



TRACTOR OPERATIONS

FORD MOTOR COMPANY LIMITED

SE 3112

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FORD

2000
3000
4000
5000



FORD TRACTOR

**FORD 2000, 3000, 4000
and 5000**

OPERATOR'S HANDBOOK

IDENTIFICATION CODE NUMBERS are located on specific components of your tractor. These numbers will be important when ordering parts or requesting information from your authorised Ford Tractor Dealer and should always be quoted in full. Have your dealer record these numbers in the appropriate space provided.

TRACTOR MODEL NUMBER	C10230
TRACTOR SERIAL NUMBER AND PRODUCTION CODE	8092155
ENGINE SERIAL NUMBER AND PRODUCTION CODE	001800-8C25
TRANSMISSION PRODUCTION CODE ..	_____
REAR AXLE PRODUCTION CODE	_____
HYDRAULIC POWER LIFT PRODUCTION CODE	_____
HYDRAULIC PUMP PRODUCTION CODE ..	_____

(ii)

CONTENTS

This Operators Handbook has been specially prepared to familiarize you with the function, operation and regular servicing of the Ford range of tractors. Included in this range are the Ford 2000 and 3000 Agricultural Highway, Narrow and Vineyard tractors and the Ford 4000 and 5000 Agricultural tractors.

The details of operation and maintenance which are peculiar to Select-O-Speed tractors and Petrol engined tractors are covered in Sections K and L. These sections should be read in conjunction with the main book.

A. DRIVING THE TRACTOR

The basic function of starting and driving the tractor, and the controls involved are covered in this section.

You should pay particular attention to the 'pre-starting check', the 'running-in' items and the safety precautions.

Controls relating to the operation of the tractor hydraulics and power take-off are detailed under separate sections.

B. THE HYDRAULIC SYSTEM

This section describes the use of Draft and Position Control and also covers the operation of the other major components and operating controls in the Hydraulic system.

C. POWER TAKE-OFF OPERATION

This section details the various types of Power Take-Off (PTO) available with Ford tractors.

D. ATTACHMENT OF IMPLEMENTS

This section covers the use and adjustment of the three-point linkage and standard swinging drawbar. Also detailed is the towbar which is standard on the Highway tractors.

E. WHEELS AND TYRES

This section lists the standard tyres available and the recommended working pressures. Also detailed is front and rear track adjustment and the liquid ballasting of tyres.

(iii)

F. SERVICING SCHEDULE

The importance of regular servicing cannot be stressed too highly. Refer to this section when the tractor hourmeter indicates that a servicing period is imminent.

G. GENERAL MAINTENANCE AND ADJUSTMENTS

Covered in this section are items from the "Servicing Schedule" which require a more detailed explanation of maintenance procedure, and also details of certain components which may require occasional adjustment and replacement.

H. OPTIONS AND ACCESSORIES

Various factory fitted options are available with the Ford range of tractors. This section gives details and method of operation of the major options.

Information is also given of certain types of accessories.

I. SPECIFICATIONS

J. INDEX

K. SELECT-O-SPEED (Optional Section)

Contained within this section are those items which relate specifically to tractors fitted with Select-O-Speed transmissions. Refer to Sections A to I of the Operator's Handbook for all other information and data.

L. PETROL ENGINED TRACTOR (Optional Section)

Contained within this section are those items which relate specifically to tractors fitted with Petrol engines. Refer to Sections A to K of the Operator's Handbook for all other information and data.

Ford policy is one of continuous improvement. The right to change prices, specifications and equipment at any time without notice is reserved.

DRIVING THE TRACTOR

SECTION A

SAFETY PRECAUTIONS

NEVER....

... run the tractor engine
in a closed shed or
garage



... refuel the tractor when
the engine is running ...



..... allow anyone to ride
on the tractor, unless legally
permitted



... travel at high speed
without previously locking
the brake pedals together, or
when operating over rough ground,
near ditches or when turning

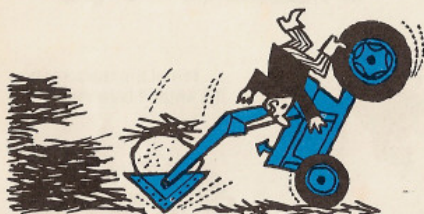


SECTION A

DRIVING THE TRACTOR

NEVER....

... pull from the top link or the rear axle ...



... fail to check that weight is properly distributed on the tractor ...



... operate on steep slopes without maintaining proper tractor stability ...



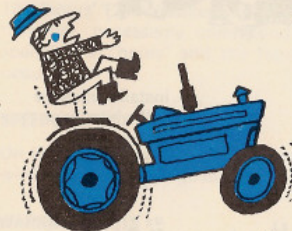
... coast down a hill in 'neutral'.

