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Fiat Trattori ***FIAT*** ***805 C***

WORKSHOP ***MANUAL***

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Fiat Trattori

FIAT

805 C

WORKSHOP MANUAL

QUICK REFERENCE INDEX

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FOREWORD

- *The manual is divided into separately numbered sections.*
- *Two-digit sections contain:*
 - *Tractor specification (00)*
 - *Tractor subassembly specification and data (10 - Engine, 20 - Drive train, 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 corner of the front page.*
- *Revised sheets will carry the same print number followed by a capital letter (e.g. 1st revision 603.54.173|A, 2nd revision 603.54.173|B, etc.) and new issue date. Revised sheets will be accompanied by updated contents sheet.*
- *Wear limits recommended for some parts are not binding, being given for guidance only.*

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IDENTIFICATION DATA

Engineering code 607.700
Engine type CO 3/75 V. 50

Bore and stroke 110x120 mm (4.33x4.72 in)
Total displacement 4,562 cm³ (278.4 in³)
Compression ratio 17 to 1
Engine speed, full load . . 2,100
No. of main bearings . . . 5
Dynamic balancer Flyweight

PERFORMANCE AND WEIGHT

Output at flywheel 80 metric hp
Operating weight (full ballast) 5,150 kg 11,356 lb

Speeds

	km/h	mph
1st	2.5	1.55
2nd	3.6	2.24
3rd	4.5	2.80
4th	5.5	3.42
5th	7.9	4.91
6th	10.1	6.28
Reverse, low	2.9	1.80
Reverse, normal	6.5	4.03

Valve gear

Valves OH, push rod operated
Intake opens 10° B.T.D.C.
Intake closes 54° A.B.D.C.
Exhaust opens 54° B.B.D.C.
Exhaust closes 10° A.T.D.C.

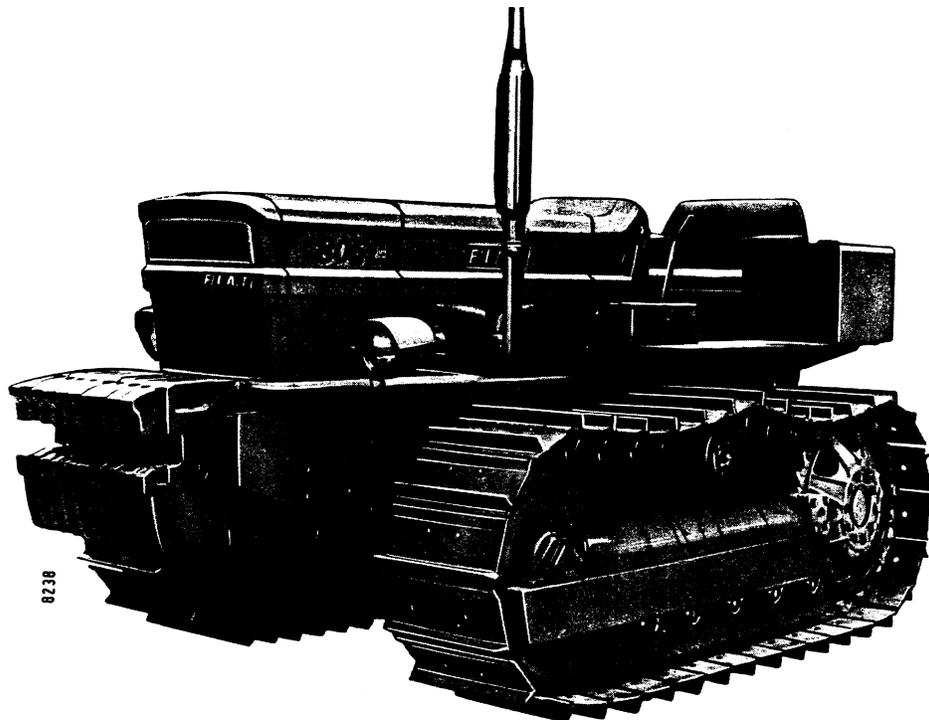
Valve clearance (for timing check)25 mm (.010 in)

Valve clearance, normal (hot or cold):

— Intake25 mm (.010 in)
— Exhaust30 mm (.012 in)

ENGINE

Type 4 stroke diesel, direct injection
No. of cylinders 4



8238

Fuel system

Air cleaner	Oil bath
Pre-cleaner	Centrifugal
Supply pump	Double diaphragm, cam operated
Injection pump	CAV, distributor
Governor	Mechanical, pump mounted
Advance device	Automatic, pump mounted

CAV pump type:

— AM	DPA 3342 F 030
— PM	DPA 3342 F 400

Injection pump inlet pressure2 kg/cm² (2.84 psi)

Fuel filters:

— Supply pump	Gauze
— Injection pump	Two, side by side, cartridge

Water separator Integral with injection pump upstream filter

Pump timing 14° B.T.D.C.

