WORKSHOP SERVICE MANUAL

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1 . INTRODUCTION

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Introduction

A . Using the manual

General

The purpose of this manual is to assist Distributors and Dealers in the efficient installation, maintenance and repair of MASSEY FERGUSON machinery. Carrying out the procedures as detailed, together with the use of special tools where appropriate, will enable the operations to be completed within the time stated in the repair time schedule.

Page numbering

Example : 7C01-3

This manual is divided into parts and sections. Each page contains the following information :

7 = Section
C = Part
01 = Sequence number within the Part
3 = Page number within the Part

The issue number and the date are indicated at the bottom of the page.

Using the manual

To assist with locating information, each section of the manual is preceded by an index listing the Parts contained in that section.

The preliminary operations to be carried out in order to reach the item involved are listed at the beginning of each Part.

Items are indicated by means of identification marks (circles, squares, triangles).

Meaning of identification marks

circle	○	(..)	identifies part only
square	□	[..]	identifies part and indicates an adjustment
triangle	Δ	/..\	identifies part and indicates an important point to be noted during removal or refitment

Amendments

Amended pages will be issued carrying the same page number as previous pages : only the issue number and the date will change.

Old pages should be destroyed.

Special tools

Where the use of a special tool is necessary in an operation, the tool number is shown following the instruction requiring its use.

Repairs and replacements

When parts have to be replaced, it is essential that only genuine MASSEY FERGUSON parts are used.

Attention is particularly drawn to the following points concerning repairs and the fitting of replacement parts and accessories.

Safety features embodied in the tractor may be impaired if other than genuine parts are fitted.

In certain territories, legislation prohibits the fitting of parts not to the tractor manufacturer's specification.

Torque wrench setting figures given in the Workshop Manual must be strictly adhered to. Locking devices must be fitted where specified. If the efficiency of a locking device is impaired during removal it must be renewed.

The tractor warranty may be invalidated by the fitting of other than genuine MASSEY FERGUSON parts. All MASSEY FERGUSON replacement parts have the full backing of the manufacturer's warranty. MASSEY FERGUSON Distributors and Dealers are obliged to supply only genuine service parts.

Repair time schedule

The sections in the repair time schedule are identical to those in the workshop manual. The Repair Time Schedule is available, under publication number 3378043M1.

B . Specifications

Engine

Characteristics	MF 6110	MF 6120	MF 6130	MF 6140	MF 6150	MF 6160	MF 6170	MF 6180	MF 6190
PERKINS Model	4.41	4.41	1004.4TLR	1004.4T2	1004-4THR2	1006-6 HR4	1006-6.HR3	1006-6TLR2	1006-THR2
Number of cylinders	4	4	4	4	4	6	6	6	6
Turbocharger	-	-	yes	yes	yes	-	-	yes	yes
Bore, (mm.)	101.1	101.1	100	100	100	100	100	100	100
Stroke, (mm.)	127	127	127	127	127	127	127	127	127
Cubic capacity (litre)	4100	4100	4000	4000	4000	6000	6000	6000	6000
Maxi. engine power DIN (KW)	51.5	58,9	62,6	66,2	69,9	73,5	81	88,3	95,6
P.T.O. power DIN (KW)	47	53	57	59,8	64	68	74	82,3	88,3
At engine speed of rev/min	2200	2200	2200	2200	2200	2200	2200	2200	2200
Maximum torque (Nm)	265	286	325	359	386	403	440	490	530
Engine speed at maximum torque	1400	1400	1400	1400	1200	1200	1200	1400	1400
Idling speed rev/min	750	750	750	850	850	850	850	850	1000
Maximum rated speed rev/min	2200	2200	2200	2200	2200	2200	2200	2200	2200
Maximum no load speed rev/min	2350	2350	2310	2310	2310	2310	2310	2310	2310
Permissible front P.T.O. power at 2200 rev/min (kW)	All the engine power					75			
Maximum torque						328			
Lubrication	Gear type pump - strainer on suction side and external canister type filter(s).								
Valves	Overhead, push-rod operated								
Valves clearance (Cold)									
- Inlet - mm (in)	0.30 (0.012)		0.20 (0.008)						
- Exhaust - mm (in)	0.30 (0.012)		0.45 (0.018)						
Engine oil cooler	no	no	yes	yes	yes	no	no	yes	yes

Fuel system and air cleaner

Supply pump	ACDELCO			
Fuel filter with sediment bowl	Yes			
Number of elements	1		2	
Injection pump	CAV	Lucas	CAV	Stanadyne
Injectors and nozzle holders	Lucas		CAV	Stanadyne
Cold weather starting	Thermostart			
Air Cleaner: Two-stage air filter with removable elements for servicing, with centrifugal prefilter and clogging indicator (warning lamp).				