DRIVING THE TRACTOR

SECTION A

NEVER....

... fail to keep the brakes in proper operating condition ...



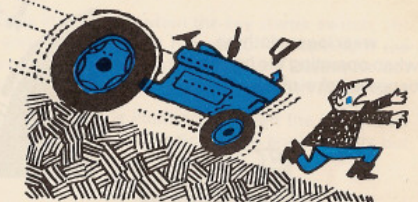
... leave the tractor seat when the tractor is in motion ...



... leave the tractor free to roll ...



... leave the tractor engine running ...

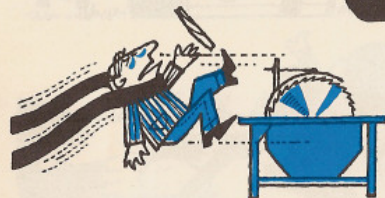
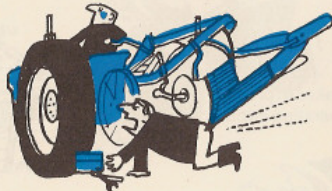


SECTION A

DRIVING THE TRACTOR

NEVER....

... work under an implement when it is in the raised position on the tractor hydraulics

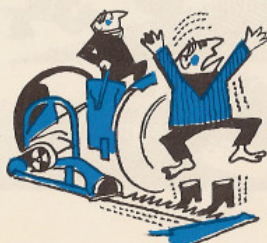


..... wear loose clothing when operating the belt pulley or power take-off

.... install or remove the belt while the belt pulley is in motion



.... attempt to clean or adjust P.T.O. driven implements with the engine running



DRIVING THE TRACTOR

SECTION A

INSTRUMENTS AND WARNING LIGHTS (Figure A1)

PROOFMETER

The proofmeter (1) registers the engine revolutions per minute (r.p.m.) and the number of 'hours' the tractor has worked. The indicated engine r.p.m. must be multiplied by 100 to determine the true engine speed.

Tractor ground speeds, power take-off and belt pulley speeds for certain indicated engine r.p.m. are listed on a decal beneath the proofmeter. Further information on these speeds may be found in Section I of this Handbook.

The 'hours' (2) measured are based on an average engine speed and do not, therefore, necessarily correspond to clock hours. The service periods are specified in 'hours' and the hourmeter should be watched for when they occur.

SPEEDOMETER

On Highway tractors the proofmeter is replaced with a speedometer to comply with Road Traffic Regulations.

WARNING LIGHTS

The generator warning light (3) is illuminated when the key starter switch, (6) Figure A4, is turned on, the engine started and run-up to idle speed. If the light remains on at higher revolutions this indicates that the battery is not being charged. If the light remains on stop the engine and establish the reason.

The engine oil pressure warning light (4) is illuminated when the key starter switch is turned on. The light should go out immediately the engine starts but if it remains on stop the engine and investigate the cause.

TEMPERATURE GAUGE

The temperature gauge (5) measures the temperature of the engine coolant and at normal engine operating temperatures the needle should be halfway between the blue (cold) and the red (hot) zones.

The gauge is not operative when the key starter switch is in the 'off' position.

SECTION A

DRIVING THE TRACTOR

FUEL GAUGE

The fuel gauge (6), operative when the key starter switch is turned on, indicates the amount of fuel in the tank by quarter graduations.

PRE-START CHECK

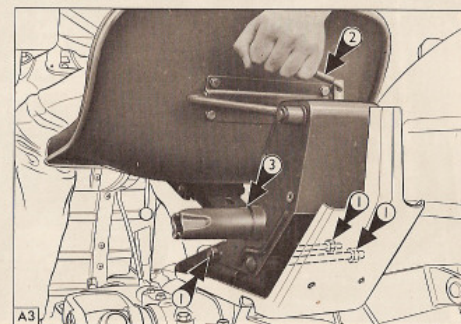
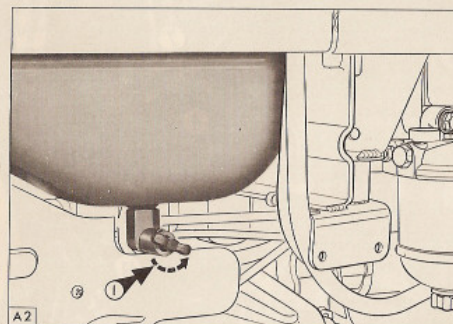
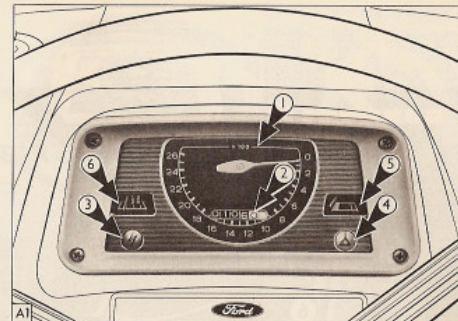
It is advisable before starting the tractor to carry out the Daily Service check detailed in Section F. Check also that there is sufficient fuel in the tank and that the fuel tank shut-off valve is open, (1) Figure A2. This valve is situated on the right-hand side of the fuel tank.