Firing order 1-3-4-2

Injector popping pressure 195 to 205 kg/cm² (2,770 to 2,915 psi)

Lubrication system

Type Forced feed

Pump Gear

Filters:

— Suction	Gauze
— Delivery	Full flow, cartridge, with by-pass valve (1 to 1.2 kg/cm ² , 14.2 to 17 psi)

Relief valve Filter mounted

Lubrication system pressure at governed speed 4.5 to 5 kg/cm² (64 to 71 psi)

Oil pump drive ratio . . 1.454 to 1

Low lube oil pressure in-

dicator Dash mounted

Cooling system

Type	Water
Pump	Centrifugal
Radiator	Vertical tube
Fan	Suction
Thermostat	Wax
— Opening temperature .	83° C ± 2°
— Fully open at	94° C
Water temperature gauge	Dash mounted

Tractor meter

Type	Mechanical, valve timing gear driven
— Drive ratio	2 to 1
— Hourmeter activation speed	1,800 rpm

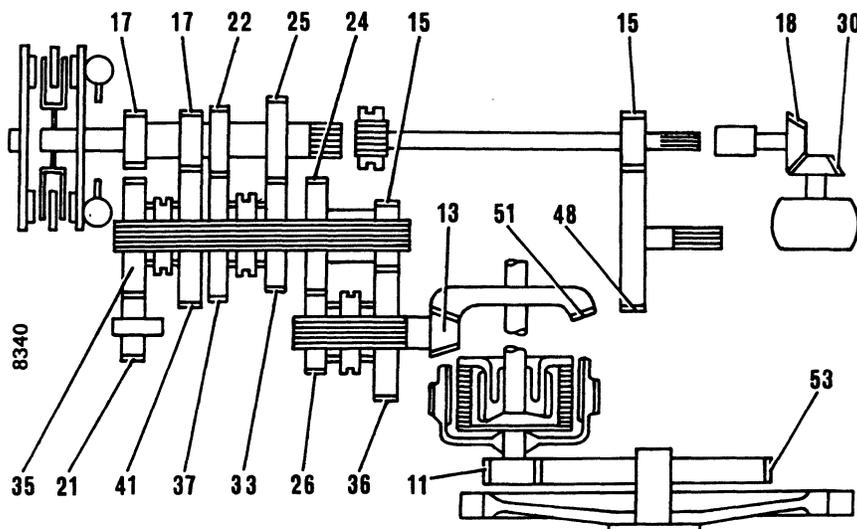
DRIVE TRAIN**Clutch**

Type	12 in, twin plate, oil bath, overcentre
Control	Manual lever

Transmission

Type	Manual
Gears	Helical, constant mesh
Speeds	Three plus reverse
Splitter	Integral with transmission
Transmission control . .	Gear lever
Splitter control	Separate lever
Transmission lube oil pump	In transmission casing
Power take-off	In transmission casing
Bevel gear	Central
Final drives	Single reductions, spur

Drive train schematics



Steering clutches

Type Multiple plate, dry
Control Mechanical, separate levers

Brakes

Service
Type Band
Control Separate pedals
Parking Hand operated

Overall transmission ratio

	Gears			
	First	Second	Third	Reverse
Low range	109.410 to 1	76.269 to 1	59.882 to 1	99.399 to 1
Normal range	49.386 to 1	34.439 to 1	27.030 to 1	45.159 to 1

UNDERCARRIAGE - SUSPENSIONS

Track frames 5 track rollers and 1 carrier roller
Track idlers Lubricated for life
Track rollers Lubricated for life
Carrier rollers Lubricated for life
No. of shoes per chain 36
Track shoe width 400-500 mm (15.75-19.68in)
Track area:
— 400 mm shoes 14,240 cm² (2,202 in²)
— 500 mm shoes 18,300 cm² (2,831 in²)
Ground pressure:
— 400 mm shoes35 kg/cm² (5 psi)
— 500 mm shoes29 kg/cm² (4 psi)
Track release Mechanical

Rear suspension

— Cross bar Track frame mounted
— Track frame bushings Lubricated for life

Front suspension

— Leaf spring Transverse mounted

BELT PULLEY DRIVE

Rotation (from rear) Counter clockwise
Speed Same as engine
Control Manual lever

POWER TAKE-OFF (540 rpm)

Rotation Clockwise
Speed (at 1,728 engine rpm) 540 rpm
Speed (2,100 engine rpm) 656 rpm
Spline size:
— Diameter 1 3/8"
— No. of splines 6

Control Manual lever (same as belt pulley drive)