Introduction

Electrical system

Voltage:	12 volts negative earth.
Batteries:	2 maintenance free batteries.
Safety start:	operated by the cluch pedal.
Headlights:	European code 40/45 W
Sidelights:	5 W
Rear/brake lights:	21/5 W
Direction indicators:	21 W
Number plate light:	10 W
Work lamps:	55 W - iodine type H3
Instrument panel lighting and warning lights:	3 W - 2 W - 1.2 W
Roof light:	10 W

Cooling

Operation:	Centrifugal pump and pressurised radiator, regulated by thermostat Opening temperature : 82° C (179.2° F) controlled by thermostat.
Fan:	6110/6120/6130/6140/6150 : belt drive 6150: viscostatic 6160/6170/6180/6190 : viscostatic model gear driven water pump.
Belt deflection: (on the longest span)	19 mm (4 cyl. engine), 10 mm (6 cyl. engine).

Transmission

Clutch :	
6110/6120/6130/6140/6150/6160	Spring-loaded multiple-disc clutch of oil bath type - 4 discs
6170/6180/6190	Pressure-loaded multiple-disc clutch of oil bath type - 5 discs
Gearbox :	- 16 or 32 speeds
Without Dynashift :	- 16 forward speeds - 16 reverse speeds - reverse shuttle (synchronised)
Creeper gear (option)	Ratio 4 to 1
Super creeper gear (option)	Ratio 7.8 to 1
Dynashift gearbox :	- 32 front speeds - 32 rear speeds - four selectable ratios without declutching - reverse shuttle (synchronised)

Introduction

Road speeds at 2200 rev/min
6110/6120/6130/6140 - 16.9 - 34 tyres

Speed	Range	Speed-shift	16 SPEED 30 KPH				16 SPEED 40 KPH			
			FORWARD		REVERSE		FORWARD		REVERSE	
			KPH	MPH	KPH	MPH	KPH	MPH	KPH	MPH
1	LOW	Slow	1.91	1.19	1.86	1.16	2.45	1.52	2.38	1.48
		Fast	2.45	1.52	2.38	1.48	3.10	1.92	3.01	1.87
2		Slow	2.93	1.82	2.85	1.77	3.70	2.30	3.59	2.23
		Fast	3.70	2.30	3.59	2.23	4.68	2.91	4.55	2.83
3		Slow	4.05	2.52	3.94	2.45	5.12	3.18	4.97	3.09
		Fast	5.12	3.18	4.97	3.09	6.48	4.03	6.30	3.91
4		Slow	5.87	3.65	5.70	3.54	7.42	4.61	7.21	4.48
		Fast	7.42	4.61	7.21	4.48	9.38	5.83	9.12	5.67
5	HIGH	Slow	7.78	4.83	7.56	4.70	9.83	6.11	9.55	5.94
		Fast	9.83	6.11	9.55	5.94	12.43	7.72	12.08	7.51
6		Slow	11.75	7.30	11.42	7.10	14.86	9.28	14.48	8.97
		Fast	14.85	9.23	14.43	8.97	18.77	11.67	18.25	11.34
7		Slow	16.26	10.10	15.80	9.82	20.56	12.79	19.98	12.42
		Fast	20.56	12.79	19.98	12.42	25.98	16.15	25.26	15.70
8		Slow	23.55	14.64	22.89	14.23	29.76	18.50	28.92	17.97
		Fast	29.76	18.50	28.92	17.97	37.62	23.38	36.57	22.72