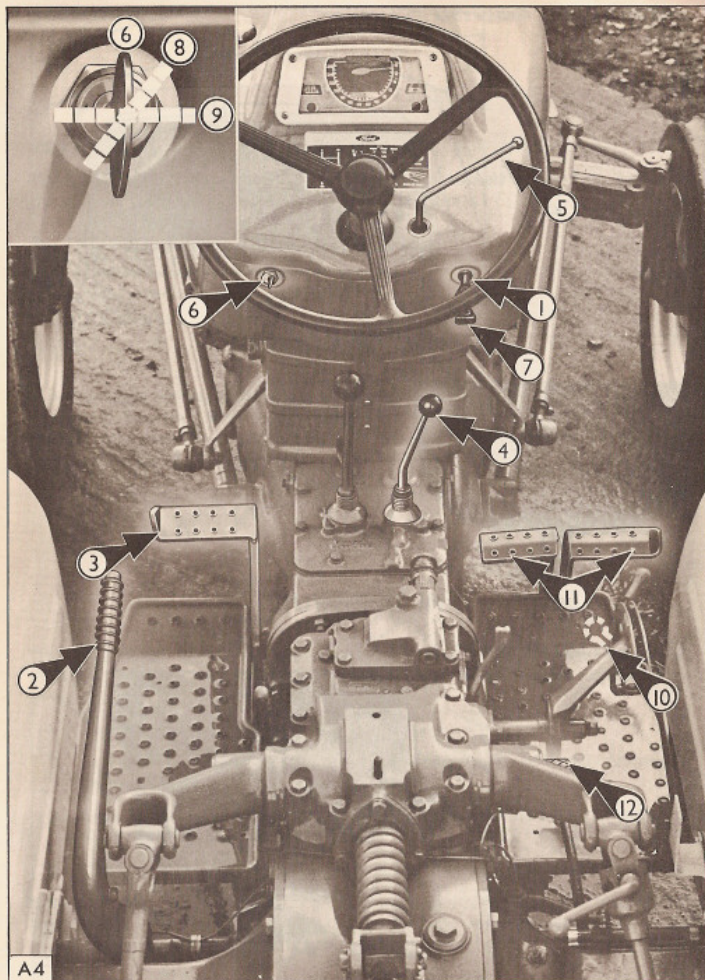
"RUNNING-IN"

The 'running-in' period of a tractor's life is extremely important and the following instructions should be followed very closely during the first 50 hours of operation :

1. Avoid overloading the engine.
2. Use the lower gear ratios when pulling heavy loads and avoid continuous operation at constant engine speeds.
3. Check the instruments frequently and keep the radiator and oil reservoirs filled to their recommended levels.
4. Avoid prolonged 'no load' operation at either high or low engine speeds.

Whilst the above instructions are particularly important during the 'running-in' period, following them throughout the tractor's life will prove beneficial to the overall performance and efficiency of your tractor.





DRIVING THE TRACTOR

SECTION A

STARTING THE ENGINE

TRACTOR SEAT (Figure A3)

Prior to starting the engine adjust the tractor seat to the most comfortable driving position. Both the steel pan and the contoured type of seat are adjustable fore and aft; the steel pan seat utilising the pairs of holes in the seat mounting bracket and the contoured seat by adjustment along the angled slots (1) in the seat base.

The tension in the contoured seat may be adjusted for the operator's weight by turning the cranked handle (2) until the two indicators (3) align. This adjustment should be made with the operator in the seat.

All types of seat may be tilted back to permit the operator to stand.

STARTING (Figure A4)

1. Check that the engine stop control (1) is pushed in and the handbrake (2) engaged.
2. Depress the foot operated clutch pedal (3) positioned on the left-hand side of the gearbox, and set the main and high/low gear lever (4) in 'Neutral' (the starter motor can only be actuated when the high/low lever is in this position).
3. Set the hand throttle* lever (5) half open (pulling the lever downwards opens the throttle.)
4. Insert the starter key (6) and turn clockwise to the first position (8) to operate the instrument and warning lights and further clockwise (9) to engage the starter.
5. When the engine starts release the key and allow it to return to the first position.
6. Immediately check to ensure that the generator and oil pressure warning lights go out.

