function and front axle suspension  |
| 3 Autotronic 5 DC                 | Linkage/Electrohydraulic spool valves/Arm-rest/Semi-active cab                                       |
| PVG 32 valves                     | Electrohydraulic spool valves  |
| Lighting/linkage controller       | Management of the lighting and of the rear linkage   |
| 1 EEM4 (ECM Tier 4f AGCO Power)   | Engine and SCR Denox system  |
| 1 Orbitrol Danfoss valve          | Orbitrol for the Auto-Guide™/Tru Trak function   |
| TMC Display                       | Onboard computer   |
| Automatic air conditioning module | Air conditioning   |
| CAN switches key pad              | Controls for several tractor functions, such as 4WD, differential lock, suspension, Auto-Guide™ etc. |
| AM50 unit                         | AGCOMMAND (telemetry)  |

| Cab and fittings                              |                                    |
|---|------------------------------------|
| Model   | MT645E/MT655E/MT665E/MT675E/MT685E |
| Type of cab suspension available              | Semi-active                        |
| Type of rear-view mirror control available    | Manual or automatic                |
| Type of air conditioning control available    | Manual or automatic                |
| Type and brand of air conditioning compressor | DENSO with axial pistons           |
| Compressor displacement                       | 188 cm <sup>3</sup> /rev.          |
| Refrigerant                                   | R134a                              |
| Cab noise level                               | 71 DBA                             |
| Roof type                                     | Standard                           |





## **B - Forward speeds**

- 1 Forward speed for all models with TechStar CVT transmission . . . . .15



# 1 Forward speed for all models with TechStar CVT transmission

## Tractor version 50 km/h (31 mile/h)\*

\*depending on country legislation.

For the 40 km/h (25 mile/h) version, the speed is electronically controlled.

For the 40 km/h (25 mile/h) version, the tractor reaches maximum speed at 1600 rpm.

For the 50 km/h (31 mile/h) version, the tractor reaches maximum speed at 1900 rpm.

| Continuous variation mode   |   |  |
|-----------------------------|---|--|
|                             | Forward   | Reverse  |
| Slow speed range (Tortoise) | 0,03 km/h (0.02 mile/h) to 28 km/h (17 mile/h)  | 0,03 km/h (0.02 mile/h) to 16 km/h (10 mile/h) |
| High speed range (Hare)     | 0,03 km/h (0.02 mile/h) to 40 km/h (25 mile/h) or 50 km/h (31 mile/h) depending on version. | 0,03 km/h (0.02 mile/h) to 38 km/h (24 mile/h) |