6150/6160/6170 -16.9 - 38 tyres

Speed	Range	Speed-shift	16 SPEED 30 KPH				16 SPEED 40 KPH			
			FORWARD		REVERSE		FORWARD		REVERSE	
			KPH	MPH	KPH	MPH	KPH	MPH	KPH	MPH
1	LOW	Slow	1.92	1.19	1.86	1.16	2.43	1.51	2.36	1.46
		Fast	2.43	1.51	2.36	1.46	3.07	1.91	2.98	1.85
2		Slow	2.90	1.81	2.81	1.74	3.67	2.28	3.57	2.21
		Fast	3.67	2.28	3.57	2.21	4.64	2.88	4.51	2.80
3		Slow	4.01	2.50	3.90	2.42	5.08	3.16	4.94	3.07
		Fast	5.08	3.16	4.94	3.07	6.42	3.99	6.24	3.88
4		Slow	5.81	3.62	5.64	3.50	7.35	4.57	7.15	4.44
		Fast	7.35	4.57	7.15	4.44	9.29	5.78	9.03	5.61
5	HIGH	Slow	7.71	4.80	7.49	4.66	9.74	6.06	9.47	5.90
		Fast	9.74	6.06	9.47	5.90	12.31	7.66	11.96	7.43
6		Slow	11.64	7.24	11.31	7.03	14.72	9.15	14.31	8.89
		Fast	14.72	9.15	14.31	8.89	18.60	11.56	18.08	11.23
7		Slow	16.11	10.02	15.66	9.73	20.37	12.66	19.80	12.30
		Fast	20.37	12.66	19.80	12.30	25.74	16.00	25.02	15.55
8		Slow	23.33	14.50	22.67	14.09	29.49	18.33	28.66	17.81
		Fast	29.49	18.33	28.66	17.81	37.27	23.17	36.22	22.51

Introduction

Road speeds at 2200 rev/min
6180/6190 - 20.8 - 38 tyres

Speed	Range	Speed-shift	16 SPEED 30 KPH				16 SPEED 40 KPH			
			FORWARD		REVERSE		FORWARD		REVERSE	
			KPH	MPH	KPH	MPH	KPH	MPH	KPH	MPH
1	LOW	Slow	2.54	1.57	2.53	1.57	2.54	1.57	2.53	1.57
		Fast	3.22	2.00	3.20	1.99	3.22	2.00	3.20	1.99
2		Slow	3.84	2.38	3.82	2.37	3.84	2.38	3.82	2.37
		Fast	4.86	3.02	4.83	3.00	4.86	3.02	4.83	3.00
3		Slow	5.32	3.30	5.29	3.28	5.32	3.30	5.29	3.28
		Fast	6.73	4.18	6.69	4.18	6.73	4.18	6.69	4.15
4		Slow	7.71	4.42	7.66	4.76	7.71	4.42	7.66	4.76
		Fast	9.74	6.05	9.69	6.02	9.74	6.05	9.69	6.02
5	HIGH	Slow	10.22	6.35	10.16	6.31	10.22	6.35	10.16	6.31
		Fast	12.91	8.02	12.84	7.98	12.91	8.02	12.84	7.98
6		Slow	15.43	9.59	15.34	9.53	15.43	9.59	15.34	9.53
		Fast	19.51	12.12	19.39	12.05	19.51	12.12	19.39	12.05
7		Slow	21.36	13.27	21.23	13.19	21.36	13.27	21.23	13.19
		Fast	27.00	16.78	26.84	16.68	27.00	16.78	26.84	16.68
8		Slow	30.92	19.21	30.74	19.10	30.92	19.21	30.74	19.10
		Fast					39.09	24.29	38.86	24.15