* Highway tractors and, for certain territories Agricultural tractors, are fitted with a foot throttle (10) as well as a hand throttle. The throttle pedal is situated on the right-hand footplate. The operation of the foot throttle over-rides the hand throttle which should be set to idling speed when the foot throttle is being used.

SECTION A

DRIVING THE TRACTOR

COLD WEATHER STARTING

When starting under cold weather conditions it is important that the starter key be held in the 'start' position continuously until the engine starts. This allows heat to build-up in the combustion chambers. At very low temperatures it may be necessary to hold the key in position for up to 35-40 seconds. **Do NOT** operate the key in a series of short jabs. If the engine does not start after 40 seconds, allow 4-5 minutes for the battery to recover then repeat the starting procedure.

As a further aid to cold starting, the Ford 3000 and Ford 5000 are fitted with an excess fuel button, Figure A5, on the side of the fuel injection pump. This button should be depressed prior to starting the tractor and will be automatically disengaged when the engine fires. If the engine does not continue to run the button must be depressed again before another attempt is made to start the engine. Optional starting aids are available for extreme cold conditions and details of these are given in Section 'H'.

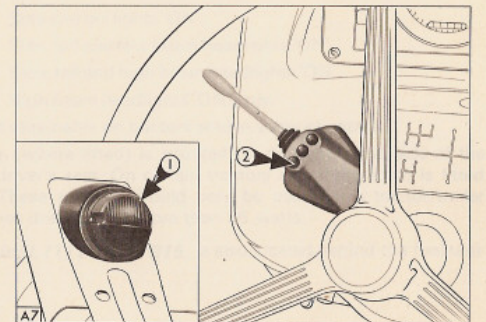
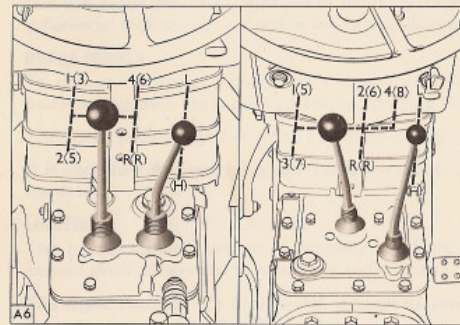
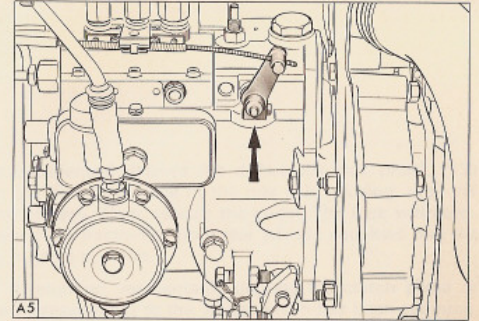
DRIVING THE TRACTOR

For fuel economy and minimum engine wear it is important to select the correct gear for a particular operation.

To drive the tractor select the desired gear using the gear change and high/low gear shift levers, Figure A6, in conjunction with the decal below the instrument cluster.

Engage the clutch whilst increasing the engine speed slightly. The clutch pedal should not be used as a footrest as prolonged 'riding' of the clutch may cause damage.

To stop the tractor depress the clutch and apply both brake pedals, (11) Figure A4 and place the main and the high/low gear shift levers in the 'Neutral' position. Apply the handbrake situated on the left-hand side, (2) Figure A4, of the tractor seat on the Ford 2000 and 3000, and on the right-hand side of the seat on the Ford 4000 and 5000. Pull out the engine stop control and turn the starter key anti-clockwise, (6) Figure A4, to the "off" position.



DRIVING THE TRACTOR

SECTION A

DIFFERENTIAL LOCK

Should wheelspin be experienced depress the differential lock pedal, (12) Figure A4, located on the right-hand side of the rear axle housing, until the lock is definitely felt to engage. Then, release the pedal. The lock will automatically disengage when the traction of both rear wheels equalises and the pedal will return to its original position.

If the pedal is slow in returning, momentarily depress the clutch pedal or briefly apply the brake corresponding to the wheel which has been spinning, this will assist the disengagement of the differential lock. Avoid the use of the differential lock at high speeds or while travelling on public roads.

BRAKE PEDALS

To reduce the tractor turning circle apply the left or right independent brake pedal as required. Enter the turn before applying the brake.

Lock both pedals together when operating at high speeds or on public roads.

It is important that you keep your brakes in proper adjustment. See section 'G' for details.

LIGHTING

The tractor lighting system is basically the same for all models except for certain small differences to meet local regulations.

The light switch, (7) Figure A4, positions are as follows:

Straight up	..	'OFF'
First right	..	Side and tail lights 'ON'.
Second right	..	Side, tail and low beam headlights 'ON'
Third right	...	Side, tail and high beam headlights 'ON'
Fourth right*	..	High beam headlights 'ON' only.