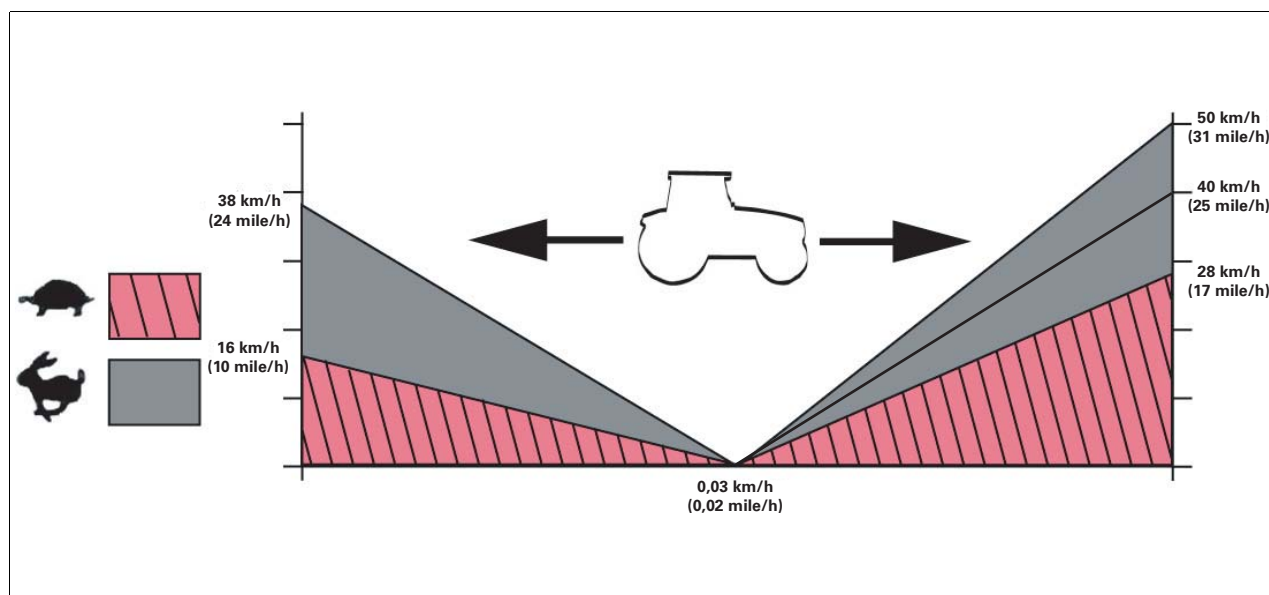


Fig. 1.

1006017



## **C - Dimensions**

|   |   |    |
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# 1 Dimensions and weights

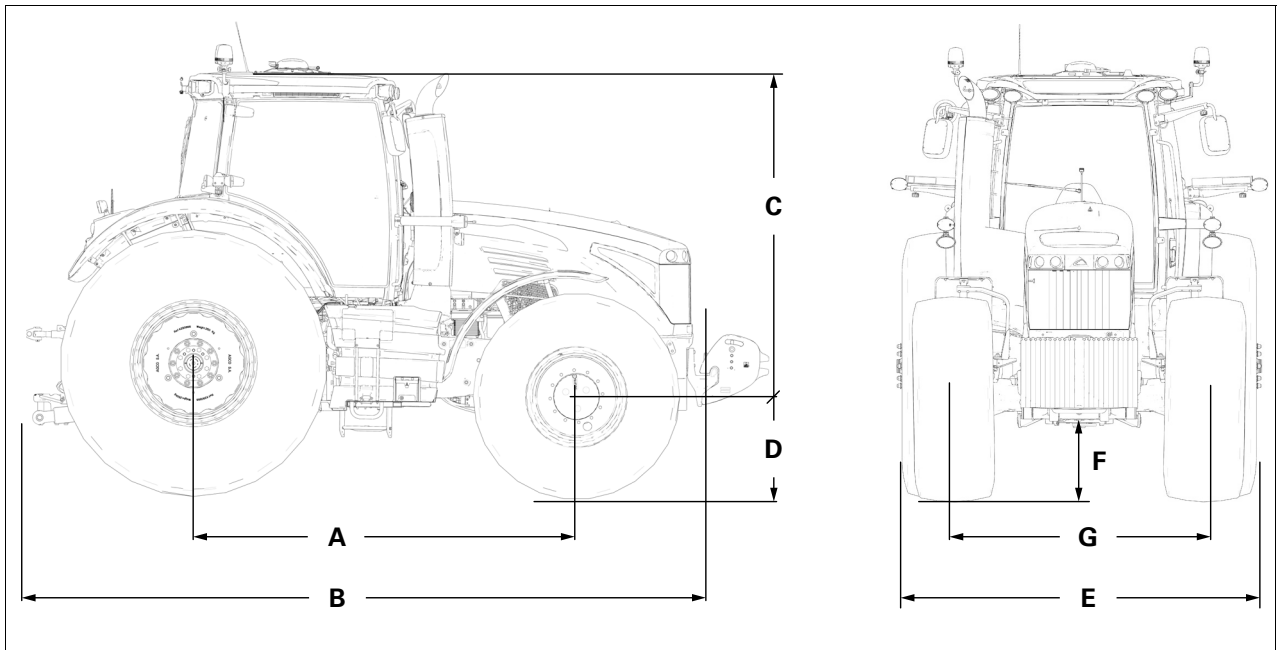


Fig. 1.

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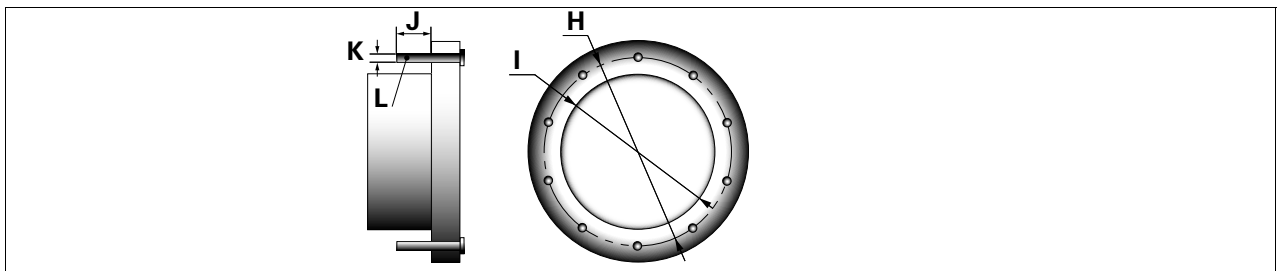


Fig. 2.