BELT PULLEY

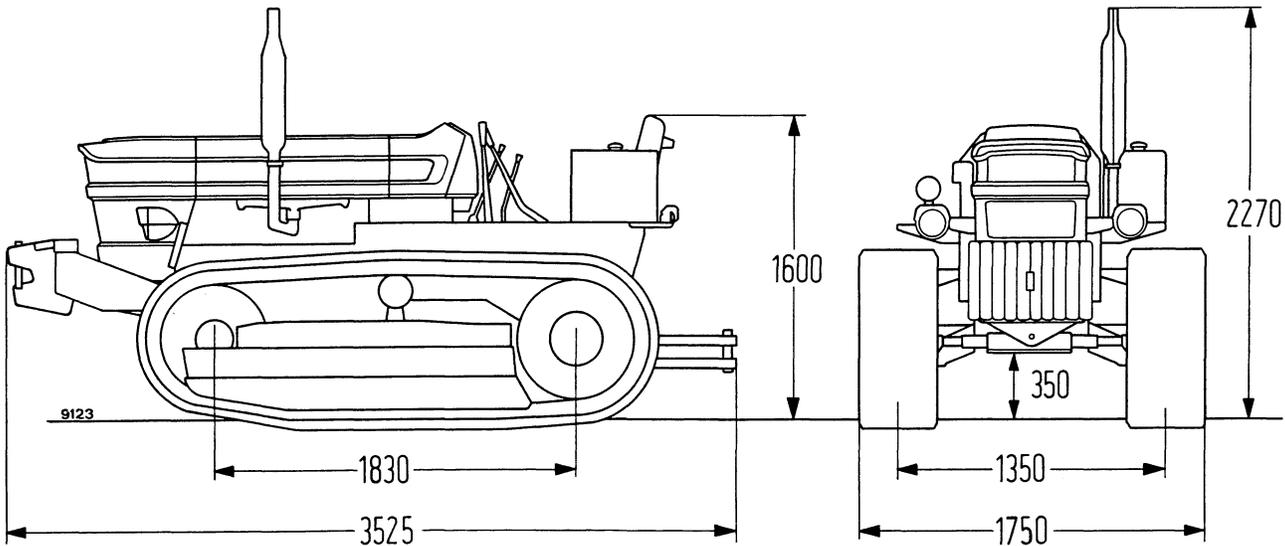
Pulley diameter 280 or 320 mm (11 or 12.6 in)
Pulley width 175 mm (6.9 in)
Speed (at 2,100 engine rpm) 1,260 rpm
Surface speed:
— 280 mm diameter 18.5 m/s (61 ft/s)
— 320 mm diameter 21.1 m/s (69 ft/s)

LIFT

Type Hydraulic
Cylinder Single acting
Operation Position control
Pump type Plessey A 25 X, gear
Pump drive Engine valve timing gear
Hydraulics Separate
3-point linkage Category 2 and 3
Design lift and capacity See pages 2, 3 and 4, section 40
Maximum lift stroke See pages 2, 3 and 4, section 40
Lift arm capacity See pages 2, 3 and 4, section 40

ELECTRICS (12 volt)

Alternator type A 12 M 124/12/42 X
— Output 32 Amp
Voltage regulator:
— AM FIAT RC 2/12 B
— PM MARELLI RTT 110 B
Starter:
— Type Marelli MT 62 BA
— Output 4 metric hp
Battery:
— Type Marelli 6 ATM 25-A or Scaini 64072
— Voltage 12 V
— Capacity:
— - Marelli 132 Ah
— - Scaini 140 Ah
Headlamps 130 mm, 45/40 Watt
Floodlamp 35 Watt, integral switch
Fuses Six 8 A
Panel lamp 5 Watt
Charge indicator lamp 5 Watt
Charge indicator relay Fused
Master switch 6-function
Starter switch Push type
or pre-heat/starter switch 4-function
Unprotected Starter, alternator and pre-heat plugs



CAPACITIES

DESCRIPTION	LUBRICANT					
	FIAT designation	Capacity			International designation	
		kg	liters	Imp. units		
Engine oil (sump, filter and lines)	} oliofiat AMBRA 20 W/40 above 0°C	14	15.6		} Multigrade detergent mineral oil, MIL-L-2104 B. EP characteristics	
Engine oil (sump and filter)		12.1	13.5	3 Gall		
Engine oil (sump only)		11.5	12.8	2.8 Gall		
Air cleaner oil (*) . . . . .		.75	.9	1½ Pint
Master clutch oil	} oliofiat AMBRA 10 W/30 below 0°C	8	8.9	2 Gall		
Lift oil		8.2	9.1	2 Gall		
Remote control oil		16.5	18.3	4 Gall		
Front idlers and roller oil	oliofiat AMBRA 20 W/40	2	2.2	½ Gall		} MIL-L-2105 B oil (SAE 80W/90-EP)
Axle oil	} oliofiat AW 90/M	21	22.6	5 Gall		
Final drive oil (each)		4	4.3	1 Gall		
Belt pulley oil . . . . .		.9	1	1¾ Pint
Lubricator grease	grassofiat G 9	—	—	—	NLG12	
Coolant (water and FIAT PARAFLU 11) (°)		—	16.5	3.6 Gall		
Fuel (diesel oil, syphoned and filtered):						
— Main tank		—	80	17½ Gall		
— Auxiliary tank		—	48	10½ Gall		

(*) Change cleaner oil when sediment is 10 mm or ½" deep.

(°) Antifreeze incorporating oxidation, corrosion, foam and scale control properties. Mixture strengths of 20°, 30°, 40° and 50° give protection down to -8°C, -15°C, -25°C and -35°C respectively. Coolant effective for a period of two years or 1600 hours.