* This position is not obtainable on tractors sold in some countries.

A rear light socket (where fitted) is situated on the right hand side of the tractor beneath the driver's seat. On certain tractors a further socket is fitted under the toolbox. These sockets should only be used for a tractor/trailer rear light or accessories drawing not more than 36 watts.

An accessory terminal, (1) Figure G15, is also located behind the fuel tank shroud.

SECTION A

DRIVING THE TRACTOR

DIRECTION INDICATORS, (Figure A7) (where fitted)

Tractors supplied to certain territories are fitted with flashing direction indicators (1) operated by a lever located to the left-hand side of the steering column. Moving the lever downwards will indicate a turn to the left, and upwards, a turn to the right. If required one or two additional pairs of indicators may be connected into the circuit.

The lights on the lever assembly (2) will flash as follows:

1. with the tractor indicators only—one light
2. with the tractor indicators and one other pair of indicators—two lights
3. with the tractor indicators and two other pairs of indicators—three lights

THE HYDRAULIC SYSTEM

SECTION B

DRAFT CONTROL (*Figure B1*)

Draft control is selected by moving the position/draft selector lever (1) downwards. Having set the hydraulic main control lever (2), together with the adjustable quadrant stop (3), to the desired position, the system will automatically maintain the implement at a depth relative to the ground contour irrespective of tractor movement. Use the adjustable stop to return the hydraulic main control lever to the same position.

IMPLEMENT POSITION CONTROL (*Figure B1*)

This control enables an implement-to-tractor height or depth to be selected and maintained without any further adjustment.

To operate the control :

1. Set the Position/Draft selector lever (1) in the uppermost position.
2. Set the implement to the required working height or depth by using the hydraulic main control lever (2).
3. Use the adjustable stop (3) to maintain this position.

FLOW CONTROL VALVE (*Figure B1*)

The flow control valve regulates the lifting speed of the 3-point linkage or remote control cylinders. A fast flow, marked as 'F' on the control knob (4), provides quicker corrections and transfers maximum weight to the tractor for increased wheel adhesion.

Slow settings, achieved by turning the knob towards 'S', reduce the speed of corrections and under certain conditions improves the rate and quality of work, particularly in hard soils.

When operating in a slow setting an internal linkage temporarily over-rides the slow setting when the implement is raised.

SECTION B

THE HYDRAULIC SYSTEM

AUXILIARY SERVICES CONTROL VALVE (Figure B1)

This control (5) allows the tractor's hydraulic power to be used to operate external cylinders on such implements as loaders and tipping trailers. The auxiliary services control valve positions are:

Ford 2000 (where fitted), 3000 and 4000:

1. 'IN' to operate the 3-point linkage.
2. 'OUT' to operate external cylinders.
3. 'HALF-OUT' to operate the 3-point linkage and external cylinders together.

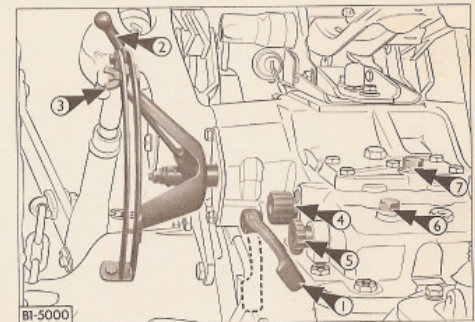
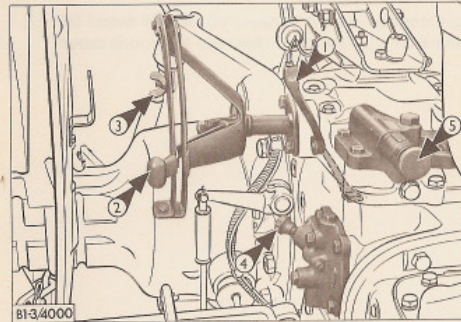
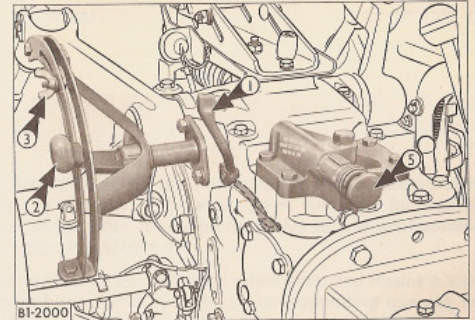
Ford 5000:

1. 'IN' to operate the 3-point linkage.
2. 'OUT' to operate external cylinders.
3. A joint service is possible by using a second jack tapping point (6) forward of the standard take-off point (7).

The main control lever is used to obtain the above services.

