FIAT

Trattori

466-466 DT
566-566 DT
666-666 DT
766-766 DT

WORKSHOP MANUAL

QUICK REFERENCE INDEX

Reprinted

SERVIZI TECNICI DI ASSISTENZA

FOREWORD

- *The manual is divided into separately numbered sections..*
- *Two-digit sections contain:*
  — *tractor specification (00);*
  — *tractor sub-assembly specification and data (10 Engine, 20 Power Train, etc.).*
- *Three-digit sections deal with the overhaul of the sub-assemblies whose data are listed in the two-digit sections. The first two digits are the same as those of the associated data sections (e.g. 20 - Power Train; 201 - Clutch; 202 - Transmission, splitter etc.).*
- *A contents list is provided to facilitate retrieval of desired information.*
- *Each sheet carries the print number of the manual and the date of issue in the bottom right-hand corner of the front page.*
- *Revised sheets will carry the same print number followed by a 2-digit number (e.g. first revision 603.54.228.01; second revision 603.54.228.02 etc.) and date of issue.*
  Revised sheets will be accompanied by the updated contents sheet.
- *All information herein is correct at the time of printing but is subject to alteration without prior notice. In case of discrepancies contact the nearest dealer, distributor or branch.*

The imperial weights and measures are given for operators' convenience and though the closest approximation is sought, they are normally rounded off for practical reasons. In case of discrepancies only the metric units should be considered.

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GENERAL: Index

SHIMS

When adjusting, measure each shim with a micrometer gauge and add the values obtained. Do not rely on overall shim thickness or the nominal value indicated for each shim.

ROTARY SHAFT SEALS

To fit rotary shaft seals proceed as follows:
— Prior to fitting, soak the seals for at least half an hour in the fluid to be retained.
— Carefully clean the shaft and ensure that the contact surface is free from damage.
— Turn the end of the sealing lip towards the fluid. If of the thrower lip type, turn the grooves so that during shaft rotation the fluid tends to be thrown back.
— Smear the sealing lip with a very thin coat of lubricant (oil is better than grease) and pack the space between sealing lip and dust shield with grease. (applicable to double-lip seals).
— Fit the seals into their housing using a flat-ended tool or ram. Under no circumstances fit with a mallet or hammer.
— Avoid entry of the seal into the recess in a tilted position. Exert a firm and uniform pressure squarely on it and ensure that the seal is pressed fully home.
— To prevent sealing lip damage during fitting, use some sort of protection before sliding over the shaft.

O-RINGS

Lubricate each ring prior to fitting and, on reassembly, slide over the part but do not twist, otherwise leakage will result.

SEALING COMPOUNDS

On the mating surfaces indicated with X apply one of the following sealing compounds: RTV SILMATE, RHODORSIL CARF 1 or LOCTITE PLASTIC GASKET.
Before applying the sealing compound, prepare the surfaces as follows:
— Using a wire brush, remove any deposits.
— Thoroughly degrease using one of the following detergents: Solvent, kerosene or hot water/soda solution.

BEARINGS

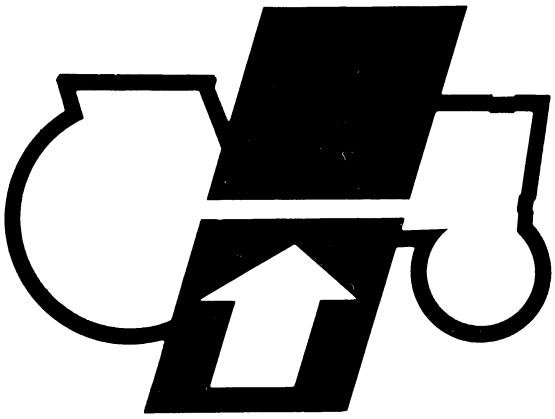
To fit bearings:
— Before installing on shafts, heat to 80°C to 90°C.
— Cool before pressing them into their seats.

ROLL PINS

When fitting straight roll pins ensure that they face in direction of work to stress the pin.
Coil roll pins can be installed in any position.

SPARE PARTS

Use exclusively **FIAT spare parts,** having the trade mark below.



ricambi originali

FiatTrattori

FIAT

These are the only parts that guarantee the quality, durability and safety of the original parts, being parts fitted in production.
Only FIAT spare parts can offer this guarantee.
When ordering spare parts please state:
— Tractor model (marketing code) and frame number.
— Engine type and number.
— Part number (given on "Microfiches" or Spare Parts Catalogue").

SERVICE TOOLS

The service tools indicated in this manual are:
— Designed specifically for tractors of the FIAT range.
— Essential for reliable repair work.
— Manufactured and tested in such a way as to offer efficient and durable working instruments.
The mechanic is also reminded that being equipped means:
— Operating in optimum working conditions.
— Obtaining the best results.
— Saving time and energy.
— Working in more safety.

NOTICE

Wear limits recommended for some parts are not binding, being given for guidance only.
"Front", "rear", "right" and "left" references are with operator facing normal direction of travel of tractor.

WARNING

This symbol is your safety alert sign. It means
« **ATTENTION - BECOME ALERT - YOUR SAFETY IS INVOLVED**»

AVOID ACCIDENTS

Most accidents occurring in the workshop are caused by the failure of some individual to follow simple and fundamental safety rules or precautions. For this reason MOST ACCIDENTS CAN BE PREVENTED by recognizing the real cause and doing something about it before the accident occurs. Regardless of the care used in the design and production of any type of equipment, there are many conditions that cannot be completely safeguarded against without interfering with reasonable accessibility and efficient operation.

A careful operator is the best insurance against an accident. The complete observance of one simple rule would prevent many thousand serious injuries each year.

That rule is:

ATTENTION. Never attempt to clean, oil or adjust a machine while it is in motion.

SAFETY PRECAUTIONS

GENERAL

- Strictly adhere to the maintenance and repair procedures indicated.
- Do not wear rings, wrist watches, jewelry or loose or hanging apparel, such as ties, torn clothing, scarves, unbuttoned or unzipped jackets that can catch on moving parts. Wear proper safety equipment as authorized for the job. Examples: hard hats, safety shoes, heavy gloves, safety glasses or goggles.
- Machine should not be serviced with anyone in the operator's seat unless they are qualified to operate the machine and are assisting in the service.
- Never attempt to operate the machine or its tools from any other position that seated in the operator's seat.
- Never lubricate, service or adjust a machine with the engine running, except as called for in the Operator's Manuals.
- Shut off engine and check that hydraulic oil is no longer under pressure before removing caps and covers.
- Carry out all servicing operations with maximum care and attention.
- Shop or field service platforms and ladders used to maintain or service machinery should be constructed and maintained according to local or national requirements.
- Disconnect batteries and lable all controls to indicate operation in progress. Restrain machine and any equipment to be lifted.
- Never check or fill fuel tanks, storage batteries or use starter fluid while smoking or near open flames, due to the presence of flammable fluid.
- Brakes are inoperative when manually released for servicing. Provision must be made to maintain control of the machine by blocking or other means.
- Ensure that the fuel gun is in contact with the filler when refuelling. To reduce the chance of static electricity sparking, maintain contact until after fuel flow is cut off.
- Use only designated towing or pulling attachment points. Use care in making attachment points. Be sure pins and locks as provided are secure before pulling. Stay clear of drawbars, cabler or chains under load.

- To move a disabled machine, use a trailer or low body truck if available.
- Load and unload on level ground affording full support to the trailer wheels. Anchor tractor to truck or trailer loading platform and block wheels as requested by carrier.
- Use only grounded auxiliary power source for heaters, chargers, pumps and similar equipment to reduce the hazards of electrical shock.
- Lift and handle all heavy parts with a lifting device of proper capacity.
- Watch out for people in the vicinity.
- Never place gasoline or diesel fuel in an open pan.
- Never use gasoline or solvent or other flammable fluid to clean parts. Use authorized commercial, non-flammable non-toxic solvents.
- When cleaning parts with compressed air use safety glasses with side shields or goggles.
- Limit the pressure to 2.1 bar (30 psi) according to local or national requirements.
- Do not run engine in a closed building without adequate ventilation.
- Do not smoke or permit any open flame or spark near when refuelling or handling highly flammable materials.
- Do not use an open flame as a light source to look for leaks or for inspection anywhere on the tractor.
- Move carefully when under, in or near machine or implements. Wear required protective equipment, such as hard hats, safety glasses, safety shoes.
- When making equipment checks that require engine running an operator should be in the operator's seat at all times with the mechanic in sight.
- For field service, move machine to level ground if possible and block machine. If work is absolutely necessary on a gradient, block machine and its attachments securely. Move the machine to level ground as soon as possible.
- Guard against kinking chains or cables. Do not lift or pull through a kinked chain or cable. Always wear heavy gloves when handling chain or cable.
- Be sure cables are anchored and the anchor point is strong enough to handle the expected load. Keep exposed personnel clear of anchor point and cable or chain.
- Keep maintenance area CLEAN and DRY. Remove water or oil puddles immediately.
- Do not pile oily, greasy rags - they are a fire hazard. Store in a closed metal container. Before starting machine or moving attachment, check, adjust and lock operator's seat. Be sure all personnel in the area are clear before starting or moving machine and any of its attachements.
- Do not carry loose objects in pockets that might fall unnoticed into open compartments.
- Wear proper protective equipment such as safety goggles or safety glasses with side shields, hard hats, safety shoes, heavy gloves where metal or other particles are apt to fly or fall.
- Wear welder's protective equipment such as dark safety glasses, helmets, protective clothing, gloves and safety shoes when welding. Dark safety glasses must be worn by anyone standing by when welding is in progress. DO NOT LOOK AT ARC WITHOUT PROPER EYE PROTECTION.
- Wire rope develops steel slivers. Use authorized protective equipment such as heavy gloves and safety glasses when handling.
- Handle all parts with extreme care. Keep hands and fingers from between parts. Wear authorized protective equipment such as safety glasses, heavy gloves, safety shoes.

GENERAL: Safety precautions

START UP

- Do not run the engine of this machine in closed areas without proper ventilation to remove deadly exhaust gases.
- Do not place head, body, limbs, feet, fingers or hands near o rotating fan or belts. Be specially alert around a pusher fan.