Road speeds "Dynashift" at 2200 rev/min -
6110 to 6140 - 13.6R38 tyres

RATIO		FORWARD		REVERSE	
		KPH	MPH	KPH	MPH
	**1** A	2.04	1.27	2.06	1.28
	B	2.39	1.49	2.41	1.50
	C	2.82	1.75	3.10	1.93
	D	3.30	2.05	3.33	2.07
	2 A	3.47	2.16	3.50	2.18
	B	4.06	2.52	4.10	2.55
	C	4.79	2.98	4.83	3.00
	D	5.61	3.49	5.66	3.52
	3 A	4.57	2.84	4.61	2.87
	B	5.34	3.32	5.39	3.35
	C	6.31	3.92	6.37	3.96
	D	7.38	4.59	7.45	4.63
	4 A	6.18	3.84	6.24	3.88
	B	7.23	4.49	7.30	4.54
	C	8.54	5.30	8.62	5.36
	D	9.99	6.21	10.08	6.27
	**1** A	7.65	4.76	7.72	4.80
	B	8.96	5.57	9.05	5.63
	C	10.57	6.57	10.67	6.64
	D	12.38	7.69	12.50	7.78
	2 A	13.00	8.08	13.13	8.17
	B	15.22	9.46	15.36	9.55
	C	17.97	11.16	18.14	11.28
	D	21.03	13.07	21.23	13.21
	3 A	17.12	10.64	17.28	10.75
	B	20.03	12.45	20.22	12.58
	C	23.65	14.69	23.88	14.85
	D	27.68	17.20	27.94	17.38
	4 A	23.16	14.39	23.38	14.54
	B	27.11	16.84	27.37	17.02
	C	32.00	19.88	32.31	20.10
	D	37.45	23.27	37.81	23.52

Introduction

Road speeds "Dynashift" at 2200 rev/min - 6150 to 6170 - 16.9R38 tyres

RATIO		FORWARD KPH	FORWARD MPH	REVERSE KPH	REVERSE MPH
1	A	2.04	1.27	2.06	1.28
	B	2.39	1.48	2.41	1.50
	C	2.82	1.75	3.10	1.93
	D	3.30	2.05	3.33	2.07
2	A	3.47	2.15	3.50	2.18
	B	4.06	2.52	4.10	2.55
	C	4.79	2.98	4.83	3.00
	D	5.60	3.48	5.65	3.51
3	A	4.56	2.83	4.60	2.86
	B	5.34	3.32	5.39	3.35
	C	6.30	3.92	6.36	3.96
	D	7.38	4.58	7.45	4.63
4	A	6.17	3.84	6.22	3.87
	B	7.22	4.49	7.29	4.53
	C	8.53	5.30	8.61	5.36
	D	9.98	6.20	10.07	6.26
1	A	7.65	4.75	7.72	4.80
	B	8.95	5.56	9.04	5.62
	C	10.56	6.56	10.66	6.63
	D	12.36	7.68	12.48	7.76
2	A	12.99	8.07	13.12	8.16
	B	15.20	9.45	15.34	9.54
	C	17.95	11.15	18.12	11.27
	D	21.00	13.05	21.20	13.19
3	A	17.10	10.62	17.26	10.74
	B	20.01	12.43	20.20	12.56
	C	23.62	14.68	23.84	14.83
	D	27.65	17.18	27.92	17.37
4	A	23.14	14.38	23.36	14.53
	B	27.08	16.83	27.34	17.01
	C	31.96	19.86	32.26	20.07
	D	37.41	23.25	37.77	23.49

Road speeds "Dynashift" at 2200 rev/min - 6180/6190 - 18.4R38 tyres

RATIO		FORWARD KPH	FORWARD MPH	REVERSE KPH	REVERSE MPH
1	A	2.09	1.30	1.97	1.23
	B	2.45	1.52	2.31	1.44
	C	2.89	1.80	2.72	1.69
	D	3.38	2.10	3.19	1.98
2	A	3.55	2.21	3.35	2.08
	B	4.16	2.58	3.92	2.44
	C	4.91	3.05	4.63	2.88
	D	5.75	3.57	5.42	3.37
3	A	4.68	2.91	4.41	2.74
	B	5.47	3.40	5.16	3.21
	C	6.46	4.01	6.85	4.26
	D	7.56	4.70	7.13	4.43
4	A	6.33	3.93	5.97	3.71
	B	7.41	4.60	6.99	4.35
	C	8.74	5.43	8.24	5.13
	D	10.23	6.36	9.65	6.00
1	A	7.84	4.87	7.39	4.60
	B	9.17	5.70	8.65	5.38
	C	10.83	6.73	10.21	6.35
	D	12.67	7.88	11.95	7.43
2	A	13.32	8.28	12.56	7.81
	B	15.59	9.69	14.70	9.14
	C	18.50	11.43	17.35	10.79
	D	21.54	13.38	20.31	12.63
3	A	17.53	10.89	16.53	10.28
	B	20.52	12.75	19.35	12.04
	C	24.22	15.05	22.84	14.21
	D	28.35	17.61	26.73	16.63
4	A	23.72	14.74	22.37	13.91
	B	27.76	17.25	26.18	16.28
	C	32.77	20.36	30.90	19.22
	D	38.36	23.83	36.17	22.50