OPERATION OF EXTERNAL CYLINDERS

1. Select draft control and move the hydraulic main control lever to the 'neutral' position on the quadrant i.e. where neither raising nor lowering takes place.
2. Move the adjustable stop on the quadrant to mark this position so that neutral can be readily located.
3. To extend the cylinder, pull the auxiliary service control knob out, and raise the hydraulic main control lever above the neutral position. When the external cylinder is fully extended return the hydraulic main control lever to the neutral position to avoid possible damage to the relief valve. If the 3-point linkage is fully raised when using the external services it will be necessary to move the main control lever past the fixed stop at the top of the quadrant in order to operate the external cylinders.
4. To retract the external cylinders, move the main control lever below the neutral position on the quadrant.



THE HYDRAULIC SYSTEM

SECTION B

General instructions

1. External cylinders are operated by oil drawn from the rear transmission housing. Although the quantity of oil available is sufficient for normal operation with most implements, it may be necessary to add oil if several remote cylinders are operated together.
2. Any external cylinder which is disconnected when extended means a loss of oil and this should be replaced by adding a corresponding quantity to the rear transmission.
3. All hoses should be cleaned before connecting and the open ends of all hoses should be covered with dust caps when not in use.

POWER TAKE-OFF OPERATION

SECTION C

POWER TAKE-OFF SHAFT

Your Ford tractor is equipped with a 1.375 inch (34.9 mm) diameter PTO shaft. The standard PTO speed is 540 ± 10 rpm and most PTO implements will operate at maximum efficiency when the PTO is operated within this speed range.

TRANSMISSION P.T.O. (Figure C1)

The 'Transmission' type of PTO (available on Ford 2000, 3000 and 4000 tractors) is operated by engaging the clutch, and will stop turning when the clutch pedal (1) is depressed.

The drive to the PTO is engaged by depressing the clutch pedal and moving the PTO lever situated on the left-hand side of the rear transmission, fully rearwards (2). To disengage the PTO depress the clutch and move the lever to the forward position (3).

The table below shows the recommended engine speeds to obtain the PTO speed of 540 ± 10 rpm.

Transmission	Model	Engine Speed (rpm)
6/7 speed	Ford 2/3000	1800
8 speed	Ford 2/3000	1600
8 speed	Ford 4000	1800

SECTION C

POWER TAKE-OFF OPERATION

LIVE P.T.O. (Figure C2)

Live PTO (available on Ford 2000 and 3000 tractors) operates in a similar manner to 'Transmission' PTO except that an intermediate clutch pedal position (1) stops the tractor without stopping the PTO shaft.

To operate the PTO shaft, depress the clutch pedal completely and move the PTO shift lever fully rearwards (2). Engage the PTO by slowly releasing the clutch pedal (3) until the shaft begins to turn. Allow the PTO shaft to reach the desired speed then slowly engage power to the rear wheels by releasing the clutch for the remainder of its travel (4). Control the PTO speed and tractor forward travel by use of the throttle and by selecting the right gear.

The clutch operating rod clevis pin can be used in two positions. Select the rear position (5) in the clevis to operate and control the drive to the PTO and the tractor.

When the PTO is not in use put the pin in the forward position (6).

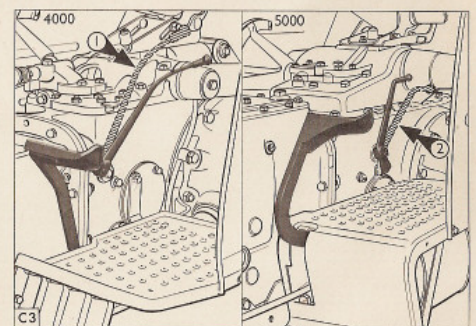
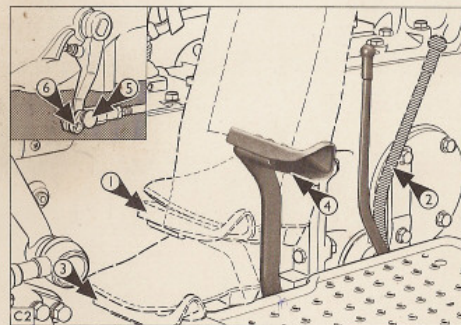
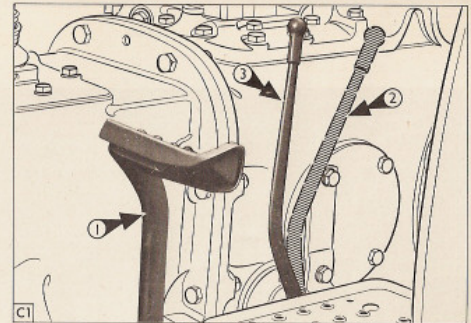
To obtain a PTO speed of 540 ± 10 rpm an engine speed setting of 1800 rpm is required.