VALVE GEAR

	mm	in
Valve head diameter:		
— Intake	42.700 to 43.000	1.6811 to 1.6929
— Exhaust	36.200 to 36.500	1.4252 to 1.4370
Valve face angle	$45^{\circ} 10'_{+10}^{-0}$	
Maximum valve eccentricity over one revolution with stylus on valve face . . . . .	.04	.0015
Cam lift (intake and exhaust)	7.300	.2874
Valve lift (intake and exhaust)	12.512	.4925
Valve fitted depth	See page 1	
Valve spring length:		
— Free	49.3	1.940
— Under 22.5 to 24.9 kg or 50 to 55 lb	42	1.653
— Under 61.1 to 67.5 kg or 134 to 150 lb	29.5	1.161

LUBRICATION - COOLING

Oil pump		
Type	FIAT, gear	
Drive	Crankshaft	
Pump drive ratio	1.454 to 1	
Warm oil pressure on full throttle	4.8 to 5.2 kg/cm ²	68 to 74 psi
Valve crack off setting	5 kg/cm ²	71 psi
Relief valve spring length:		
— Free	69.7 to 71.3 mm	2.74 to 2.80 in
— Under 11 kg or 24.2 lb	48.5 mm	1.91 in
Water pump		
Type	Centrifugal, vane	
Front drive ratio	1.573 to 1	
Impellor clearance relative to body ⁽¹⁾2 to .8 mm	.008 to .032 in
Thermostat		
Type	Behr-Thomson	
Opening temperature	$83 \pm 2^{\circ}\text{C}$	
Fully open at	94°C	
Valve travel when fully open	7.5 mm	.2953 in

⁽¹⁾ AM version

ENGINE: Data

CALIBRATION DATA - C.A.V. INJECTION PUMP TYPE DPA 3342 F 030 - 770997 (AM)

Procedure A

Bosch test machine with WSF 2044/4 X injector springs and EFEP 182 nozzles.

Robotti test machine with graduated lock ring injectors, FIAT 656829 injector spring and EFEP 182 nozzles.

Injector popping pressure 175 kg/cm² (2489 psi)

Piping 2 x 6 x 865 mm

Procedure B

Test machine incorporating production injectors (KP 70 S 1 F 10 nozzle holders and DLL 145 S 60 F nozzles).

Injector popping pressure 195 to 205 kg/cm² (2775 to 2915 psi)

Piping 1.5 x 6 x 700 mm

Calibration fluid FIAT CFB

Calibration fluid temperat. 30° + 5° C

Fuel supply pressure . . .2 kg/cm² (2.8 psi)

Direction of rotation (as seen from drive end) . Clockwise

Firing order 1-3-4-2

Assembly data

Governor control stud to metering valve lever pin 53 to 54 mm (2.08 to 2.13 in)

Governor spring attachment position See diagram

Roller spacing 49.93 mm (1.9657 in)

Test No.	Lever position L ₁ = throttle L ₂ = shutt-off	Speed rpm	Transfer pressure kg/cm ²	Advance degrees	PROCEDURE A		PROCEDURE B
					Injector delivery	Back leak	Injector delivery
					cm ³ /1000 shots	cm ³ /100 shots	cm ³ /1000 shots
1-2	—	100	≥ 1	—	—	—	
3	—	500	—	6.5 to 7.5	—	—	
4	—	1050	—	8 to 8.5	—	—	
5	—	180 max	—	1.8 to 2.5	—	—	
6 ⁽¹⁾	—	300	—	0	—	—	
7 ⁽²⁾	—	—	—	—	—	—	
8-9-10 ⁽³⁾	L ₁ = full L ₂ = out	1050 ⁺⁰ ₋₂₀	4.6 to 5.6	—	60.5 to 62.5(●)	≥ 14	66.5 to 68.5(●)
11-12		500 ± 5	3 to 4	—	59.5 to 62.5(●)	—	66 to 69 (●)
13 ⁽¹⁾		100	—	—	≥ 57	—	—
14	L ₁ = full L ₂ = in	200	—	—	≤ 4	—	—
15 ⁽³⁾	L ₁ = idle L ₂ = out	200	—	—	≤ 5	—	—
16 ⁽⁴⁾	L ₁ = full	1150	—	—	≤ 3	—	—
17 ⁽⁵⁾	L ₂ = out	1050 ⁺⁰ ₋₂₀	—	—	60.5 to 62.5	—	—

(●) Maximum spread: 2 cm³/1000 shots

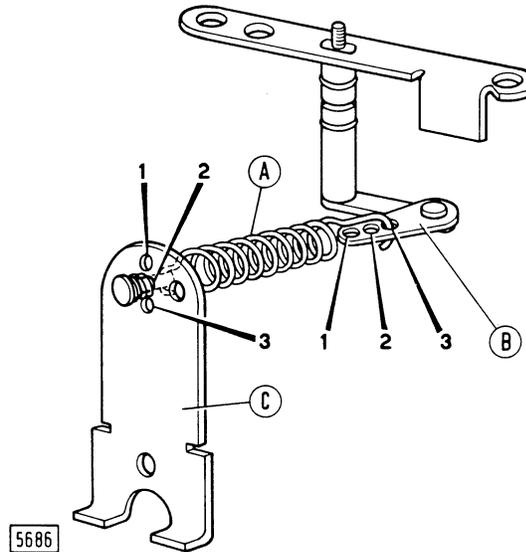
⁽¹⁾ Manual start-retard activated

⁽²⁾ 3-cylinder engine only

⁽³⁾ Back-off throttle lever adjusting screws fully

⁽⁴⁾ Governor cut-in. Adjust maximum speed screw.