Introduction

Final reduction units

Reduction units :	epicyclic, in the rear axle housings.	
Reduction ratios :	6110/6120/6130/6140 (normal duty)	4.714 to 1
	6150/6160/6170 (heavy duty)	5.077 to 1
	6180/6190	5.571 to 1

Power take-off

Independent power take-off (IPTO)	Proportional to the engine speed. Hydraulic clutch.
P.T.O. ratio	540 rev/min at 1980 engine rev/min 1000 rev/min at 2000 engine rev/min
Speed changing (according to model)	Either by changing shafts : - 540 rev/min shaft, 35 mm (1"3/8 in) diameter, 6 splines. - 1000 rev/min shaft, 35 mm (1"3/8 in) diameter, 21 splines Or by external selection lever on rear L.h.s. - shaft 35 mm - 6 splines
"Economy" independant power take-off (optional extra)	The normal 540 and 1000 rev/min p.t.o. speeds can be obtained at the above stated engine speeds or at 1550 engine rev/min by selecting the "economy" ratio.
Control	Lever in the cab.
Ground speed P.T.O. (optional extra)	An addition to the independent P.T.O.
Control	Lever in the cab.
Speed : MF 6110/6120/6130/6140	- 540 rev/min - 7.87 revolutions of the p.t.o. shaft for 1 turn of the wheel axle. - 1000 rev/min - 14.83 revolutions of the p.t.o. shaft for 1 turn of the wheel axle.
Speed : MF 6150/6160/6170	- 540 rev/mn - 8.48 revolutions of the p.t.o. shaft for 1 turn of the wheel axle. - 1000 rev/mn - 15.54 revolutions of the p.t.o. shaft for 1 turn of the wheel axle.
Speed : MF 6180/6190	- 540 rev/mn - 8.23 revolutions of the p.t.o. shaft for 1 revolution of the wheel. - 1000 rev/mn - 15.08 revolutions of the p.t.o. shaft for 1 revolution of the wheel.

Front power take-off (optional extra)

Control	Hydraulic clutch mechanism controlled by a button in the cab.
Ratio	1000 rev/min at 2040 engine rev/min. - 2.04. : 1

Four-wheel drive front axle

Clutch mechanism	Hydraulic, electrically actuated by push button in the cab
Differential Lock	Front and rear differential lock-hydraulic with electrical control.

Introduction

Hydraulics

Two stage gear pump, driven directly by the engine, supplies :

1st Stage
This circuit supplies 29 l/min (6.4 Imp. gal/min) (7.6 US gal/min) at maximum engine speed.
Maximum pressure : 17 bar

1. Hydrostatic steering
   Hare/Tortoise range gear
   Differential lock (rear and front)
   I.P.T.O. clutch
   P.T.O. brake
   Front P.T.O. (if fitted)
   Four-wheel drive (if fitted)
   Top up of brake master cylinder and clutch master cylinder
   Clutch control valve (pressure loaded)
   Lubrication of gearbox,P.T.O. and rear axle
   Gearbox front unit (Speedshift or Dynashift)
   Electro-hydraulical reverse shuttle (if fitted)

2nd Stage
This circuit supplies 50 l/min (11 Imp. gal/min) (13.2 US gal/min)
Maximum pressure :185 bar

2. Trailer brake supply
   Auxiliary hydraulic system
   Hydraulic lift.

Filtration

External 150-micron throwaway, canister type suction strainer.
External 15 micron High pressure filter.