ENGINE

- Turn radiator cap slowly to relieve pressure before removing. Add coolant only with engine stopped or idling if hot.
- Do not run engine when refuelling and use care if engine is hot due to the increased possibility of fire if fuel is spilled.
- Never attempt to check or adjust fan belts when engine is running. Do not adjust engine fuel pump when the machine is in motion.
- Never lubricate a machine with the engine running.

ELECTRICAL SYSTEM

- BATTERY GAS IS HIGHLY INFLAMMABLE.
  When auxiliary batteries are used, connect both cable ends to the terminals as specified: (+) with (+) and (−) with (−). Do not short circuit terminals.
  Leave battery box open to improve ventilation when charging batteries. Never check charge by placing metal objects across the posts. Keep sparks or open flame away from batteries. Do not smoke near battery to guard against the possibility of accidental explosion.
- Check for fuel or battery electrolyte leaks before starting service or maintenance work. Eliminate leaks before proceeding.
- Do not charge batteries in a closed area. Provide proper ventilation to guard against an accidental explosion from an accumulation of explosive gases given off in the charging process.
- Disconnect batteries before working on electrical system, or starting repair work of any kind.

HYDRAULIC SYSTEM

- Fluid escaping under pressure from a very small hole can almost be invisible and can have sufficient force to penetrate the skin. Use a piece of carboard or wood to search for suspected pressure leks. DO NOT USE HANDS. If injuried by escaping fluid, see a doctor at once. Serious infection or reaction can develop if proper medical treatment is not administered immediately.
- When making pressure checks use the correct gauge for expected pressure.

WHEELS AND TYRES

- Be sure tyres are properly inflated to manufacturer's specified pressure. Inspect damage periodically.
- Stand to one side when changing inflation tyres.
- Check tyres only when the machine is empty and tyres are cool to avoid overinflation. Do not use reworked wheel parts. Improper welding, heating or brazing weakens them and can cause failure.
- Never cut or weld on the rim of an inflated tyre.
- When servicing tyres, block the machine in front and back of all wheels. After jacking up, place blocking under machine to protect from falling according to local or national requirements.
- Deflate tyres before removing objects from tread.
- Never inflate tyres with flammable gas. Explosion and personal injury could result.

ATTACHMENTS

- Lift and handle all heavy parts with a lift device of proper capacity. Be sure parts are supported by proper slings and hooks. Use lift eyes if provided. Watch out for people in the vicinity.
- Handle all parts with extreme care. Keep hands and fingers from between parts. Wear authorized protective equipment such as safety glasses, heavy gloves, safety shoes.
- Guard against kinking chains or cables. Always wear heavy gloves when handling chains or cables.

SPECIFICATION

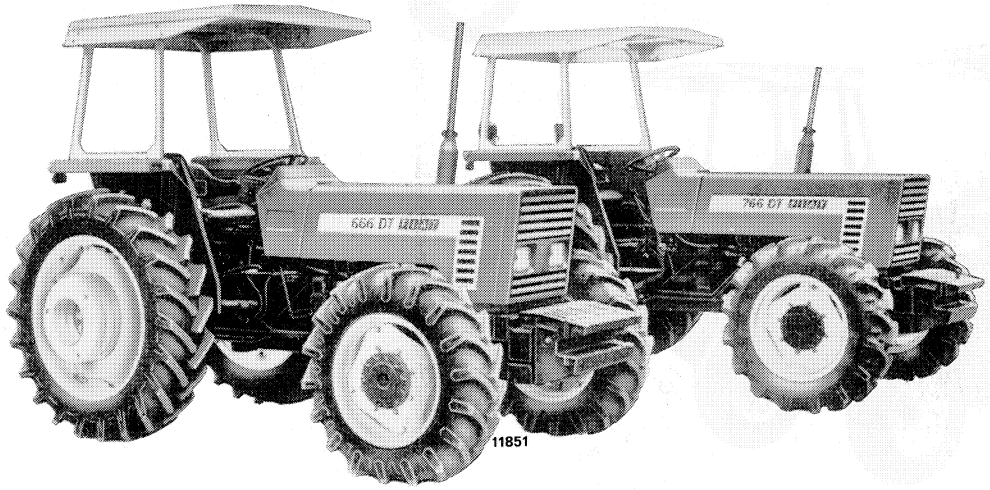
Marketing code:	466 466 DT	566 566 DT	666 666 DT	766 766 DT
— Two wheel drive				
— Four wheel drive				
Engineering code:				
— 12-speed, two wheel drive	669.100.000	670.100.000	671.100.000	672.100.000
— 12-speed, two wheel drive with reverser	669.100.000 var. 720.110	670.100.000 var. 720.110	671.100.000 var. 720.110	672.100.000 var. 720.110
— 20-speed, two wheel drive	669.100.000 var. 720.111	670.100.000 var. 720.111	671.100.000 var. 720.111	672.100.000 var. 720.111
— 12-speed, four wheel drive	669.127.000	670.127.000	671.127.000	672.127.000
— 12-speed, four wheel drive with reverser	669.127.000 var. 720.110	670.127.000 var. 720.110	671.127.000 var. 720.110	672.127.000 var. 720.110
— 20-speed, four wheel drive	669.127.000 var. 720.111	670.127.000 var. 720.111	671.127.000 var. 720.111	672.127.000 var. 720.111


11926


11927

SPECIFICATION

	466 466 DT	566 566 DT	666 666 DT	766 766 DT
Engine type (all versions)	FIAT 8035.02.376 (C.A.V. pump) 8035.02.276 (BOSCH pump)	FIAT 8035.04.376 (C.A.V. pump)	FIAT 8045.02.376 (C.A.V. pump) 8045.02.276 (BOSCH pump)	FIAT 8045.04.376 (C.A.V. pump) 8045.04.276 (BOSCH pump)
WEIGHTS				
Operating weight (including lift, implement attachment, tow hook, swinging drawbar and ROPS frame)				
— Two wheel drive	2200 kg (4851 lb)	2300 kg (5071 lb)	2580 kg (5689 lb)	2700 kg (5953 lb)
— Four wheel drive	2450 kg (5402 lb)	2550 kg (5623 lb)	2880 kg (6350 lb)	3100 kg (6835 lb)



ENGINE	466 466 DT	566 566 DT	666 666 DT	766 766 DT
Type	4-stroke diesel, naturally aspirated			
Injection	Direct			
Number of cylinders	3		4	
Sleeves	Dry, pressed on engine block			
Bore and stroke	100x110 mm (3.94x4.33 in)	103x110 mm (4.05x4.33 in)	100x110 mm (3.94x4.33 in)	103x110 mm (4.05x4.33 in)
Displacement	2592 cm^3	2750 cm^3	3456 cm^3	3666 cm^3
Compression ratio	17 to 1			
Max. horsepower DGM/DIN	39,7 kW (54 Hp)	42,7 kW (58 Hp)	50 kW (68 Hp)	57,4 kW (78 Hp)
Max. output speed	2600 rpm	2500 rpm	2500 rpm	2500 rpm
Max. torque speed	1400 rpm	1600 rpm	1400 rpm	1400 rpm
Main bearings	4		5	
Sump	Iron			
Balancer	—		Flyweight, engine sump	
Valve Gear	OH valves, push rod operated			
Inlet — Opens: BTDC	3°			
Inlet — Closes: ABDC	23°			
Exhaust — Opens: BBDC	48°30'			
Exhaust — Closes: ATDC	6°			
Valve clearance — for timing check	0,45 mm (0.018 in)			
Valve clearance — Normal - Inlet	0,25 mm (0.010 in)			
Valve clearance — Normal - Exhaust	0.35 mm (0.014 in)			
Fuel System				
Air cleaner	Oil bath or dry, automatic drain centrifugal precleaner			
Fuel filters (on feed pump delivery)	Two, in line, cartridge type, water separator integral with first filter			
Feed pump	Double diaphragm			
— Operation	Cam			
Injection pump	Distributor			
— Type — BOSCH or C.A.V.	EP/VA3/110H 1300 CL 134-8- 770798 DPA 3233F420 770535	— DPA 3233 F700 771338	EP/VA4/110H 1250 CL - 771381 DPA 3342 F470 771414	EP/VA4/110H 1250 CL 136-6- 771151 DPA 3342 F570 771541

SPECIFICATION

	466 466 DT	566 566 DT	666 666 DT	766 766 DT
— Integral all-speed governor { BOSCH / C.A.V.	Hydraulic Centrifugal			
— Integral advance device	Hydraulic			
— Pump timing, BTDC { BOSCH / C.A.V.	$10^0 \pm 1^0$ $17^0 \pm 1^0$	— $13^0 \pm 1^0$	$9^0 \pm 1^0$ $15^0 \pm 1^0$	$13^0 \pm 1^0$ $18^0 \pm 1^0$
Injectors	3-orifice			
— Type	See page 10, Section 10			
— Release pressure	221 to 230 bar (225 to 235 kg/cm², 3200 to 3342 psi)			
Firing order	1-2-3		1-3-4-2	
Lubrication System	Forced feed, gear pump			
Pump drive	Camshaft			
Oil filters	Strainer on pump inlet and full flow cartridge on outlet			
Relief valve	In pump body			
— Oil pressure at governed speed	2.9 to 3.9 bar (3 to 4 kg/cm², 42.6 to 56.9 psi)			
Cooling System	Water, centrifugal pump			
Radiator	3 or 4 deep core vertical tube			
Fan, water pump pulley mounted	Suction, steel			
Temperature control	Wax thermostat			
Tractor Meter	On instrument panel			
— Drive	Oil pump gear			
Hourmeter activation speed	1800 rpm			
Meter drive ratio	1 to 2			

POWER TRAIN

Clutch

Type	LUK, VALEO, or O.M.G. 11 in
Construction	Twin, dry single plate
Control	
— Transmission	Pedal
— PTO	Manual lever
Plate material	
— Models 466, 566 and 666 (standard)	
Transmission	Organic
PTO	Organic
— Models 766 (standard) and 666 (optional)	
Transmission	Cerametallic compound
PTO	Organic.

Transmission

Type	Constant mesh with speed range synchromesh shift
Gear	Helical
Splitter	Pinion drive, 3 forward and 1 reverse range for 12 forward and 4 reverse speeds
Crawler	20 forward and 8 reverse speeds
Reverser	Mechanical, 12 forward, 12 reverse speeds
Optional	4th gear with low ratio (39/36 instead of 40/33)
Control levers	Separate
Crawler or reverser control	Lever, on left hand side.
Bevel Drive	On differential.
Differential	Two pinion.
Differential lock	Pedal controlled.
Final Drives	Pinion drive, spur.