⁽⁵⁾ Recheck fuelling.



Governor spring attachment points.

A. Governor spring - **B.** Throttle link - **C.** Governor control arm.

ON-BENCH PERFORMANCE DATA

(AM fuel pump)

TEST PLAN

Engine on bench with fan, air cleaner and exhaust silencer removed.
Barometric pressure: 740 ± 5 mm Hg at 239 metres (785 ft) above sea level.

Ambient temperature: $20 \pm 3^\circ$ C.
Relative humidity, $70\% \pm 5$.
Fuel density, 830 ± 10 g/liter.
Pump timing, $14^\circ \pm 1^\circ$ B.T.D.C.

Throttle	Engine rpm	Power output of engine run-in for a total of				Time to burn 250 cm ³ (15 in ³) of fuel (seconds)
		2-hour		50-hour		
		Metric HP	kW	Metric HP	kW	
Maximum, full load	2100	≥ 74	≥ 54.5	≥ 76	≥ 55.9	55 to 58
Maximum	1000	≥ 35.5	≥ 26.1	≥ 36.5	≥ 26.9	115.4 to 121.8
Maximum, no load	2300 ± 20	—	—	—	—	—
Minimum, no load	600 to 650	—	—	—	—	—

ENGINE: Data

TORQUE DATA

DESCRIPTION	Thread size	Position	Torque	
			kgm	ft lb
Capscrew, clutch to bell housing	M 12 x 1.25	—	10.5	76
Capscrew, bell housing to sump	M 10 x 1.25	—	6	43
Nut, engine to bell housing	M 12 x 1.25	—	10.5	76
Capscrew, engine side support	M 14 x 1.5	—	16.5	119
Nut, cylinder head	M 16 x 1.5	C ₁ , page 11	23.5	170
Capscrew, rocker shaft bracket	M 10 x 1.25	—	5	36
Capscrew, injection pump shaft gear	M 8 x 1.25	—	2.5	18
Capscrew, intermediate gear jack shaft	M 8 x 1.25	C ₂ , page 11	3	22
Capscrew, drive pulley to crankshaft	M 18 x 1.5	C ₃ , page 11	30	217
Capscrew, main bearing cap	M 16 x 1.5	C ₄ , page 11	14.5	105
Capscrew, connecting rod cap	M 13 x 1	C ₅ , page 11	13	94
Capscrew, dynamic balancer flyweight carrier	M 10 x 1.25	—	5	36
Capscrew, flyweight carrier to block	M 10 x 1.25	—	5	36
Capscrew, flywheel	M 12 x 1.5	C ₆ , page 11	9.5	69
Nut, fuel pump shaft drive bush	9/16"-18 UNF	—	8.3	60
Capscrew, fuel pump to support	M 8 x 1.25	—	2.5	18

CALIBRATION DATA - C.A.V. INJECTION PUMP TYPE DPA 3342 F 400 - 771392 (PM)

Procedure A

Bosch test machine with WSF 2044/4 X injector springs and EFEP 182 nozzles.

Robotti test machine with graduated lock ring injectors, FIAT 656829 injector spring and EFEP 182 nozzles.

Injector popping pressure 175 kg/cm² (2,489 psi)

Piping 2 x 6 x 845 mm

Calibration fluid FIAT CFB

Calibration fluid temperatur. 30° + 5° C

Fuel supply pressure 2 kg/cm² (2.8 psi)

Direction of rotation (as seen from drive end) Clockwise

Firing order 1-3-4-2

Procedure B

Test machine incorporating production injectors (KP 70 S 1 F 10 nozzle holders and DLL 145 S 60 F nozzles).

Injector popping pressure 195 to 205 kg/cm² (2,775 to 2,915 psi)

Piping 1.5 x 6 x 700 mm

Assembly data

Governor control stud to metering valve lever pin 53.3 to 54.3 mm (2.09 to 2.14 in)

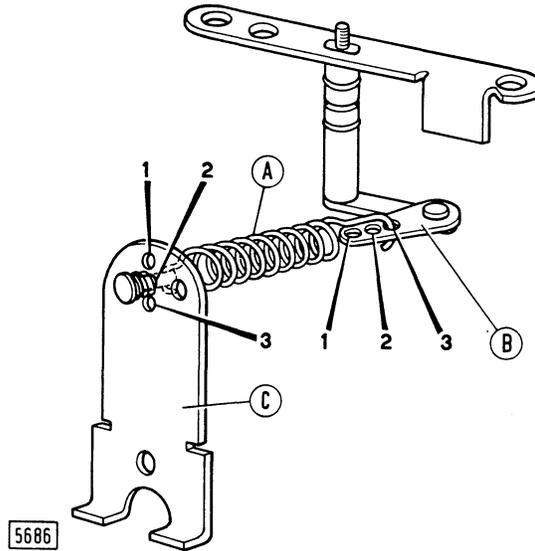
Governor spring attachment position See diagram