Hydraulic lift

Type : 3-point, Category 2or 3, with fixed, telescopic or quick attach hook type ball ends (according to model).
Rams : 2. Lifting force (see charts)

MF 6110/6120/6130/6140 - Rams Ø 57 mm (2.24 in)

Position of lift rod on lower links mm (in)	Length of lift rods mm (in)	Lower links horizontal Kg (Lb)	Lower links fully raised Kg (Lb)
508 (20)	565 (22.2) 765 (30.1)	2885 (6360) 3010 (6636)	3825 (8433) 3165 (6977)
608 (24)	565 (22.2) 765 (30.1)	- 3430 (7562)	4190 (9237) 3485 (7683)

MF 6150/6160/6170 - Rams Ø 66 mm (2.59 in)

Position of lift rod on lower links mm (in)	Length of lift rods mm(in)	Lower links horizontal Kg (Lb)	Lower links fully raised Kg (Lb)
550 (21.6)	595 (23.4) 827 (32.5)	4350 (9590) 4276 (9427)	5194 (11451) 4308 (9497)
650 (25.6)	595 (23.4) 827 (32.5)	5740 (12654) 4788 (10556)	5689 (12541) 4703 (10368)

MF 6150/6160 - Rams Ø 57 mm (2.24 in)

Position of lift rod on lower links mm (in)	Length of lift rods mm (in)	Lower links horizontal Kg (Lb)	Lower links fully raised Kg (Lb)
550 (21.6)	595 (23.4) 827 (32.5)	3192 (7037) 3138 (6918)	3812 (8404) 3162 (6971)
650 (25.6)	595 (23.4) 827 (32.5)	4213 (9286) 3514 (7747)	4175 (9204) 3452 (7610)

MF 6180/6190 - Rams Ø 73 mm (2.87 in)

Position of lift rod on lower links mm (in)	Length of lift rods mm (in)	Lower links horizontal Kg (Lb)	Lower links fully raised Kg (Lb)
550 (21.6)	595 (23.4) 827 (32.5)	5425 (11960) 5000 (11023)	6510 (14352) 5087 (11215)
650 (25.6)	595 (23.4) 827 (32.5)	8090 (17835) 5717 (12604)	7117 (15690) 5595 (12335)

1A01.10

Introduction

Brakes

Type : Oil immersed single disc per wheel, 343 mm (13.50 in), outside diameter. Inside diameter of lining :
6110/6120/6130/6140 : 296 mm (11.65 in)
6150/6160/6170/6180/6190 : 274,5 mm (10.81 in)

Operation : Hydraulic, from two master cylinders, automatic adjustment.
Handbrake : Operates on the rear axle bevel gear.
Trailer brake : According to model by an hydraulic valve.

Differential lock - Rear axle

Type : Positive clutch

Control : Hydraulic, with electrical control.

Steering

Type : Hydrostatic fixed or tiltable telescopic steering column. One double action central ram

Theoritical turning circle	6110/20/30/40		6150		6160	6170/80/90
Tyres *		13.6-24		13.6-28	13.6-28	14.9-28
- 2 WD	•		•			
- 4 WD		•		•	•	•
Track adjustments (m)	-	1,75	-	1,85	1,85	2,05
Angle	57°	55°	57°	55°	55°	55°
Radius tyres (outer)						
- without braking (m)	-	4,37	-	4,60	4,94	4,94

* with front axle disengaged

Wheels

FRONT	2-wheel drive pressed steel 4-wheel drive pressed steel
REAR	pressed steel with manual adjustment or cast with power adjust variable track (P.A.V.T.), or manual adjustment.

Introduction

Tyres

Compatibility of front/rear tyres of 4-wheel drive tractors same make and model.