BRAKES

Service

Type	Disc, oil-bath, axle shaft mounted
Operation	Mechanical
Control	Latched pedals

Parking/Emergency

Type	Acting on service brakes, disc, oil-bath independent	Optional
Position	Bevel pinion shaft mounted	Optional
Control	Manual lever	

STEERING

Steering unit	
— 466, 466 DT, 566, 566 DT and 666	Recirculating ball
— 666 DT, 766 and 766 DT optional for 466, 466 DT, 566, 566 DT and 666	Fully hydraulic, independent circuit
Linkage joints	Sealed for life
Turning radius (without brakes)	
— 466 and 566	3.8 m (12 ft 5 in)
— 466 DT and 566 DT with front axle in	5.3 m (17 ft 4 in)
— 666 and 766	3.9 m (12 ft 8 in)
— 666 DT and 766 DT with front axle in	5.6 m (18 ft 4 in)

FRONT AXLE
(466, 566, 666 and 766)

Type	Inverted U, telescoping, center pivotting
Track adjustment	Sliding axle ends
Track widths	6 off

LIVE FRONT AXLE
(466 DT, 566 DT, 666 DT and 766 DT)

Type	Full floating, center pivotting, unjointed drive shaft and articulations on tractor centerline.
Differential	Two pinion
Final drives	Planetary
Track widths Disc/Rim/Hub repositioning	5 off

REAR WHEELS

Track widths Disc/Rim/Hub repositioning	7 off

POWER TAKE-OFF

Type	Fully independent
Speed	540 rpm, 1-3/8 in six-spline or 1000 rpm, 1-3/8 in 21-spline extension
Control	Manual lever
Standard speed selection	Lever on PTO housing
Engine speed with PTO at standard speeds	
— 540 rpm	2200 rpm
— 1000 rpm	2380 rpm
Rotation	Clockwise (tractor seen from rear)

Ground speed PTO

Control		Same as independent PTO
Rotation		
Shaft drive ratio		
— 540 rpm	466 - 566	8.2 revs per rear wheel turn
	666 - 766	8.9 revs per rear wheel turn
— 1000 rpm	466 - 566	14.1 revs per rear wheel turn
	666 - 766	15.3 revs per rear wheel turn

LIFT

Type	Hydraulic, draught and position control
Draught control	Lower links through sensing bar
Sensitivity adjustment	Control valve mounted lever
Response adjustment	Knob controlled
Pump	Gear, engine valve gear driven
Hydraulic fluid	Rear transmission oil
Design lift capacity	
Max. lift capacity	
Max. lift stroke	See section 50, pages 1 and 4
Implement attachment	
— 466 - 566 and 666 (early model)	Categories I and II
— 666 (late model) and 766	Category II only
Side sway control	Check chains or links

Remote control valves

Number	One or two
Type	— Convertible from single to double-acting — Double-acting, with float position
Trailer power braking remote control valve activated by tractor brake pedals (optional)	

TOWING ATTACHMENTS

Crossmember	Drilled
Drawbar	Swinging over sector
Tow hook	Adjustable for height
Rockinger jaw hook	
Trailer hook	Standard
Front pull hook	

BALLASTING

Front axle

Support	80 kg (176 lb)
Plates	
— Six, 33 kg (73 lb) each	278 kg (612 lb) total
— Ten, 33 kg (73 lb) each	410 kg (904 lb) total

Rear wheels

Rings	
— Four, 50 kg (110 lb) each	200 kg (441 lb) total
— Six, 50 kg (110 lb) each	300 kg (661 lb) total

BODY

Hood	One piece, forward tilt
Fenders	Partial wrap-around with ROPS frame mounts
Operator's seat	
Type	Padded
Suspension	Hydraulic damper, parallelogram Adjustable for reach and suspension ride
Fuel tank	In front of seat
Dashboard	13-function instrument panel plus control board.

ELECTRICAL SYSTEM

Voltage	12 V
Type	BOSCH G1 14 V - 33 A-1 MARELLI AA 108 14 V - 33 A-1 ISKRA AAG 1104 - 14 V - 33 A LUCAS 18 ACR - 14 V - 40 A
Voltage regulator	Electronic, integral
Starter	
— 466 and 566	MARELLI MT 71 AA BOSCH JF 12 V LUCAS M 45 G26390/D
— 666 and 766	MARELLI MT 68 AB BOSCH JD 12 V CAV CA 45 G 12 - 117
Battery	
Location	Ahead of radiator
Capacity	
— 466 and 566	88 or 92 Ah
— 666 and 766	110 or 120 Ah.

Lighting

Headlamps	Twin, high and asymmetric low beams, 45/40 W
Front lights	
— Parking	5 W
— Turn signal	21 W
Tail lights	
— Parking	5 W
— Turn signal	21 W
— Stop	21 W
— License plate	

Instruments and Accessories

Instrument panel	13-function (see Section 60, page 15)
Control board	See Section 60, page 15
Flood light	35 W
Rear power point	DIN, 7-pole
Dash power point	Single-pole
Horn	
Cold starting	Thermostarter or start-pilot
Lighter	Dash-mounted
Fuses	8, see Section 60, page 12
Hazard warning	Tractor and trailers

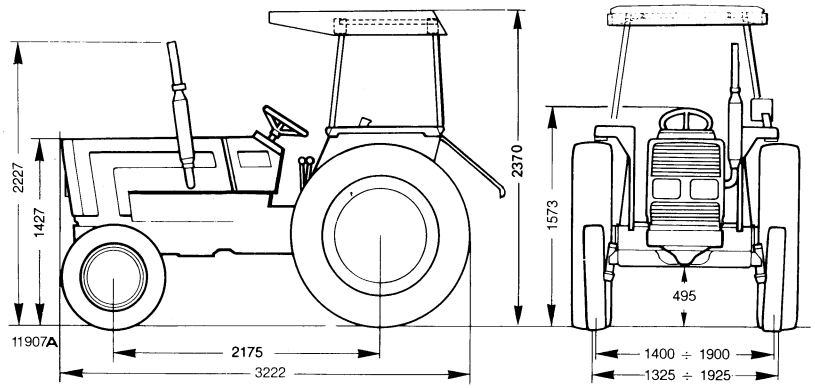
TYRE SIZES

	466	566	666	766
Front	6.00-16 7.50-16	6.00-16 7.50-16	7.50-16 7.50-18	7.50-18 7.50-20
Rear	13.6/12-28 14.9/13-28 12.4/11-32	14.9/13-28 16.9/14-28 16.9/14-30 14.9/13-30 12.4/11-36	16.9/14-30 14.9/13-30 18.4/15-30 13.6/12-36	18.4/15-30 16.9/14-34 13.6/12-36 13.6/12-38

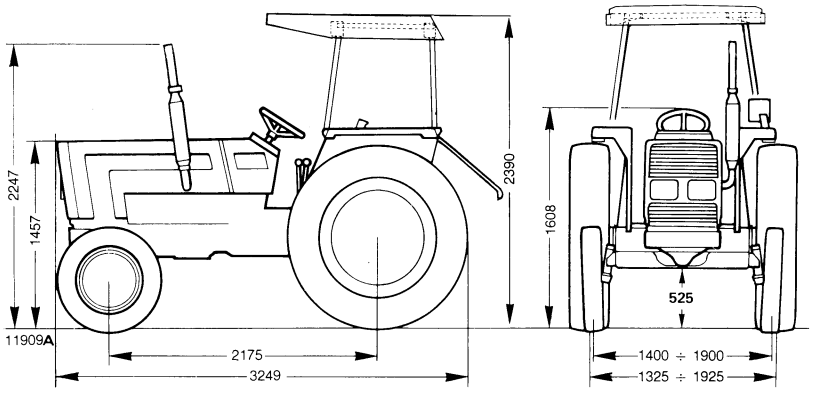
	466 DT	566 DT	666 DT	766 DT
Front	8.00-20(1) 8.3/8-24(2) 11.2/10-20(3)	9.5/9-24(1)(2) 12.4 R20(3) 11.2/10-20(4) 11.2/10-24(5)(6)	9.5/9-24(1) 12.4 R20 (2) 11.2/10-24(3) 12.4/11-24(4)(5) 13.6/12-24(6) 11.2/10-28(7)	12.4/11-24(1)(2) 13.6/12-24(3) 11.2/10-28(4)
Rear	13.6/12-28(1) 12.4/11-32(2) 14.9/13-28(3)	14.9/13-30(1)(3) 16.9/14-28(2) 14.9/13-28(4) 16.9/14-30(5) 12.4/11-36(6)	14.9/13-30(1)(2) 16.9/14-30(3) 13.6/12-36(4) 18.4/15-30(5) 16.9/14-34(6) 13.6/12-38(7)	13.6/12-36(1) 18.4/15-30(2) 16.9/14-34(3) 13.6/12-38(4)

(1)(2)(3)(4)(5)(6)(7). Tyre matching references.