Roller spacing 49.97 mm (1.9660 in)

Test No.	Lever position L ₁ = throttle L ₂ = shutt-off	Speed rpm	Transfer pressure kg/cm ²	Advance degrees	PROCEDURE A		PROCEDURE B
					Injector delivery	Back leak	Injector delivery
					cm ³ /1000 shots	cm ³ /100 shots	cm ³ /1000 shots
1-2	—	100	≥ 1	—	—	—	—
3	—	700	—	2.5 to 3.5	—	—	—
4	—	1050	—	6,5 to 7	—	—	—
5	—	180 max	—	1.5 to 1,8	—	—	—
6 (1)	—	300	—	0	—	—	—
7 (2)	—	—	—	—	—	—	—
8-9-10 (3)	L ₁ = full L ₂ = out	1050 ⁺⁰ / ₋₂₀	4.5 to 5.5	—	61 to 63 (●)	≥ 14	65 to 67 (●)
11-12		700 ± 5	3.5 to 4.5	—	54 to 57 (●)	—	64 to 67 (●)
13 (1)		100	—	—	≥ 51	—	—
14	L ₁ = full L ₂ = in	200	—	—	≤ 4	—	—
15 (3)	L ₁ = idle L ₂ = out	200	—	—	≤ 5	—	—
16 (4)	L ₁ = full L ₂ = out	1225	—	—	≤ 4	—	—
17 (5)		1050 ⁺⁰ / ₋₂₀	—	—	61 to 63	—	—

- (●) Maximum spread: 2 cm³/1000 shots
- (1) Manual start-retard activated
- (2) 3-cylinder engine only
- (3) Back-off throttle lever adjusting screws fully
- (4) Governor cut-in. Adjust maximum speed screw.
- (5) Recheck fuelling.

ENGINE: Data



Governor spring attachment points.

A. Governor spring - **B.** Throttle link - **C.** Governor control arm.

ON-BENCH PERFORMANCE DATA (PM fuel pump)

TEST PLAN

Engine on bench with fan, air cleaner and exhaust silencer removed.
Barometric pressure: 740 ± 5 mm Hg at 239 metres (785 ft) above sea level.

Ambient temperature: $20 \pm 3^\circ$ C.
Relative humidity, $70\% \pm 5$.
Fuel density, 830 ± 10 g/liter.
Pump timing, $14^\circ \pm 1^\circ$ B.T.D.C.

Throttle	Engine rpm	Power output of engine run-in for a total of				Time to burn 250 cm ³ (15 in ³) of fuel (seconds)
		2-hour		50-hour		
		Metric HP	kW	Metric HP	kW	
Maximum, full load	2100	≥ 74	≥ 54.5	≥ 76	≥ 55.9	≥ 55
Maximum, full torque	1400	≥ 53.2	≥ 39.1	≥ 55	≥ 40.5	≥ 72
Maximum, no load	2300 ± 20	—	—	—	—	—
Minimum, no load	600 to 650	—	—	—	—	—

HYDRAULIC PUMP

Type	Gear, drawing from lift body	
Model	A 25 X	
Make	FIAT (Plessey licence)	
Drive	Engine valve timing train	
Rotation (from drive end)	Clockwise	
Drive ratio	1.156 to 1	
Maximum rated speed (at 2100 engine rpm)	2,428 rpm	
Maximum rated output	27.6 l/min (6 Gall/min)	
Output at 1445 rpm and 145 to 155 kg/cm ² (2,059 to 2,201 psi):		
— New or reconditioned pump	15.3 l/min (3.4 Gall/min)	
— Used pump	11 l/min (2.4 Gall/min)	
Test oil temperature	55° to 65°C	
Test oil grade	SAE 20 W	
	mm	in
Pump gear journal diameter	17.400 to 17.424	.6850 to .6860
Journal housing bore diameter bearings	17.450 to 17.470	.6870 to .6877
Journal clearance in bearing . . . . .	.026 to .070	.0010 to .0027
— Maximum wear clearance . . . . .	.1	.0040
Bearing housing diameter in pump body	37.270 to 37.294	1.4673 to 1.4683
Gear clearance in pump body:		
— AM . . . . .	.120 to .064	.0047 to .0025
— PM . . . . .	.020 to .064	.0008 to .0025
Maximum pump body wear on suction side . . . . .	.1	.0040
Bearing width	19.796 to 19.812	.7793 to .7799
Gear flank width	18.323 to 18.348	.7213 to .7223
Gear and bearing housing width in sump body	58.072 to 58.122	2.2862 to 2.2882
Gear and bearing end float (applicable to new and reconditioned pump) . . . . .	.100 to .207	.0040 to .0081

LIFT (up to frame 661666)