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**MT600E TechStar CVT**

| Reference | Measured specification                                | Dimension/weight  |
|-----------|---|---|
| (A)       | Wheel base  | 3093 mm (121.9 in)  |
| (B)       | External length with front linkage                    | 6200 mm (244.3 in)  |
|           | External length without front linkage with weights    | 5944 mm (234.2 in)  |
|           | External length without front linkage without weights | 5531 mm (217.9 in)  |
| (C)       | Standard height to roof without Auto-Guide            | 3030 mm (119.4 in) to 3130 mm (123.3 in)  |
|           | Standard height to roof with Auto-Guide               | 3170 mm (124.9 in) to 3270 mm (128.8 in)  |
| (D)       | Height to ground                                      |   |
|           | - front: minimum/maximum radius                       | 700 mm (27.6 in) to 775 mm (30.5 in)  |
|           | - rear: minimum/maximum radius                        | 925 mm (36.4 in) to 1025 mm (40.4 in)   |
| (E)       | Maximum external width                                | 2550 mm (100.5 in)  |
| (F)       | Ground clearance                                      | 444 mm (17.5 in) to 484 mm (19.1 in)  |
|           | Tractor weight  | See certificate of conformity:<br><br>1. Weight at no load, point 2.1.1<br>2. Total weight, point 2.4.4<br>3. Load per axle, point 2.2.2<br>4. List of tyres, point 2.2.3.1 |



## MT600E TechStar CVT

| Reference | Measured specification   | Dimension/weight   |                        |                    |                            |
|-----------|--|--|------------------------|--------------------|----------------------------|
|           |  | Rear axle  | Front axle             |                    |                            |
|           |  |  | Dana 770/504 - 770/618 | Dana 770/624       | Dana 770/510 - 770/624 SHD |
| (G)       | Distance between flanges (HA260F)<br>Short shaft Ø 110 mm (4.3 in)<br>Long shaft Ø 110 mm (4.3 in) | 1888 mm (74.4 in)<br><br>1893 mm (74.6 in) to 2262 mm (89.1 in)<br><br>1893 mm (74.6 in) to 3012 mm (118.7 in) | 1892 mm (74.5 in)      | 1904 mm (75.0 in)  | 1904 mm (75.0 in)          |
| (H)       | Centre-to-centre distance between studs<br>- straight shaft  | 335 mm (13.2 in)   | 425 mm (16.7 in)       | 425 mm (16.7 in)   | 425 mm (16.7 in)           |
| (I)       | Centring diameter  | 280,8 mm (11.1 in)   | 370,8 mm (14.6 in)     | 370,8 mm (14.6 in) | 370,8 mm (14.6 in)         |
| (J)       | Stud length  | 69 mm (2.7 in)   | 47 mm (1.9 in)         | 47 mm (1.9 in)     | 47 mm (1.9 in)             |
| (K)       | Stud diameter  | M22x1.5  | M22x1.5                | M22x1.5            | M22x1.5                    |
| (L)       | Number of studs (per side)<br>- flanged shaft<br>- straight shaft                                  | 10<br>10   | 12                     | 12                 | 12                         |