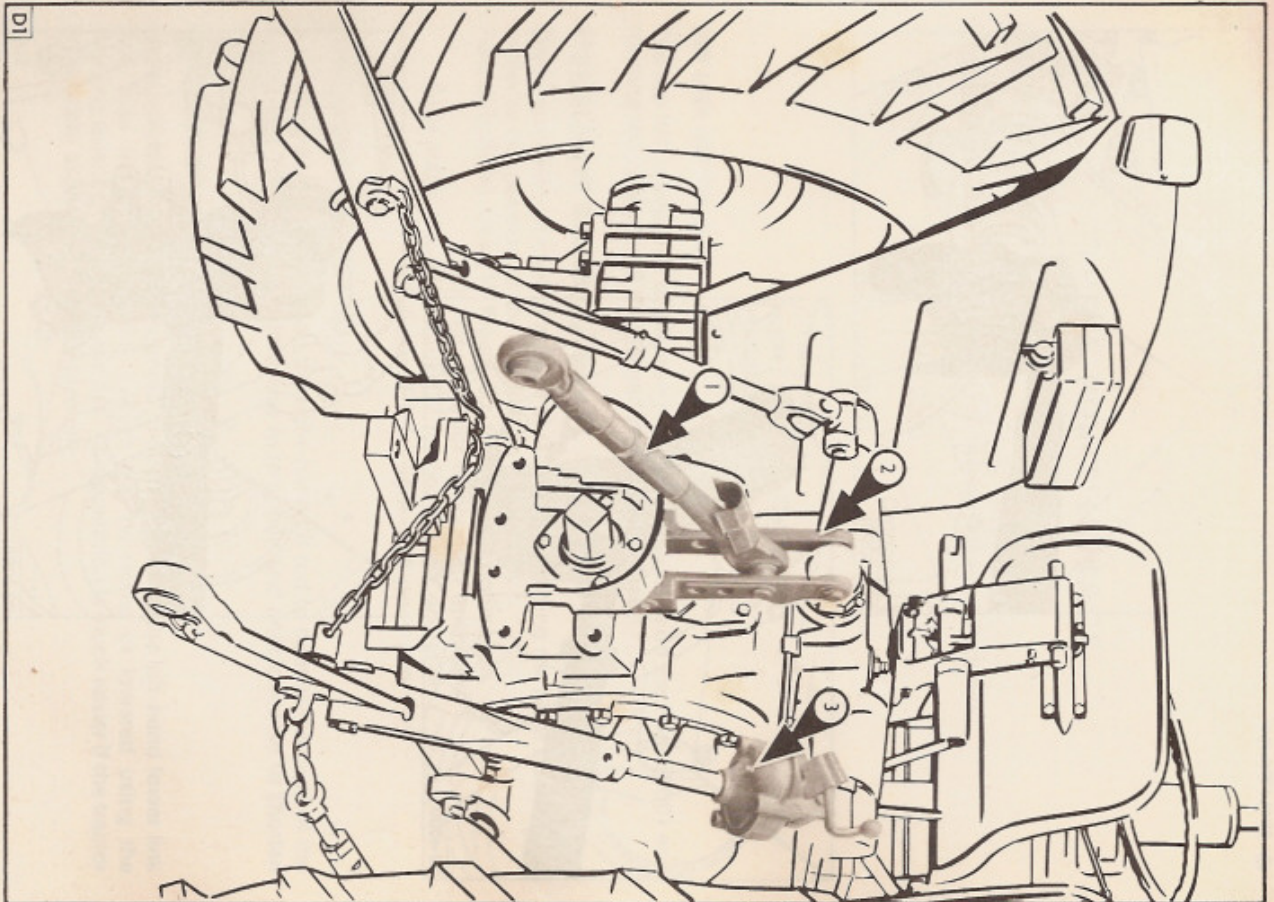
INDEPENDENT P.T.O. (Figure C3)

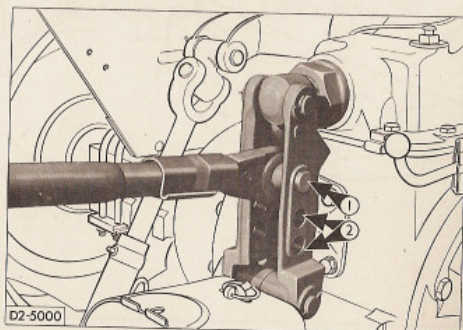
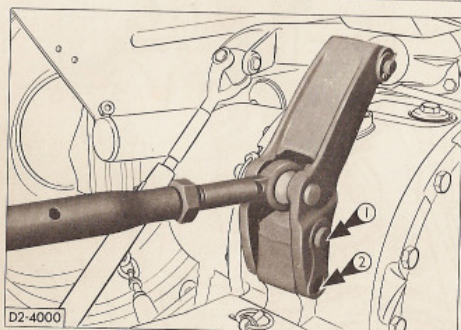
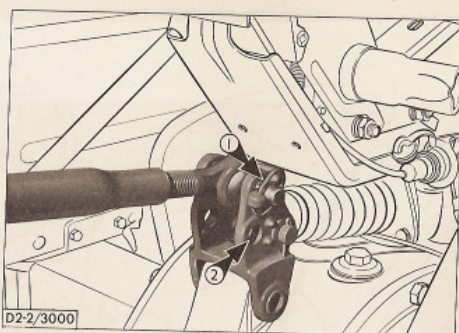
An 'Independent' PTO (Available on Ford 4000 and 5000 tractors) can be engaged or disengaged while the tractor is either moving or stationary.