Type	Position control, single acting cylinder	
Bore and stroke	95 x 137 mm	3.74 x 5.39 in
Total displacement	971 cm ³	59.25 cu.in
Overload valve crack off setting	200 to 210 kg/cm ²	2845 to 2987 psi
Relief valve crack off setting	145 to 155 kg/cm ²	2062 to 2204 psi
Design lift capacity	1456 kgm	3210 lb
3-point linkage	Suitable for cat. 2 and 3 implements	
Maximum lift capacity on lower links:		
— Lifting rods coupled to front mounting holes	1520 kg	3350 lb
— Lifting rods coupled to rear mounting holes	1800 kg	3968 lb
Lower link travel:		
— Lift rods coupled to front mounting holes	720 mm	28.34 in
— Lift rods coupled to rear mounting holes	600 mm	23.72 in
	mm	in
Lift cylinder piston diameter	94.980 to 95.000	3.7393 to 3.7401
Lift cylinder bore diameter	95.036 to 95.071	3.7415 to 3.7429
Lift piston clearance in bore . . . . .	.036 to .091	.0014 to .0036
Cross shaft journal diameter:		
— Right	59.970 to 60.000	2.3610 to 2.3622
— Left	64.970 to 65.000	2.5578 to 2.5590
Bushing fitted I.D. in lift body:		
— Right	60.100 to 60.170 ⁽¹⁾	2.3661 to 2.3688 ⁽¹⁾
— Left	65.100 to 65.170 ⁽¹⁾	2.5629 to 2.5657 ⁽¹⁾
Cross shaft working clearance in bushings . . . . .	.100 to .200	.0040 to .0080
Bushing interference fit in housing . . . . .	.020 to .102	.0008 to .0041
Lift arm stroke adjusting screw washer thickness . . . . .	.45 to .55	.0177 to .0216
Lift arm end float shim thickness range	5.4-5.5-5.6-5.7-5.8-5.9	.212-.216-.220-.224-.228-.232
Lift arm end float . . . . .	.1 to .3	.004 to .012
Lift valve spool clearance in body (matched and honed together on assembly) . . . . .	.025 to .035	.0009 to .0013
Unload valve spring length:		
— Free	22	.87
— Under 2.3 to 2.6 kg (5 to 6 lb)	10	.39
Lift valve spring length:		
— Free	46	1.81
— Under 1.8 to 2.2 kg (4 to 5 lb)	20	.79
Lift adjustments	See page 7	

⁽¹⁾ After fitting and reaming

LIFT (as from frame 661667)

Type	Position control	
Control	Manual lever next to operator	
Response adjustment	Outer control valve mounted lever	
Single acting cylinder:		
— Bore and stroke	95 x 133 mm (3.74 to 5.23 in)	
— Displacement	942 cm ³ (57.5 in ³)	
Relief valve crack off setting	190 to 195 kg/cm ² or 2,702 to 2,773 psi (186 to 191 bar *)	
Safetly valve crack off setting	230 to 240 kg/cm ² or 3,271 to 3,342 psi (225 to 235 bar *)	
Design lift capacity	1,790 kgm or 12,947 ft.lb (17,554 N · m *)	
	mm	in
Lift piston diameter	94.980 to 95.000	3.7393 to 3.7401
Cylinder bore diameter	95.036 to 95.071	3.7415 to 3.7429
Piston clearance in cylinder . . . . .	.036 to .091	.0014 to .0036
Cross shaft journal diameter:		
— Right	54.970 to 55.000	2.1642 to 2.1653
— Left	62.670 to 62.700	2.4673 to 2.4685
Bushing fitted I.D. in lift body:		
— Right	55.100 to 55.170 (°)	2.1693 to 2.1720 (°)
— Left	62.800 to 62.870 (°)	2.4724 to 2.4751 (°)
Cross shaft working clearance in bushings . . . . .	.100 to .200	.0040 to .0080
Right bushing interference fit in housing . . . . .	.096 to .152	.0038 to .0060
Left bushing interference fit in housing . . . . .	.126 to .182	.0050 to .0072
Cross shaft end float with lift arms in position . . . . .	.1 to 1.0	.0040 to .0400

(°) Not reamed
(*) S.I. Unit.

LIFT (as from frame 661667)

Continued

	mm	in
Position control shaft diameter	23.967 to 24.000	.9436 to .9449
Shaft housing bore diameter in lift body	24.020 to 24.072	.9457 to .9477
Shaft clearance in housing . . . . .	.020 to .105	.0008 to .0041
Spool clearance in control valve body . . . . .	.025 to .035 ⁽¹⁾	.0010 to .0014 ⁽¹⁾
Valve clearance in lift body . . . . .	.025 to .035	.0010 to .0014
Inlet valve return spring length:		
— Free	13	.512
— Under .17 to .23 kg (1.7 to 2.3 N or .4 to .5 lb)	9.8	.3858
Unload valve spring length:		
— Free	31	1.2205
— Under 4.1 to 4.5 kg (40.2 to 44.1 N or 9 to 10 lb)	21	.8268
Governor valve spring length:		
— Free	46	1.8110
— Under 1.8 to 2.2 kg (17.6 to 21.6 N or 4 to 5 lb)	20	.7874
Lift clutch spring length:		
— Free	42	1.6535
— Under 54 to 66 kg (530 to 647 N or 119 to 145 lb)	20.5	.8071