## 2 Attachment points: TechStar CVT models with 5 t (6 US ton) front linkage

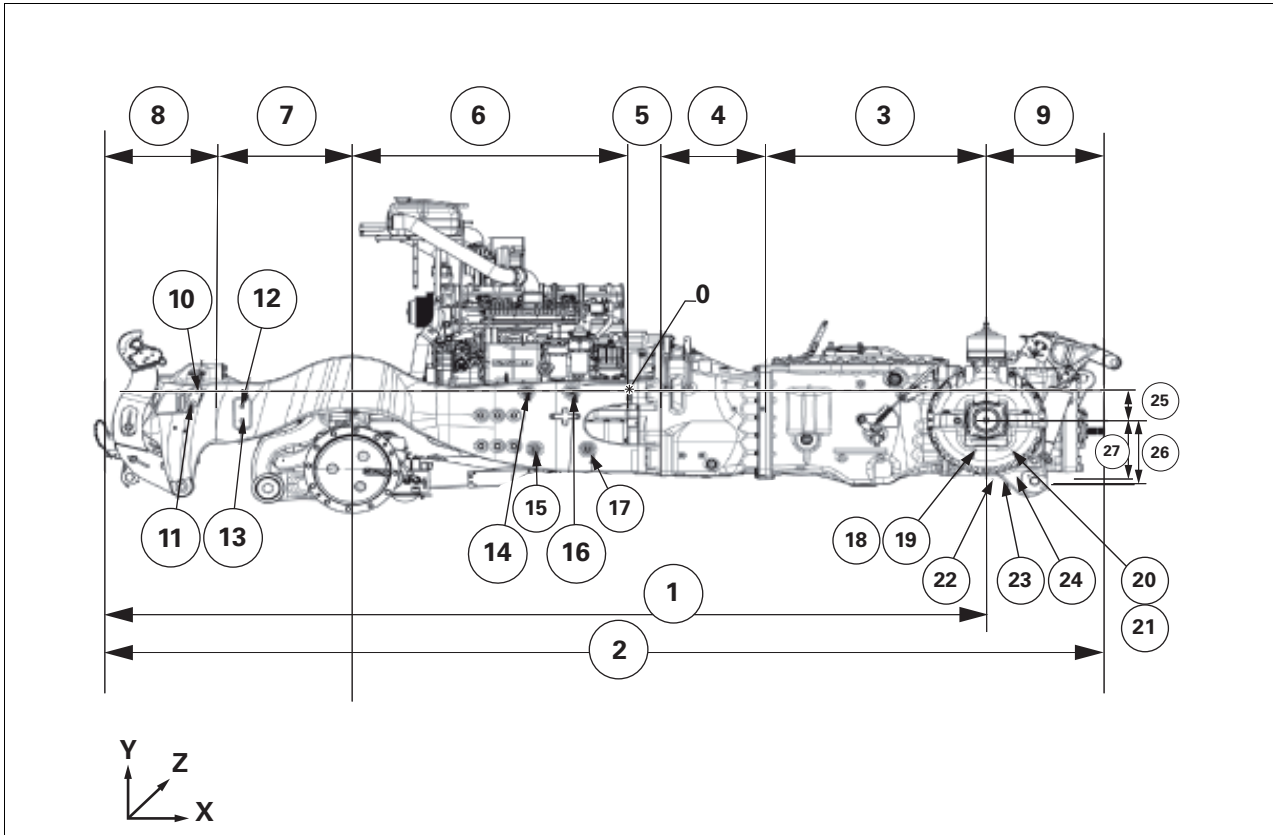


Fig. 3.

I048211

**NOTE:** Values x, y and z represent reference point 0 of the tractor.

| Reference         |                    | X                   | Y                  | Z                  |
|-------------------|--------------------|---------------------|--------------------|--------------------|
| 1                 | 4276 mm (168.5 in) |                     |                    |                    |
| 2                 | 4847 mm (191.0 in) |                     |                    |                    |
| 3                 | 1075 mm (42.4 in)  |                     |                    |                    |
| 4                 | 512 mm (20.2 in)   |                     |                    |                    |
| 5                 | 161 mm (6.3 in)    |                     |                    |                    |
| 6                 | 1344 mm (53.0 in)  |                     |                    |                    |
| 7                 | 665 mm (26.2 in)   |                     |                    |                    |
| 8                 | 519 mm (20.4 in)   |                     |                    |                    |
| 9                 | 570 mm (22.5 in)   |                     |                    |                    |
| 10                | M20                | -2100 mm (-82.7 in) | 410 mm (16.2 in)   | 15 mm (0.6 in)     |
| 11                | M20                | -2119 mm (-83.5 in) | 410 mm (16.2 in)   | -41 mm (-1.6 in)   |
| 12 <sup>(1)</sup> | M20                | -1879 mm (-74.0 in) | 225 mm (8.9 in)    | -65 mm (-2.6 in)   |
| 13 <sup>(1)</sup> | M20                | -1879 mm (-74.0 in) | 225 mm (8.9 in)    | -145 mm (-5.7 in)  |
| <sup>(1)</sup> 14 | M20                | -494 mm (-19.5 in)  | -294 mm (-11.6 in) | -15 mm (-0.6 in)   |
| 15 <sup>(1)</sup> | M20                | -454 mm (-17.9 in)  | 284 mm (11.2 in)   | -295 mm (-11.6 in) |
| 16 <sup>(1)</sup> | M20                | -274 mm (-10.8 in)  | 294 mm (11.6 in)   | 15 mm (0.6 in)     |
| 17 <sup>(1)</sup> | M20                | -194 mm (-7.6 in)   | 284 mm (11.2 in)   | -295 mm (-11.6 in) |
| 18                | M20                | 1670 mm (65.8 in)   | 740 mm (29.2 in)   | -280 mm (-11.0 in) |
| 19                | M20                | 1670 mm (65.8 in)   | 645 mm (25.4 in)   | -280 mm (-11.0 in) |