Tyres	Front	Rear	Front	Rear	Front	Rear
	11.2R28	13.6R38	13.6R28	16.9R38	420-70R24	520-70R34
		16.9R34		18.4R34	440-65R28	540-65R38
		18.4R30	14.9R24	13.6R38	420-70R28	520-70R38
	(1) 12.4R24	13.6R38		18.4R34	480-65R28	520-70R38
		16.9R30	14.9R28	18.4R38		600-65R38
		18.4R30	(1) 380-70R24	480-70R34		
	13.6R24	13.6R38	380-70R28	480-70R38		
		16.9R34				

***NOTE :** The data in this table is not binding. Ask your dealer for further information on other possible choices.*

(1) 6110/6120/6130/6140/6150 only

Water Ballasting (75° fill)

Front tyres	Rim	Litre	Imp. gal.	US gal.	Kg	lb
11.2R28	W9 x 28	98	21.56	25.9	98	216
13.6R24	W12 x 24	139	30.60	36.7	139	306
13.6R28	W11 or W12 x 28	150	33.00	39.6	150	330
14.9R24	W12 x 24	178	39.20	47.0	178	392
14.9R28	W12 x 28	200	44.00	52.8	200	440
380-70R24	W12 x 24	161	35.40	42.5	161	354
380-70R28	W12 x 28	174	38.30	45.9	174	383
440-65R28		202	44,44	52.52	202	444
420-70R24	W12 x 24	192	42.20	50.7	192	423
420-70R28	W12 x 28	214	47.10	56.5	214	471
480-65R28	W12 x 28	255	56.10	67.3	255	561

Rear tyres	Rim	Litre	Imp. gal.	US gal.	Kg	lb
13.6R38	W11 or W12 x 38	184	40.50	48.6	184	405
16.9R30	W14 x 30	260	57.20	68.7	260	472
16.9R34	W14 or W15 x 34	285	62.70	75.3	285	627
16.9R38	W14 or W15 or W16 x 38	304	66.80	80.3	304	669
18.4R30	W14 or W15 or W16 x 30	304	66.80	80.3	304	669
18.4R34	W15 or W16 x 34	345	75.90	91.1	345	760
18.4R38	W15 or W16 x 38	386	84.90	102.0	386	850
480-70R34	W15 x 34	349	76.70	92.2	349	768
480-70R38	W15 x 38	375	82.50	99.0	375	826
520-70R34	W15 x 34	424	93.29	112.0	424	934
520-70R38	W15 x 38	452	99.45	119.4	452	995
540-65R38	W14,15 or 16 x 38	386	84.92	100.36	386	849
600-65R38	W15 or W16 x 38	521	115.00	135.46	521	1146

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Capacities

Fuel tank :	6110/6120/6130/6140 :	130 l (28.60 Imp. gal.) (34.34 US gal.)
	6150/6160/6170/6180/6190 :	160 l (35.20 Imp. gal.) (42.27 US gal.)
Cooling system :	6110/6120/6130/6140/6150 :	17 l (3.74 Imp. gal.) (4.49 US gal.)
	6160/6170/6180/6190 :	25 l (5.50 Imp. gal.) (6.60 US gal.)
Engine sump :	6110/6120/6130/6140/6150 :	7,4 l (1.63 Imp. gal.) (1.95 US gal.)
	6160/6170/6180/6190 :	14,8 l (3.26 Imp. gal.) (3.91 US gal.)
Transmission/rear axle :*	6110/6120/6130/6140/6150/6160 :	62 l (13.66 Imp. gal.) (16.4 US gal.)
	6170/6180/6190 :	68 l (15 Imp. gal.) (18 US gal.)
Front axle assemby :	6110/6120/6130/6140/6160/6170/6180 :	6 l (1.32 Imp. gal.) (1.58 US gal.)
	6150 :	9 l (1.98 Imp. gal.) (2.38 US gal.)
	6190 :	6,7 l (1.47 Imp. gal.) (1.77 US gal.)
Front final reduction units (each) :	6110/6120/6130/6140 :	1 l (0.22 Imp. gal.) (0.26 US gal.)
	6150/6160 :	1,2 l (0.26 Imp. gal.) (0.32 US gal.)
	6170/6180/6190 :	2 l (0.44 Imp. gal.) (0.53 US gal.)

* When working on steep slopes 10 l (2.2 Imp. gal.) (2.7 US gal.) of oil can be added.