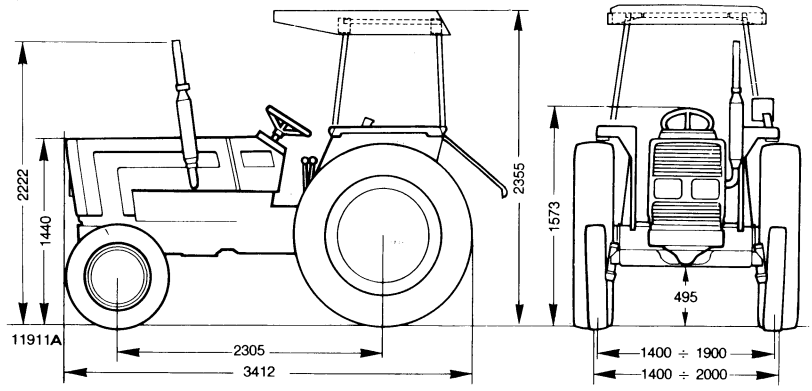
SPECIFICATION



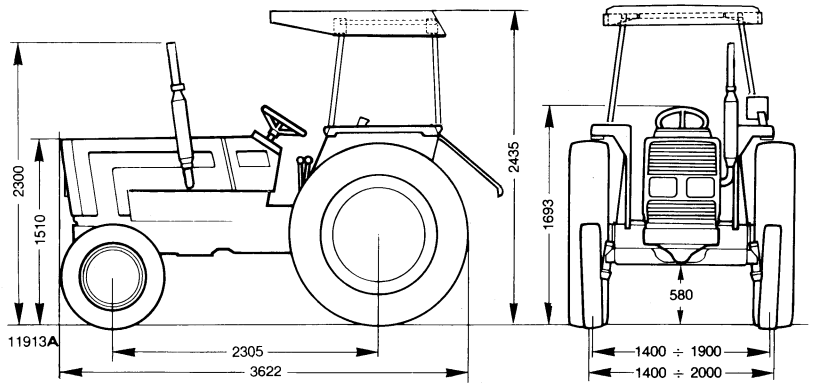
Mod. 466
(6.00-16 front and
14.9/13-28 rear tyres)



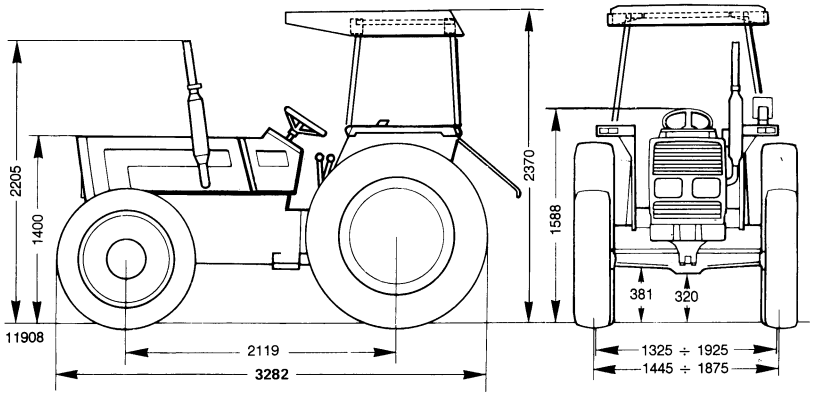
Mod. 566
(7.50-16 front and
14.9/13-30 rear tyres)



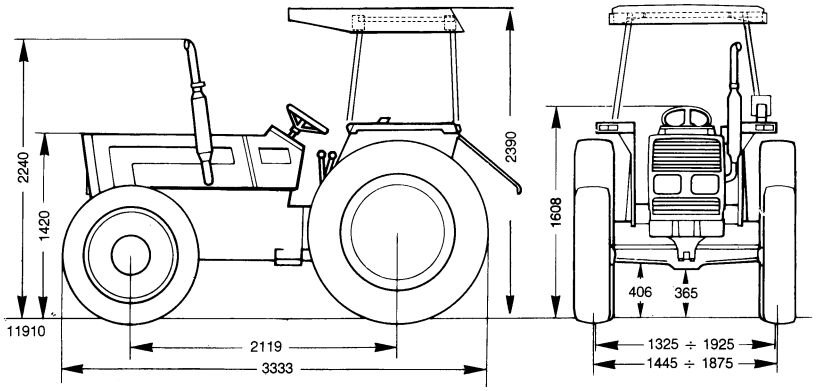
Mod. 666
(7.50-16 front and
16.9/14-30 rear tyres)



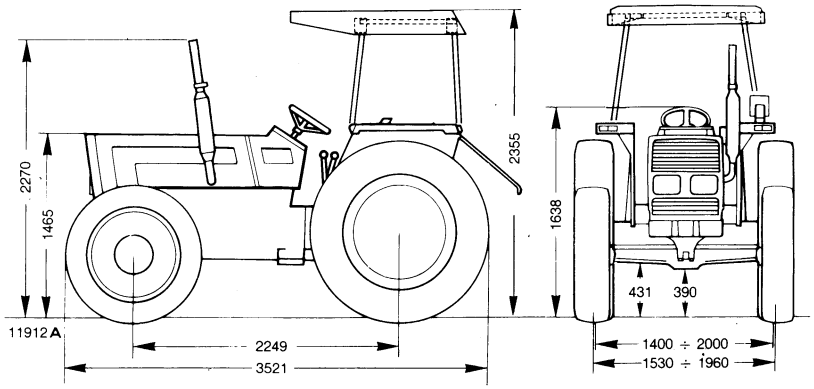
Mod. 766
(7.50-20 front and
16.9/14-34 rear tyres)



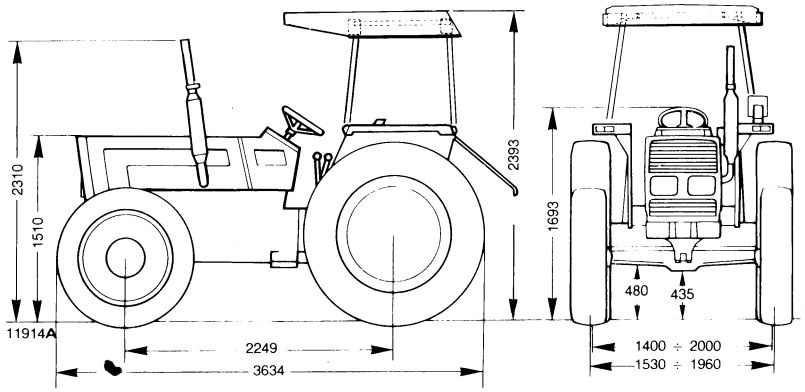
Mod. 466 DT
(11.2/10-20 front and
14.9/13-28 rear tyres)



Mod. 566 DT
(9.5/9-24 front and
14.9/13-30 rear tyres)



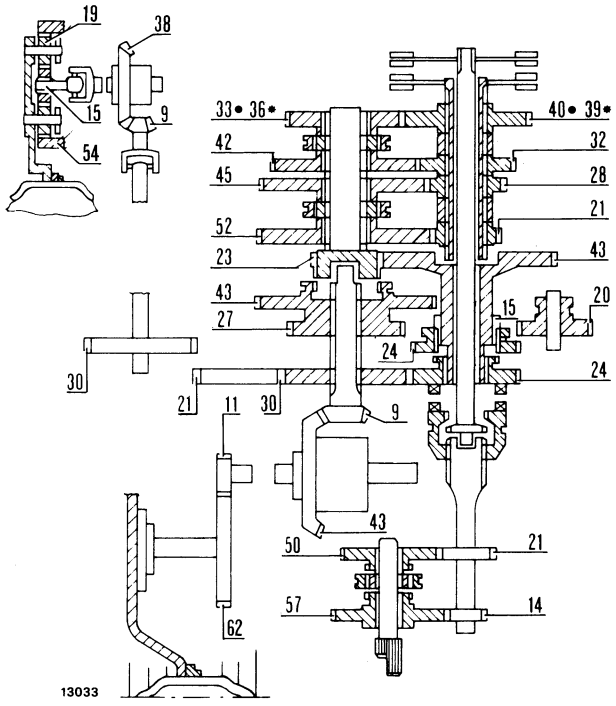
Mod. 666 DT
(11.2/10-24 front and
16.9/14-30 rear tyres)



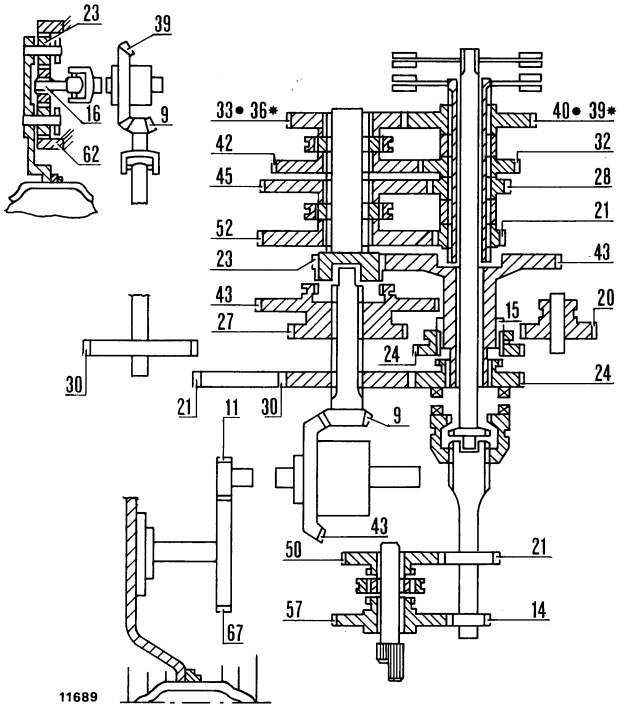
Mod. 766 DT
(13.6/12-24 front and
16.9/14-34 rear tyres)

POWER TRAIN SCHEMATICS

466 - 466 DT - 566 - 566 DT
(12-speed)



666 - 666 DT - 766 - 766 DT
(12-speed)