⁽¹⁾ Matched and honed together on assembly

IMPLEMENT ATTACHMENT (as from frame 661667)

Type	Three point	
	2 and 3	
Category		
Maximum lift capacity on lower links starting from horizontal:		
— Lift rods coupled to front mounting holes	1,950 kg	4,300 lb
- Lift travel	580 mm	22.8 in
— Lift rods coupled to rear mounting holes	2,340 kg	5,160 lb
- Lift travel	500 mm	19.7 in
Maximum lift capacity with lift rods coupled to front mounting holes starting from horizontal:		
— Centre of gravity 600 mm (23.6 in) from lower link joints	1,490 kg	3,285 lb
- Lift travel	705 mm	27.7 in
— Centre of gravity 1200 mm (47.2 in) from lower link joints	1,160 kg	2,558 lb
- Lift travel	860 mm	33.8 in

AUXILIARY CONTROL VALVE

Type	Suitable for external single acting or double acting cylinder
Control	Separate manual lever
Spool clearance in control valve body (matched and honed on assembly)	.015 to .020 mm (.0005 to .0007 in)
Relief valve	Existing valve in standard control valve cover

TORQUE DATA

DESCRIPTION	Thread size	Torque		
		kgm	N · m (*)	ft lb
Hydraulic pump				
Capscrew, pump to timing cover	M 6 x 1	.8	8	6
Nut, pump	3/8" - 24 UNF	4.2	41	30
Nut, pump drive shaft sleeve	7/16" - 20 UNF	2.8	27	20
Lift (up to frame 661666)				
Capscrew, lift support to tractor	M 10 x 1.25	6.3	62	45
	M 14 x 1.5	18	176	130
	M 16 x 1.5	25.5 (°)	250	184
	M 16 x 1.5	23.5 (*)	230	170
Nut, lift support to tractor frame	M 16 x 1.5	23	225	166
Capscrew, lift body to support	M 14 x 1.5	16.5	162	119
Nut, lift body to support	M 14 x 1.5	16.5	162	119
Nut, control valve to lift body	M 10 x 1.25	6	59	43
	M 14 x 1.5	16	157	116
Nut, rear cover to lift body	M 12 x 1.5	14	137	101
Safety valve	M 24 x 1.5	6	59	43
Plug, unload valve	M 24 x 1.5	6.5	64	47
Nut, lift arm to shaft	M 14 x 1.5	16	157	116
Capscrew, top link support	M 16 x 1.5	23	225	166

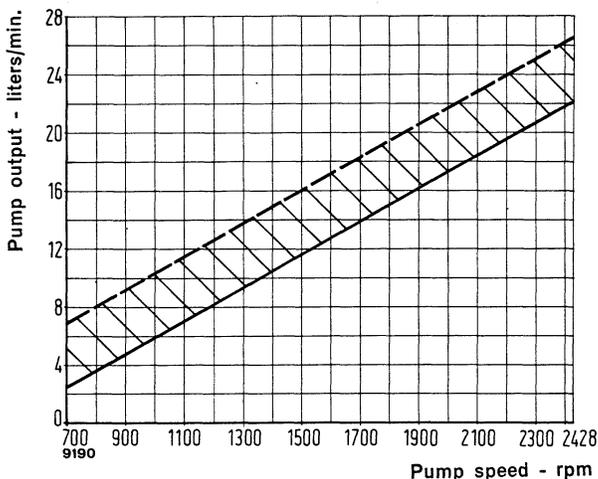
(°) Material specification R100 - (*) Material specification R80 - (*) SI Unit.

TORQUE DATA

Continued

DESCRIPTION	Thread size	Torque		
		kgm	N · m (*)	ft lb
Lift (as from frame 661667)				
Capscrew, lever to spool	M 10 x 1.25	3.5	34	25
Nut, control valve body }	M 10 x 1.25	6	59	43
	M 14 x 1.25	15	147	108
Capscrew, lift support to tractor }	M 10 x 1.25	6.3	62	43
	M 14 x 1.5	18	176	130
	M 16 x 1.5	25	245	181
Nut, lift support to tractor	M 16 x 1.5	23	226	166
Capscrew, lift body to support	M 14 x 1.5	16.5	162	119
Capscrew, top lift cover	M 8 x 1.25	2.6	25	19
Capscrew, control valve cover	M 10 x 1.25	6	59	43
Capscrew, lift rear cover	M 12 x 1.25	10	98	72
Relief valve	M 28 x 1.5	12	118	87
Cylinder safety valve	M 24 x 1.5	6	59	43
Capscrew, lift arm plate	M 14 x 1.25	15	147	108
Capscrew, inner arm	M 10 x 1.25	6.2	60	45
Capscrew, top link support	M 16 x 1.5	23	226	166

(*) SI Unit.



Speed-output chart - Lift pump A 25 X.

Test pressure 170 kg/cm² (166 bar - 2,418 psi) - Oil temperature 55° to 65°C - Pump drive ratio 1.156 to 1.

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