Front and rear static axle load limits - Kg (lb) at 1,5 bar (21.77 PSI) pressure

	Type	Front Kg (lb) mm (in)	Rear Kg (lb) mm (in)
2 WD	Normal duty		
	6110/6120/6130/6140/6150	3800 (8377) track 1.383 (54.45)	6340 (13977) track 1.772 (69.76)
	Heavy duty		
	6150/6160/6170	4350 (9590) track 1,484 (58.42)	6340 (13977) track 1,772 (69.76)
	6180/6190	4350 (9590) track 1,484 (58.42)	7600 (16755) track 1,835 (72.25)
4 WD	6110/6120/6130/6140/6150	4000 (8818) track 1,650 (64.96)	6340 (13977) track 1,772 (69.76)
	6160/6170	5000 (11023) track 1,800 (70.87)	6340 (13977) track 1,772 (69.76)
	6180	5000 (11023) track 1,800 (70.87)	7600 (16755) track 1,835 (72.25)
	6190	6000 (13228) track 1,920 (75.60)	7600 (16755) track 1,835 (72.25)

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Dimensions and weights

CHARACTERISTICS mm (in) - Kg (lb)	6110		6120/6130/6140		6150		6160/6170		6180		6190	
	2WD	4WD	2WD	4WD	2WD	4WD	2WD	4WD	2WD	4WD	2WD	4WD
A Wheelbase	2371 (93.34)	2375 (93.35)	2371 (93.34)	2375 (93.35)	2549 (100.35)	2553 (100.51)	2696 (106.10)	2699 (106.25)	2696 (106.10)	2699 (106.25)	2696 (106.10)	2699 (106.25)
B Overall length with drawbar	3995 (117.9)	4069 (160.2)	3995 (117.9)	4069 (160.2)	4137 (162.87)	4137 (162.87)	4320 (170)	4472 (176)	4402 (173.3)	4402 (173.3)	4527 (178.2)	4527 (178.2)
C Height to roof (cab tractor)	2627 (103.4)	2627 (103.4)	2627 (103.4)	2627 (103.4)	2724 (107.2)	2724 (107.2)	2755 (108.5)	2755 (108.5)	2768 (109)	2768 (109)	2908 (114.5)	2908 (114.5)
D Overall width (1)	2570 (101.2)	2570 (101.2)	2570 (101.2)	2570 (101.2)	2570 (101.2)	2570 (101.2)	2570 (101.2)	2570 (101.2)	2733 (107,6)	2733 (107,6)	2832 (111,5)	2832 (111,5)
E Ground clearance (under drawbar Frame)	385 (15.2)	385 (15.2)	385 (15.2)	385 (15.2)	385 (15.2)	385 (15.2)	445 (17.5)	445 (17.5)	442 (17.4)	442 (17.4)	502 (19.8)	502 (19.8)
F Height to steering wheel	1971 (77.6)	1971 (77.6)	1971 (77.6)	1971 (77.6)	2023 (79.6)	2023 (79.6)	2068 (81.4)	2068 (81.4)	2110 (83)	2110 (83)	2250 (88.6)	2250 (88.6)
Total weight (with full tank, without extra weight steel wheels)	3565 (7859)	3840 (8465)	3565 (7859)	3840 (8465)	4120 (9080)	4400 (9698)	4440 (9800)	4675 (10320)	4190 (9249)	4590 (10132)	4805 (10607)	5040 (11126)
Rear tyres dimensions	16.9-34		16.9-34		16.9-34		18.4-38		16.9-38		20.8-38	

	Rear axle	Front axle		
		AG85	AG105	AG125
G Distance between flanges	1774 (69.84)	1669 (67)	1800 (70.86)	1800 (70.86)
* Normal duty axle housing shaft Ø 82	1835 (72.34)			
* Shaft straight shaft Ø 82	2230 (87.79)			
	Ø 82 shafts (3.23)			
H Stud distance	203,20 (8.00)	275 (10.8)		335 (13.20)
L Centring diameter	149,35 (5.88)			280,8 (11.04)
I Stud length				
Wheel with steel hub	41 (1.61)	43 (1.70)	43 (1.70)	55 (2.16)
Wheel with cast iron hub	66 (2.60)			
J Stud diameter	M 18 x 1,5	M 18 x 1,5		M 22 x 1,5
K Number of studs	8	8		10

(1) These dimensions are applicable for tractors adjusted for max. track

* 6180/6190 only