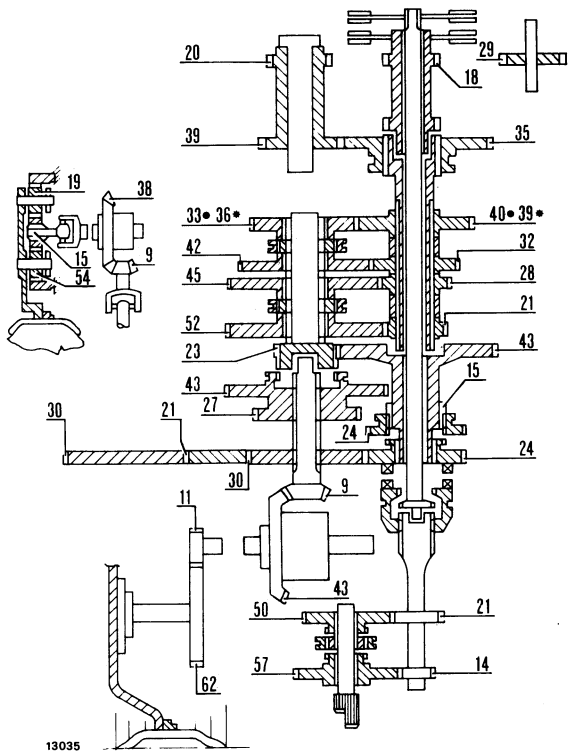
GEARS	466 - 466DT						566 - 566DT								666 - 666DT				666-666DT - 766-766DT				766-766DT	
	12.4/11-32		13.6/12-28		14.9/13-28		14.9/13-28		16.9/14-28		14.9/13-30		16.9/14-30		12.4/11-36		14.9/13-30		16.9/14-30		18.4/15-30		13.6/12-36		13.6/12-38 16.9/14-34	
	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph
1st low	1.1	1.8	1.0	1.7	1.1	1.8	1.0	1.7	1.1	1.8	1.0	1.7	1.1	1.8	1.1	1.8	0.9	1.6	1.0	1.7	1.1	1.8	1.0	1.7	1.1	1.8
2nd »	1.7	2.7	1.6	2.6	1.7	2.7	1.6	2.6	1.7	2.7	1.7	2.7	1.8	2.8	1.8	2.8	1.5	2.5	1.6	2.6	1.7	2.7	1.7	2.7	1.8	2.8
3rd »	2.0	3.3	1.9	3.2	2.0	3.3	1.9	3.2	2.0	3.3	2.0	3.3	2.1	3.4	2.2	3.5	1.8	3.0	1.9	3.2	2.0	3.3	2.0	3.3	2.1	3.4
4th ●	3.3	5.3	3.1	5.0	3.3	5.3	3.2	5.1	3.3	5.3	3.2	5.2	3.4	5.5	3.4	5.5	2.9	4.8	3.1	5.0	3.3	5.3	3.3	5.3	3.4	5.4
4th *	2.9	4.8	2.8	4.6	2.9	4.7	2.7	4.5	2.9	4.7	2.9	4.7	3.0	4.9	3.0	4.9	2.7	4.4	2.8	4.6	2.9	4.8	2.9	4.7	2.9	4.8
1st normal	2.5	4.0	2.4	3.9	2.5	4.0	2.4	3.9	2.6	4.1	2.5	4.0	2.7	4.2	2.7	4.2	2.3	3.7	2.4	3.9	2.6	4.1	2.5	4.0	2.7	4.2
2nd »	3.9	6.3	3.7	6.0	3.8	6.2	3.7	6.0	3.8	6.2	3.7	6.1	3.9	6.4	4.0	6.5	3.5	5.7	3.7	5.9	3.9	6.3	3.8	6.2	3.9	6.4
3rd »	4.8	7.7	4.5	7.3	4.7	7.6	4.5	7.3	4.7	7.6	4.6	7.5	4.9	7.9	4.9	7.9	4.3	7.0	4.5	7.3	4.8	7.7	4.7	7.6	4.9	7.9
4th ●	7.6	12.2	7.2	11.6	7.5	12.1	7.2	11.6	7.6	12.2	7.4	12.0	7.7	12.5	7.8	12.6	6.8	11.1	7.2	11.6	7.6	12.2	7.5	12.1	7.7	12.5
4th *	6.8	11.0	6.5	10.5	6.7	10.8	6.4	10.3	6.8	10.9	6.7	10.8	6.9	11.2	7.0	11.4	6.2	10.0	6.5	10.5	6.8	10.9	6.8	10.9	6.8	11.0
1st high	5.9	9.5	5.6	9.0	5.8	9.4	5.6	9.1	5.9	9.5	5.8	9.3	6.0	9.7	6.0	9.8	5.3	8.6	5.6	9.0	5.9	9.5	5.8	9.4	6.0	9.7
2nd »	9.0	14.6	8.6	13.9	9.0	14.5	8.6	13.9	9.0	14.6	8.9	14.4	9.3	15.0	9.4	15.1	8.3	13.3	8.6	13.9	9.0	14.6	9.0	14.5	9.3	15.0
3rd »	11.1	17.9	10.6	17.1	10.9	17.7	10.6	17.1	11.1	17.9	10.9	17.6	11.4	18.4	11.5	18.5	10.1	16.3	10.5	17.0	11.1	17.9	11.0	17.8	11.4	18.4
4th ●	17.7	28.5	16.8	27.1	17.5	28.2	16.8	27.1	15.7	28.4	17.3	28.0	18.2	29.3	18.3	29.5	16.0	25.9	16.8	27.1	17.7	28.5	17.5	28.3	18.1	29.2
4th *	16.0	25.8	15.2	24.6	15.6	25.1	15.0	24.2	15.7	25.4	15.7	25.2	16.2	26.1	16.5	26.6	14.5	23.4	15.2	24.6	15.8	25.5	15.8	25.4	16.0	25.8
1st Rev.	2.8	4.5	2.7	4.3	2.8	4.5	2.6	4.3	2.8	4.5	2.7	4.4	2.9	4.6	2.9	4.7	2.5	4.1	2.6	4.3	2.8	4.5	2.8	4.5	2.9	4.6
2nd »	4.3	6.9	4.1	6.6	4.3	6.9	4.1	6.6	4.3	6.9	4.2	6.8	4.4	7.1	4.5	7.2	3.9	6.3	4.1	6.6	4.3	6.9	4.3	6.9	4.4	7.1
3rd »	5.3	8.5	5.0	8.1	5.2	8.4	5.0	8.1	5.3	8.5	5.2	8.4	5.4	8.7	5.5	8.8	5.4	7.7	5.0	8.1	5.3	8.5	5.2	8.4	5.4	8.7
4th ●	8.4	13.5	8.0	12.9	8.3	13.4	8.0	12.9	8.4	13.5	8.2	13.3	8.6	13.9	8.7	14.0	7.6	12.3	8.0	12.9	8.4	13.5	8.3	13.4	8.6	13.9
4th *	7.6	12.3	7.3	11.7	7.4	12.0	7.1	11.5	7.5	12.1	7.4	12.0	7.7	12.4	7.8	12.5	6.9	11.1	7.3	11.7	7.5	12.1	7.6	12.3	7.3	11.8

Tractor speed, at max engine output speed, rear tyres.

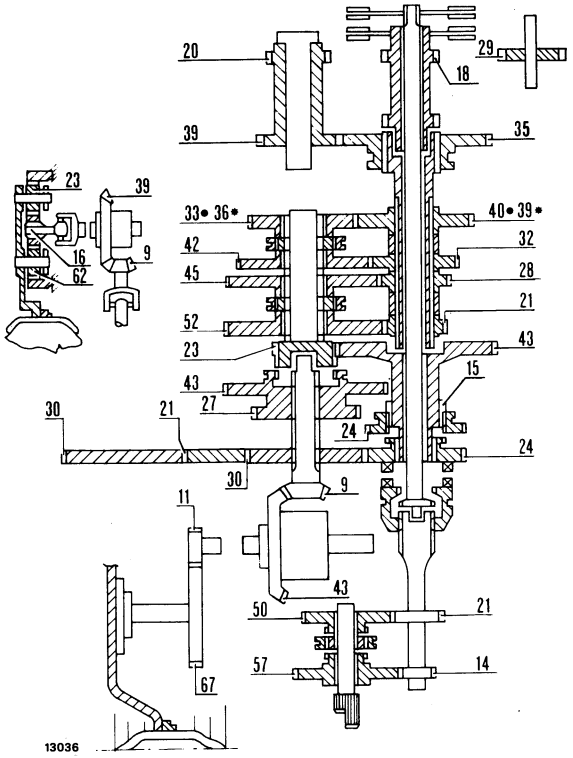
● 40/33 ratio. * 39/36 ratio.

POWER TRAIN SCHEMATICS

466 - 466 DT - 566 - 566 DT with reverser



666 - 666 DT - 766 - 766 DT with reverser



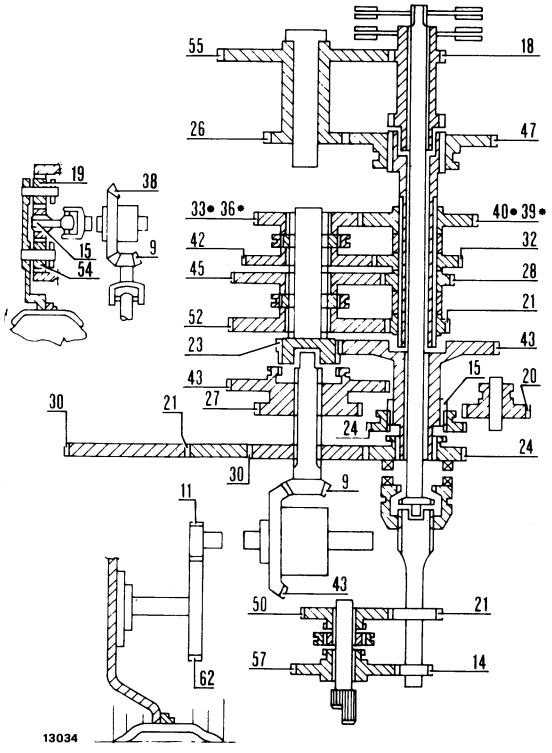
GEARS	Tractor speed, at max engine output speed, rear tyres:																					
	466 - 466DT						566 - 566DT								666 - 666DT				666-666DT - 766-766DT				766-766DT	
	12.4/11-32		13.6/12-28		14.9/13-28		14.9/13-28		16.9/14-28		14.9/13-30		16.9/14-30		12.4/11-36		14.9/13-30		16.9/14-30		18.4/15-30		13.6/12-36		13.6/12-38 16.9/14-34	
	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph	mph	kph
1st low	1.1	1.8	1.0	1.7	1.1	1.8	1.0	1.7	1.1	1.8	1.0	1.7	1.1	1.8	1.1	1.8	0.9	1.6	1.0	1.7	1.1	1.8	1.1	1.8	1.1	1.8
2nd »	1.7	2.7	1.6	2.6	1.7	2.7	1.6	2.6	1.7	2.7	4.7	2.7	1.8	2.8	1.8	2.8	1.5	2.5	1.6	2.6	1.7	2.7	1.7	2.7	1.8	2.8
3rd »	2.0	3.3	1.9	3.2	2,0	3.3	1.9	3.2	2.0	3.3	2.0	3.3	2.1	3.4	2.2	3.5	1.8	3.0	1.9	3.2	2.0	3.3	2.0	3.3	2.1	3.4
4th ●	3.3	5.3	3.1	5.1	3.3	5.3	3.2	5.1	3.3	5.3	3.2	5.2	3.4	5.5	3.4	5.5	2.9	4.8	3.1	5.0	3.3	5.3	3.3	5.3	3.4	5.4
4th *	2.9	4.8	2.8	4.6	2.9	4.7	2.7	4.5	2.9	4.8	2.9	4.7	3.0	4.9	3.4	5.5	2.7	4.4	2.8	4.6	2.9	4.8	2.9	4.7	2.9	4.8
1st normal	2.5	4.1	2.4	3.9	2.5	4.0	2.4	3.9	2.6	4.1	2.5	4.0	2.7	4.2	2.7	4.2	2.3	3.7	2.4	3.9	2.6	4.1	2.5	4.0	2.7	4.2
2nd »	3.9	6.3	3.7	6.0	3.8	6.2	3.7	6.0	3.8	6.3	3.8	6.2	4.0	6.5	4.0	6.5	3.5	5.7	3.7	6.0	3.9	6.3	3.8	6.2	3.9	6.4
3rd »	4.8	7.7	4.5	7.3	4.7	7.6	4.5	7.3	4.8	7.7	4.6	7.5	4.9	7.9	4.9	7.9	4.3	7.0	4.5	7.3	4.8	7.7	4.7	7.6	4.9	7.9
4th ●	7.6	12.2	7.2	11.6	7.5	12.1	7.3	11.7	7.6	12.2	7.4	12.0	7.8	12.6	7.9	12.7	6.8	11.1	7.2	11.6	7.6	12.2	7.5	12.1	7.7	12.5
4th *	6.9	11.1	6.6	10.6	6.7	10.8	6.5	10.4	6.8	10.9	6.7	10.8	6.3	10.2	6.3	10.2	6.2	10.0	6.5	10.5	6.8	10.9	6.8	10.9	6.9	11.1
1st high	5.9	9.5	5.6	9.1	5.8	9.4	5.6	9.1	5.9	9.5	5.8	9.4	6.1	9.8	6.1	9.9	5.4	8.7	5.6	9.1	5.9	9.5	5.8	9.4	6.1	9.8
2nd »	9.1	14.7	8.7	14.0	9.0	14.5	8.7	14.0	9.0	14.6	8.9	14.4	9.4	15.1	9.5	15.2	8.3	13.3	8.6	13.9	9.1	14.7	9.0	14.5	9.3	15.0
3rd »	11.1	17.9	10.6	17.1	10.9	17.8	10.6	17.1	11.2	18.0	10.9	17.7	11.5	18.5	11.6	18.6	10.1	16.3	10.6	17.1	11.1	17.9	11.0	17.8	11.4	18.4
4th ●	17.7	28.5	16.9	27.2	17.5	28.3	16.9	27.2	17.7	28.5	17.5	28.1	18.2	29.3	18.4	29.6	16.1	26.0	16.8	27.1	17.7	28.5	17.5	28.3	18.1	29.2
4th *	16.1	25.9	15.3	24.7	15.6	25.2	15.1	24.3	15.8	25.5	15.7	25.3	16.3	26.2	16.4	26.4	14.5	23.4	15.2	24.6	15.9	25.6	15.8	25.4	16.1	25.9