| Reference |     | X                 | Y                | Z                  |
|-----------|-----|-------------------|------------------|--------------------|
| 20        | M20 | 1826 mm (71.9 in) | 740 mm (29.2 in) | -280 mm (-11.0 in) |
| 21        | M20 | 1826 mm (71.9 in) | 645 mm (25.4 in) | -280 mm (-11.0 in) |
| 22        | M20 | 1792 mm (70.6 in) | 100 mm (3.9 in)  | 437 mm (17.2 in)   |
| 23        | M20 | 1825 mm (71.9 in) | 100 mm (3.9 in)  | -440 mm (-17.3 in) |
| 24        | M20 | 1858 mm (73.2 in) | 100 mm (3.9 in)  | -437 mm (-17.2 in) |
| 25        |     |                   |                  | 140 mm (5.5 in)    |
| 26        |     |                   |                  | 330 mm (13.0 in)   |
| 27        |     |                   |                  | 300 mm (11.8 in)   |

1. Front-end loader attachment points

### 3 Attachment points: TechStar CVT models without front linkage

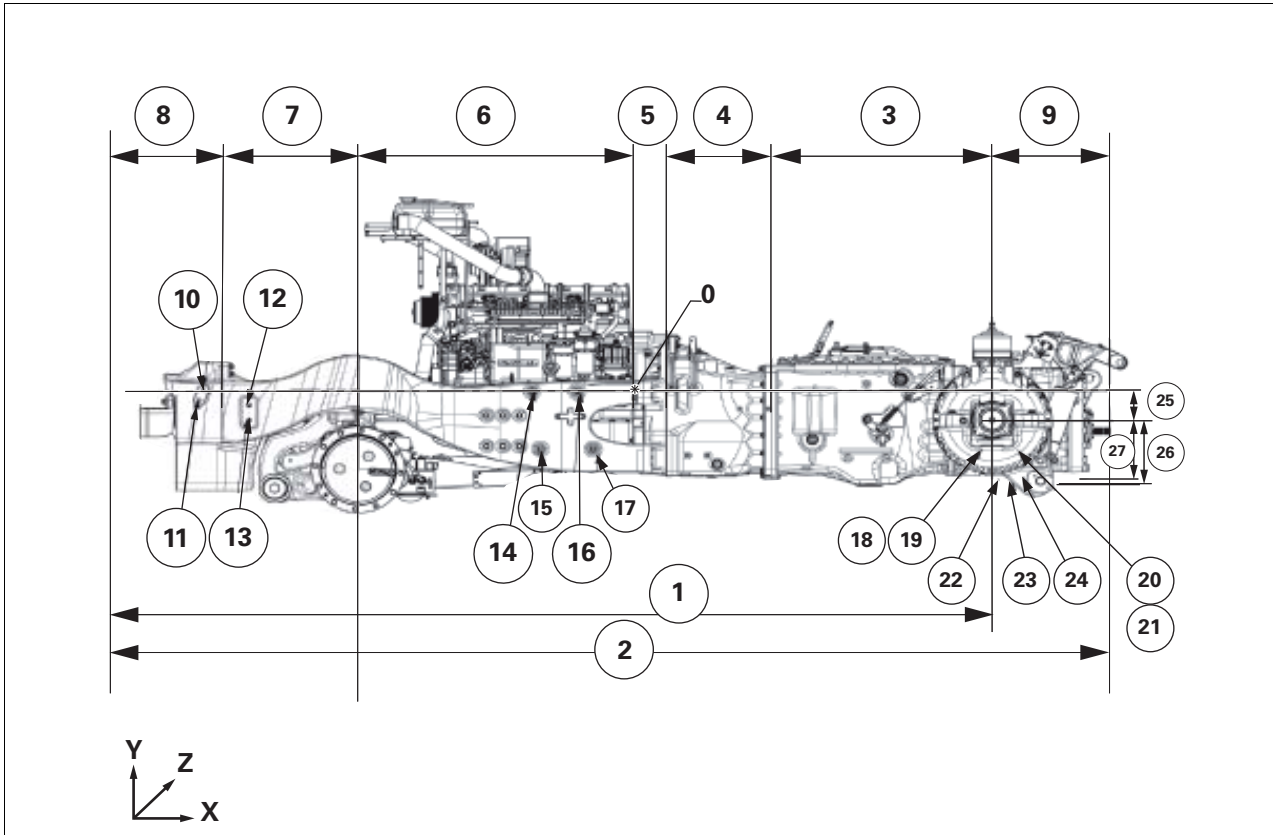


Fig. 4.

I048213

**NOTE:** Values x, y and z represent reference point 0 of the tractor.

| Reference         |                    | X                   | Y                  | Z                  |
|-------------------|--------------------|---------------------|--------------------|--------------------|
| 1                 | 4052 mm (159.6 in) |                     |                    |                    |
| 2                 | 4623 mm (182.1 in) |                     |                    |                    |
| 3                 | 1075 mm (42.4 in)  |                     |                    |                    |
| 4                 | 512 mm (20.2 in)   |                     |                    |                    |
| 5                 | 161 mm (6.3 in)    |                     |                    |                    |
| 6                 | 1344 mm (53.0 in)  |                     |                    |                    |
| 7                 | 665 mm (26.2 in)   |                     |                    |                    |