● 40/33 ratio. * 39/36 ratio.

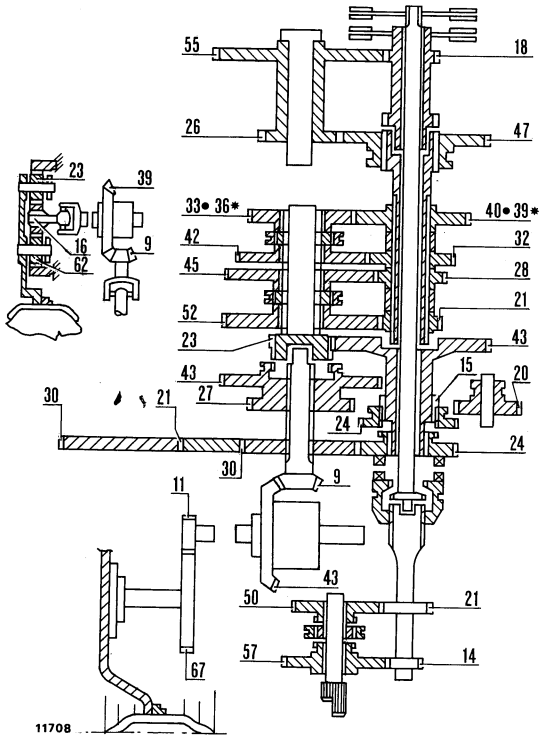
SPECIFICATION

POWER TRAIN SCHEMATICS

466 - 466 DT - 566 - 566 DT with crawler



666 - 666 DT - 766 - 766 DT with crawler

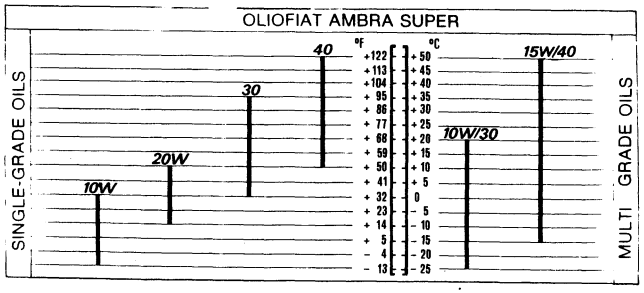


GEARS	466 - 466DT						566 - 566DT								666 - 666DT				666-666DT - 766-766DT				766-766DT	
	Tractor speed, at max engine output speed, rear tyres:																							
	13.6/12-28		14.9/13-28		12.4/11-32		14.9/13-28		16.9/14-28		14.9/13-30		16.9/14-30		12.4/11-36		14.9/13-30		16.9/14-30		18.4/15-30		13.6/12-36		13.6/12-38 16.9/14-34	
1st crawler low	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.3	0.2	0.3
2nd » »	0.3	0.5	0.3	0.5	0.3	0.5	0.3	0.5	0.3	0.5	0.3	0.5	0.3	0.5	0.3	0.5	0.2	0.4	0.3	0.5	0.3	0.5	0.3	0.5	0.3	0.5
3rd » »	0.4	0.6	0.4	0.6	0.4	0.6	0.4	0.6	0.5	0.6	0.4	0.6	0.4	0.6	0.4	0.6	0.3	0.5	0.4	0.6	0.4	0.6	0.4	0.6	0.4	0.6
4th ●	0.5	0.9	0.5	0.9	0.5	0.9	0.5	0.9	0.5	0.9	0.5	0.9	0.6	1.0	0.6	1.0	0.5	0.9	0.5	0.9	0.5	0.9	0.5	0.9	0.6	1.0
4th *	0.5	0.8	0.5	0.9	0.5	0.9	0.5	0.8	0.5	0.9	0.5	0.9	0.5	0.9	0.6	1.0	0.5	0.8	0.5	0.8	0.5	0.9	0.5	0.9	0.5	0.9
1st crawler nor.	0.4	0.7	0.4	0.7	0.4	0.7	0.4	0.7	0.4	0.7	0.4	0.7	0.5	0.8	0.5	0.8	0.4	0.7	0.4	0.7	0.4	0.7	0.4	0.7	0.4	0.7
2nd » »	0.7	1.1	0.7	1.1	0.7	1.1	0.7	1.1	0.7	1.1	0.7	1.1	0.7	1.2	0.7	1.2	0.6	1.0	0.7	1.1	0.7	1.1	0.7	1.1	0.7	1.1
3rd » »	0.8	1.3	0.9	1.4	0.9	1.4	0.8	1.3	0.9	1.4	0.9	1.4	0.9	1.4	0.9	1.4	0.8	1.3	0.8	1.3	0.9	1.4	0.9	1.4	0.9	1.4
4th ●	1.3	2.1	1.4	2.2	1.4	2.2	1.3	2.1	1.4	2.2	1.3	2.1	1.4	2.3	1.4	2.3	1.2	2.0	1.3	2.1	1.4	2.2	1.4	2.2	1.4	2.3
4th *	1.1	1.9	1.2	2.0	1.2	2.0	1.1	1.9	1.2	2.0	1.2	2.0	1.2	2.0	1.4	2.3	0.9	1.6	1.0	1.7	1.1	1,8	1.1	1.8	1.1	1.8
1st low	1.0	1.7	1.1	1.8	1.1	1.8	1.0	1.7	1.1	1.8	1.0	1.7	1.1	1.8	1.1	1.8	0.9	1.6	1.0	1.7	1.1	1.8	1.0	1.7	1.1	1.8
2nd »	1.6	2.6	1.7	2.7	1.7	2.7	1.6	2.6	1.7	2.7	1.7	2.7	1.7	2.8	1.7	2.8	1.5	2.5	1.6	2.6	1.7	2.7	1.7	2.7	1.7	2.8
3rd »	1.9	3.2	2.0	3.3	2.0	3.3	1.9	3.2	2.0	3.3	2.0	3.3	2.1	3.4	2.2	3.5	1.8	3.0	1.9	3.2	2.0	3.3	2.0	3.3	2.1	3.4
4th ●	3.2	5.1	3.3	5.3	3.3	5.3	3.2	5.1	3.3	5.3	3.2	5.2	3.3	5.4	3.5	5.5	3.0	4.8	3.1	5.0	3.3	5.3	3.3	5.3	3.3	5.4
4th *	2.8	4.6	2.9	4.7	3.0	4.8	2.7	4.5	3.0	4.8	2.9	4.7	3.0	4.9	3.0	4.9	2.7	4.4	2.8	4.6	3.0	4.8	2.9	4.7	3.0	4.8
1st normal	2.4	3.9	2.5	4.0	2.5	4.0	2.4	3.9	2.5	4.1	2.5	4.0	2.6	4.2	2.6	4.2	2.3	3.7	2.4	3.9	2.5	4.1	2.5	4.0	2.6	4.2
2nd »	3.7	6.0	3.8	6.2	3.9	6.3	3.7	6.0	3.8	6.2	3.8	6.1	3.9	6.4	4.0	6.5	3.5	5.7	3.7	5.9	3.9	6.3	3.8	6.2	3.9	6.4
3rd »	4.5	7.3	4.7	7.6	4.8	7.7	4.5	7.3	4.7	7.6	4.6	7.5	4.9	7.9	4.9	7.9	4.3	7.0	4.5	7.3	4.8	7.7	4.7	7.6	4.9	7.9
4th ●	7.2	11.6	7.5	12.1	7.6	12.2	7.2	11.6	7.5	12.1	7.4	12.0	7.7	12.5	7.8	12.6	6.9	11.1	7.2	11.6	7.6	12.2	7.5	12.1	7.7	12.5
4th *	6.6	10.6	6.7	10.8	6.9	11.1	6.5	10.4	6.8	10.9	6.7	10.8	6.9	11.2	7.0	11.4	6.2	10.0	6.5	10.5	6.8	10.9	6.8	10.9	6.8	11.0
1st high	5.6	9.0	5.8	9.4	5.9	9.5	5.7	9.1	5.9	9.5	5.8	9.3	6.0	9.7	6.0	9.8	5.3	8.6	5.6	9.0	5.9	9.5	5.8	9.4	6.0	9.7
2nd »	8.6	13.9	9.0	14.5	9.1	14.6	8.6	13.9	9.1	14.6	8.9	14.4	9.3	15.0	9.4	15.1	8.3	13.3	8.6	13.9	9.1	14.6	5.0	14.5	9.4	15.0
3rd »	10.6	17.1	11.0	17.7	11.1	17.9	10.6	17.1	11.1	17.9	11.0	17.6	11.4	18.4	11.5	18.5	10.1	16.3	10.6	17.0	11.1	17.9	11.1	17.8	11.4	18.4
4th ●	17.6	26.3	17.0	27.4	17.1	27.6	16.8	27.1	17.6	28.4	17.4	28.0	18.2	29.3	18.3	29.5	16.0	25.9	16.8	27.1	17.6	28.4	17.5	28.2	18.1	29.2
4th *	15.2	24.6	15.6	25.2	16.0	25.8	15.0	24.2	15.7	25.4	15.6	25.2	16.2	26.1	16.5	26.6	14.5	23.4	15.2	24.6	15.8	25.5	15.8	25.4	16.0	25.8
1st low rev.	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8	0.4	0.7	0.5	0.8	0.5	0.8	0.5	0.8	0.5	0.8
2nd » »	0.7	1.2	0.7	1.2	0.7	1.2	0.7	1.2	0.7	1.2	0.7	1.2	0.8	1.3	0.8	1.3	0.7	1.1	0.7	1.2	0.7	1.2	0.7	1.2	0.8	1.3
3rd » »	0.9	1.5	0.9	1.5	0.9	1.5	0.9	1.5	0.9	1.5	0.9	1.5	1.0	1.6	1.0	1.6	0.9	1.4	0.9	1.5	0.9	1.5	0.9	1.5	1.0	1.6
4th ●	1.4	2.3	1.5	2.4	1.4	2.4	1.4	2.3	1.5	2.4	1.5	2.4	1.5	2.5	1.5	2.5	1.3	2.2	1.4	2.3	1.5	2.5	1.5	2.4	1.5	2.5
4th *	1.3	2.1	1.3	2.2	1.3	2.2	1.3	2.1	1.3	2.2	1.3	2.2	1.3	2.2	1.3	2.2	1.3	2.1	1.3	2.1	1.3	2.2	1.3	2.2	1.3	2.2
1st High rev.	2.7	4.3	2.8	4.5	2.8	4.5	2.7	4.3	2.8	4.5	2.7	4.4	2.8	4.6	2.9	4.7	2.5	4.1	2.7	4.3	2.8	4.5	2.8	4.5	2.8	4.6
2nd » »	4.1	6.6	4.3	6.9	4.3	6.9	4.1	6.6	4.3	6.9	4.2	6.8	4.4	7.1	4.5	7.2	3.9	6.3	4.1	6.6	4.3	6.9	4.3	6.9	4.4	7.1
3rd » »	5.0	8.1	5.2	8.4	5.3	8.5	5.0	8.1	5.3	8.5	5.2	8.4	5.4	8.7	5.5	8.8	4.8	7.7	5.0	8.1	5.3	8.5	5.2	8.4	5.4	8.7
4th ●	8.0	12.9	8.3	13.4	8.4	13.5	8.0	12.9	8.4	13.5	8.2	13.3	8.6	13.9	8.8	14.2	7.6	12.3	8.0	12.9	8.4	13.5	8.3	13.4	8.6	13.9
4th *	7.3	11.7	7.4	12.0	7.6	12.3	7.1	11.5	7.5	12.1	7.4	12.0	7.7	12.4	7.7	12.5	6.9	11.1	7.2	11.7	7.5	12.1	7.5	12.1	7.6	12.3