| 8                 | 395 mm (15.6 in)   |                     |                    |                    |
| 9                 | 570 mm (22.5 in)   |                     |                    |                    |
| 10                | M20                | -2100 mm (-82.7 in) | 410 mm (16.2 in)   | 15 mm (0.6 in)     |
| 11                | M20                | -2119 mm (-83.5 in) | 410 mm (16.2 in)   | -41 mm (-1.6 in)   |
| 12 <sup>(1)</sup> | M20                | -1879 mm (-74.0 in) | 225 mm (8.9 in)    | -65 mm (-2.6 in)   |
| 13 <sup>(1)</sup> | M20                | -1879 mm (-74.0 in) | 225 mm (8.9 in)    | -145 mm (-5.7 in)  |
| <sup>(1)</sup> 14 | M20                | -494 mm (-19.5 in)  | -294 mm (-11.6 in) | -15 mm (-0.6 in)   |
| 15 <sup>(1)</sup> | M20                | -454 mm (-17.9 in)  | 284 mm (11.2 in)   | -295 mm (-11.6 in) |
| 16 <sup>(1)</sup> | M20                | -274 mm (-10.8 in)  | 294 mm (11.6 in)   | 15 mm (0.6 in)     |
| 17 <sup>(1)</sup> | M20                | -194 mm (-7.6 in)   | 284 mm (11.2 in)   | -295 mm (-11.6 in) |
| 18                | M20                | 1670 mm (65.8 in)   | 740 mm (29.2 in)   | -280 mm (-11.0 in) |
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| Reference |     | X                 | Y                | Z                  |
|-----------|-----|-------------------|------------------|--------------------|
| 20        | M20 | 1826 mm (71.9 in) | 740 mm (29.2 in) | -280 mm (-11.0 in) |
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| 22        | M20 | 1792 mm (70.6 in) | 100 mm (3.9 in)  | 437 mm (17.2 in)   |
| 23        | M20 | 1825 mm (71.9 in) | 100 mm (3.9 in)  | -440 mm (-17.3 in) |
| 24        | M20 | 1858 mm (73.2 in) | 100 mm (3.9 in)  | -437 mm (-17.2 in) |
| 25        |     |                   |                  | 140 mm (5.5 in)    |
| 26        |     |                   |                  | 330 mm (13.0 in)   |
| 27        |     |                   |                  | 300 mm (11.8 in)   |

1. Front-end loader attachment points



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