● 40/33 ratio. *39/36 ratio.

CAPACITIES

DESCRIPTION	LIQUIDS AND LUBRICANTS												
	FIAT RECOMMENDED PRODUCTS	CAPACITY											International Designation
		466 - 466 DT			566 - 566 DT			666 - 666 DT			766 - 766 DT		
		dm³ (litres)	gall.	kg	dm³ (litres)	gall.	kg	dm³ (litres)	gall.	kg	dm³ (litres)	gall.	kg	
Sump and filter oil	**Oliofiat AMBRA SUPER** (see table below)	7.3	1⅓	6.6	7.3	1⅓	6.6	11.2	2½	10.1	11.2	2½	10.1	Diesel engine oil to MIL-L-2104 C and service API CD
Sump oil		6.7	1½	6	6.7	1½	6	10.5	2⅓	9.5	10.5	2⅓	9.5	
Air cleaner oil		0.55	1⅓ pints	0.5	0.55	1⅓ pints	0.5	0.55	1⅓ pints	0.5	0.55	1⅓ pints	0.5	
Power steering circuit oil	**Oliofiat TUTELA MULTI F**	1,8	⅓	1,6	1,8	⅓	1,6	1,8	⅓	1,6	1.8	⅓	1.6	Transmission, oil bath brakes and lift oil to Massey Ferguson MF1135 and Ford M2C 86A.
Steering unit oil		0.9	1¾ pints	0.8	0.9	1¾ pints	0.8	0.9	1¾ pints	0.8	0.9	1¾ pints	0.8	
Live front axle oil														
— Axle casing		4.3	¾	3.9	4.3	¾	3.9	6.1	1⅓	5.5	6.1	1⅓	5.5	
— Planetary drives (each)		0.8	1⅔ pints	0.7	0.8	1⅔ pints	0.7	1.2	½	1.1	1.2	½	1.1	
Rear transmission (transmission, bevel drive, brakes) and lift oil														
— 2-wheel drive		47.8	10½	43	47.8	10½	43	47.8	10½	43	47.8	10½	43	
— 4-wheel drive		48.6	10⅔	43.7	48.6	10⅔	43.7	48.6	10⅔	43.7	48.6	10⅔	43.7	
Final drive oil (each)		3.9	¾	3.5	3.9	¾	3.5	5.3	1¼	4.8	5.3	1¼	4.8	
Front wheel hub oil	**Grassofiat TUTELA G9**	—		—	—		—	—		—	—		—	Lithium - calcium grease to NLG1 No. 2
Pressure lubricators		—		—	—		—	—		—	—		—	
Coolant	Water and FIAT **"PARAFLU 11"**	10.5	2⅓	—	10.5	2⅓	—	13	2¾	—	13	2¾	—	
Fuel	Diesel fuel	73	16	—	73	16	—	73	16	—	73	16	—	



ENGINE BLOCK - CYLINDER HEAD

	466 - 666	566 - 766
Engine Block		
Cylinder bore diameter in engine block	102.890 to 102.940 mm (4.051 to 4.053 in)	106.890 to 106.940 mm (4.208 to 4.210 in)
Sleeve O.D.	103.020 to 103.050 mm (4.056 to 4.057 in)	107.020 to 107.050 mm (4.213 to 4.215 in)
Sleeve interference fit in block	0,08 to 0,160 mm (0.003 to 0.006 in)	
Sleeve diameter oversize	0,2 mm (0.008 in)	

	mm		in	
	466 - 666	566 - 766	466 - 666	566 - 766
Sleeve bore diameter	100.000 to 100.018 (1)	103.000 to 103.018 (1)	3.937 to 3.938	4.055 to 4.046
Maximum ovalitv and taper due to wear (2)	0.12		0.005	
Sleeve bore oversize	0.2 - 0.4 - 0.6 - 0.8		0.008 - 0.016 - 0.024 - 0.031	
Housing bore diameter — Camshaft bushings				
- Front	54.780 to 54.805		2.1567 to 2.1577	
- Intermediate	54.280 to 54.305		2.1370 to 2.1379	
- Rear	53.780 to 53.805		2.1173 to 2.1183	
Tappet housing bore diameter	15.000 to 15.018		0.590 to 0.591	
Tappet oversize	0.1 - 0.2 - 0.3		0.004 - 0.008 - 0.012	
Main bearing housing bore diameter	80.587 to 80.607		3.1727 to 3.1734	
Cylinder head				
Valve guide housing bore diameter in head	13.966 to 13.983		0.5498 to 0.5505	
Valve guide oversize	0.2		0.0079	
Valve seat dimensions	Section 101, page 2			
Valve stand-in	0.7 to 1.1		0.027 to 0.043	
— Maximum stand-in allowed	1.4		0.055	
Injector stand-out	1 to 1.5		0.039 to 0.059	
—Maximum stand-out allowed	1.8		0.071	
Cylinder head height	92		3.622	
Maximum head skimming depth	0.5		0.020	

(1) After reaming, 0.1 mm oversize sleeves may be fitted in production coupled to corresponding oversize pistons.
(2) Measure in ring swept area, parallel and perpendicular to engine centerline.

CRANK GEAR

	mm		in	
	466 - 666	566 - 766	466 - 666	566 - 766
Crankshaft - Bearings				
Main journal diameter	76.187 to 76.200 (1)		2.9994 to 2.9999	
Main journal undersize	0.254 - 0.508 - 0.762 - 1.016		0.0099 - 0.0199 - 0.0299 - 0.0399	
Main bearing wall thickness	2.162 to 2.172		0.0851 to 0.0855	
Main bearing undersize	0.254 - 0.508 - 0.762 - 1.016		0.0099 - 0.0199 - 0.0299 - 0.0399	
Main journal clearance in bearings	0.063 to 0.096		0.0025 to 0.0038	
— Maximum wear clearance	0.180		0.0071	
Crankpin diameter	58.730 to 58.743 (1)		2.3122 to 2.3127 (1)	
Crankpin undersize	0.254 - 0.508 - 0.762 - 1.016		0.0099 - 0.0199 - 0.0299 - 0.0399	
Big end bearing wall thickness	1.805 to 1.815		0.0710 to 0.0715	
Big end bearing undersize	0.254 - 0.508 - 0.762 - 1.016		0.0099 - 0.0199 - 0.0299 - 0.0399	
Crampkin clearance in big end bearing	0.047 to 0.080		0.0018 to 0.0031	
— Maximum wear clearance	0.180		0.0071	
Crankshaft thrust washer thickness	3.378 to 3.429 mm (0.1329 to 0.1349 in)			
Thrust washer oversize	0.127 mm (0.0049 in)			
Width of main bearing housing over thrust washers	31.766 to 31.918 mm (1.2506 to 1.2566 in)			
Length of corresponding main journal	32.000 to 32.100 mm (1.2598 to 1.2638 in)			
Crankshaft end float	0.082 to 0.334 mm (0.0032 to 0.0131 in)			
— Maximum wear end float	0.40 mm (0.016 in)			
Maximum main journal and crankpin ovality or taper after grinding	0.01 mm (0.0004 in)			
Maximum main journal and crankpin ovality or taper due to wear	0.05 mm (0.0019 in)			

(1) 0.1 mm undersize crankpin and main journal crankshafts may be fitted in production coupled to corresponding undersize bearings.

(follows)

CRANK GEAR

(continued)

	mm	
	466 - 666	**566 - 766**
Maximum main journal misalignment with crankshaft resting on end journals	0.10mm (0.0039 in)	
Maximum misalignment of crankpins (mods 466 and 566) or of every pair of crankpins (mods 666 and 766) relative to main journals (in either direction)	0.25 mm (0.0098 in)	
Maximum tolerance on distance from outer crankpin edge	± 0.10 mm (± 0.0039 in)	
Maximum crankshaft flange run-out with stylus in A, (section 103, page 2) over 108 mm (4.25 in) diameter, T.I.R.	0.025 mm (0.0009 in)	
Maximum flywheel seat eccentricity relative to main journals (see B, section 103, page 2) T.I.R.	0.04 mm (0.0016 in)	
Connecting Rods		
Small end bore diameter	35.861 to 35.899 mm (1.4118 to 1.4133 in)	37.846 to 37.884 mm (1.4899 to 1.4914 in)
Small end bushing OD	35.979 to 36.017 mm (1.4165 to 1.4179 in)	37.979 to 38.017 mm (1.4952 to 1.4967 in)
Bushing interference fit in small end	0.080 to 0.156 mm (0.0031 to 0.0061 in)	0.095 to 0.171 mm (0.0037 to 0.0067 in)
Small end bushing fitted ID	32.005 to 32.012 mm (1.2600 to 1.2603 in)	34.005 to 34.012 mm (1.3388 to 1.3390 in)
Big end bore diameter	62.408 to 62.420 mm (2.4570 to 2.4575 in)	
Maximum connecting rod axis misalignment at 125 mm (5 in)	± 0.07 mm (± 0.003 in)	
Maximum connecting rod weight difference over a complete set of the same engine	25 grams (0.88 oz.)	

(follows)

CRANK GEAR

(continued)

	466 - 666	566 - 766
Pistons		
Piston diameter 50 mm (2 in) from base of skirt, at right angles to pin	99.828 to 99.840 mm (3.9302 to 3.9307 in)	102.813 to 102.825 mm (4.0477 to 4.0482 in)
Piston clearance in sleeve	0.160 to 0.190 in (0.0063 to 0.0075 in)	0.175 in to 0.205 mm (0.0069 to 0.0081 in)
— Maximum wear clearance	0.30 mm (0.012 in)	
Piston oversize range	0.2-0.4-0.6-0.8 mm (0.008-0.016-0.024-0.032 in)	
Piston pin diameter	31.983 to 31.990 mm (1.2592 to 1.2594 in)	33.983 to 33.990 mm (1.3379 to 1.3382 in)
Piston pin housing bore in piston	31.993 to 32.000 mm (1.2596 to 1.2598 in)	33.993 to 34.000 mm (1.3383 to 1.3386 in)
Piston pin clearance in piston	0.003 to 0.017 mm (0.0001 to 0.0007 in)	0.003 to 0.017 mm (0.0001 to 0.0007 in)
Piston pin oversize	0.2-0.5 mm (0.008-0.019 in)	
Piston pin clearance in small end bushing	0.015 to 0.029 mm (0.0006 to 0.0011 in)	
— Maximum wear clearance	0.06 mm (0.0024 in)	
Maximum weight difference over a complete set of pistons	20 grams (2/3 oz.)	
Piston ring clearance in groove		
— Top	0.090 to 0.122 mm (0.0035 to 0.0048 in)	
— 2nd	0.050 to 0.082 mm (0.0019 to 0.0032 in)	
— 3rd	0.040 to 0.072 mm (0.0016 to 0.0028 in)	
Maximum wear clearance		
— Top	0.50 mm (0.008 in)	
— 2nd and 3rd	0.20 mm (0.019 in)	
Piston ring gap		
— Top	0.35 to 0.55 mm (0.0138 to 0.0216 in)	0.35 to 0.55 mm (0.0138 to 0.0216 in)
— 2nd	0.30 to 0.45 mm (0.0118 to 0.0177 in)	0.30 to 0.50 mm (0.0118 to 0.0197 in)
— 3rd	0.25 to 0.40 mm (0.0098 to 0.157 in)	0.30 to 0.45 mm (0.0118 to 0.0177 in)
Maximum wear gap	1.20 mm (0.047 in)	

(follows)

CRANK GEAR

(continued)

	mm	in
Dynamic Balancer (666 and 766)		
Idler gear jack shaft clearance in gear bushing (see 19, page 5, section 103) (1)	0.050 to 0.100	0.002 to 0.004
Flyweight gear shaft clearance in front bushing (see 11) (1)	0.050 to 0.100	0.002 to 0.004
Drive pinion clearance in bushings (see 18) (1)	0.050 to 0.100	0.002 to 0.004
Connecting sleeve spline backlash (see 13)	0.038 to 0.106	0.0015 to 0.0042
Flyweight gear shaft clearance in rear bushing (see 11) (2)	0.013 to 0.061	0.0005 to 0.0024
Pivot clearance in flyweight bushings (see 26 and 27)	0.020 to 0.073	0.0008 to 0.0029
Flyweight bushing interference fit in housing	0.040 to 0.100	0.0016 to 0.0040
Idler gear jack shaft clearance in bushing (see 34) (2)	0.013 to 0.061	0.0005 to 0.0024
Gear backlash	0.080	0.0031
Flyweight balancer timing	See page 5, section 103	

(1) Bushing interference fit in housing, 0.063 to 0.140 mm (0.0025 to 0.0055 in)
(2) Bushing interference fit in housing, 0.037 to 0.101 mm (0.0014 to 0.0040 in)

VALVE GEAR

	mm	
	466 - 666	566 - 766
Valve Timing Gears		
Timing gear backlash	0.08 mm (0.0031 in)	
Idler gear jack shaft diameter	31.975 to 32.000 (1.2589 to 1.2598 in)	
Idler gear bushing fitted I.D. after reaming	32.050 to 32.075 (1.2618 to 1.2628 in)	
Jack shaft journal clearance in bushing	0.050 to 0.100 mm (0.0019 to 0.0039 in)	
— Maximum wear clearance	0.15 mm (0.0059 in)	
Bushing interference fit in idler gear	0.063 to 0.140 mm (0.0025 to 0.0055 in)	
Lift and power steering pump drive gear shaft diameter	36.975 to 37.000 mm (1.4557 to 1.4567 in)	
Bushing fitted I.D. after reaming	37.050 to 37.075 mm (1.4586 to 1.4596 in)	
Shaft clearance in bushing	0.050 to 0.100 mm (0.0019 to 0.0039 in)	
Bushing interference fit in housing	0.063 to 0.140 in (0.0025 to 0.0055 in)	
Pump drive gear thrust washer thickness	1.45 to 1.50 mm (0.0571 to 0.0591 in)	

VALVE GEAR

(continued)

	466 - 666	566 - 766
Camshaft		
Camshaft bushing O.D.:		
— Front	54.875 to 54.930 mm (2.1604 to 2.1626 in)	
— Intermediate	54.375 to 54.430 mm (2.1407 to 2.1429 in)	
— Rear	53.875 to 53.930 mm (2.1210 to 2.1232 in)	
Bushing interference fit in housing	0.070 to 0.150 mm (0.0028 to 0.0059 in)	
Camshaft bushing fitted I.D. after reaming		
— Front	51.080 to 51.130 mm (2.011 to 2.013 in)	
— Intermediate	50.580 to 50.630 mm (1.9913 to 1.9933 in)	
— Rear	50.080 to 50.130 mm (1.9716 to 1.9736 in)	
Camshaft journal diameter		
— Front	50.970 to 51.000 mm (2.0067 to 2.0079 in)	
— Intermediate	50.470 to 50.500 mm (1.9870 to 1.9882 in)	
— Rear	49.970 to 50.000 mm (1.9673 to 1.9685 in)	
Camshaft journal clearance in bushing	0.080 to 0.160 mm (0.0031 to 0.0063 in)	
Maximum wear clearance	0.20 mm (0.0079 in)	
Camshaft end float (thrust plate to associated seat in camshaft)	0.070 to 0.220 mm (0.0028 to 0.0087 in)	
Tappets		
Tappet O.D.	14.950 to 14.970 mm (0.5886 to 0.5894 in)	
Tappet clearance in housing on engine block	0.030 to 0.068 mm (0.0012 to 0.0027 in)	
Maximum wear clearance	0.15 mm (0.0059 in)	
Tappet oversize	0.1-0.2-0.3 mm (0.004-0.008-0.012 in)	
Rockers		
Rocker bushing O.D.	21.006 to 21.031 mm (0.8270 to 0.8280 in)	
Rocker bore diameter	20.939 to 20.972 mm (0.8244 to 0.7902 in)	
Bushing interference fit in rocker	0.034 to 0.092 mm (0.0013 to 0.0036 in)	
Rocker bracket bore diameter	18.016 to 18.034 mm (0.7093 to 0.7100 in)	
Rocker shaft diameter	17.982 to 18.000 mm (0.7079 to 0.7087 in)	
Rocker shaft clearance in bracket	0.016 to 0.052 mm (0.0006 to 0.0020 in)	
— Maximum wear clearance	0.15 mm (0.006 in)	

(follows)