To engage the PTO on Ford 4000 tractors move the PTO shift lever forwards (1), and on the Ford 5000 move the lever rearwards (2).

To obtain a PTO speed of 540 ± 10 rpm an engine speed setting of 1800 rpm on the Ford 4000, and 1900 rpm on the Ford 5000 (1700 rpm on U.K. Ford 5000 tractors) is required.







ATTACHMENT OF IMPLEMENTS

SECTION D

THREE-POINT LINKAGE

LINKAGE CATEGORIES

Ford tractors are supplied with the following linkage categories:

Ford 2000 and 3000	Category 1
Ford 4000 and 5000	Category 2

TOP LINK ((1) Figure D1)

The top link is adjusted by releasing the locknut (a latch on the Ford 5000) and rotating the sleeve until the desired length is obtained.

HYDRAULIC LIFT ROCKER ((2) Figure D1, and Figure D2)

Better sensitivity of control may be obtained by changing the pivot point of the rocker or the position of the top link on the rocker:

- Ford 2/3/5000. Use (1) Figure D2 for light draft operation
(2) Figure D2 for heavy draft operation
Ford 4000. Use (1) Figure D2 for heavy draft operation
(2) Figure D2 for light draft operation

LEVELLING BOX ((3) Figure D1)

A levelling box is provided on the right-hand lift rod to control the level of the implement. Turn the lever clockwise to lengthen and anticlockwise to shorten the rod.

IMPLEMENT ATTACHMENT

When connecting linkage mounted implements attach the left-hand lower link first, then the right-hand link (which can be raised or lowered using the levelling box), and finally the top link. This operation is much easier if the tractor is correctly aligned with the implement.

SECTION D

ATTACHMENT OF IMPLEMENTS

STANDARD SWINGING DRAWBAR

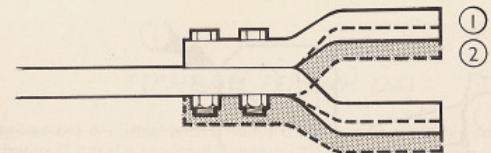
The swinging drawbar fitted to the Ford 2000, 3000 and 5000 tractors gives two positions—one at 14 inches (35.6 cm) from the end of the PTO shaft and the other giving a 'close-coupled' position enabling the hitch point to be moved nearer to the rear of the tractor. Use the close coupled position for towing heavier types of equipment.

On the Ford 4000 the 14 inch (35.6 cm) position only is available. By inverting the drawbar and/or changing the position of the clevis different drawbar above ground heights may be obtained, Figure D3.

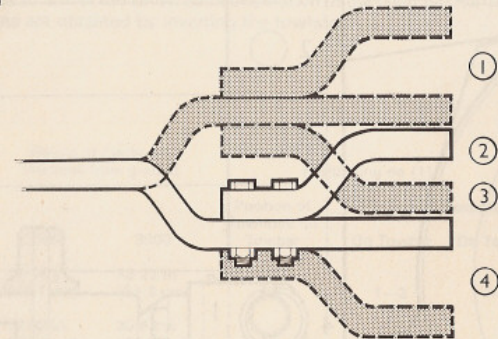
The maximum static downward loads listed below should not be exceeded.

Model	14 inch (35.6 cm) position		Close-coupled position	
	lb	kg	lb	kg
Ford 2000 and 3000	1000	454	1650	749
Ford 4000	1000	454	—	—
Ford 5000	1500	681	2300	1044

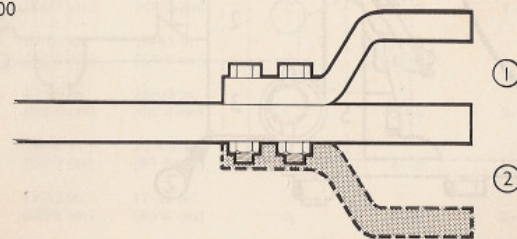
2000 and 3000



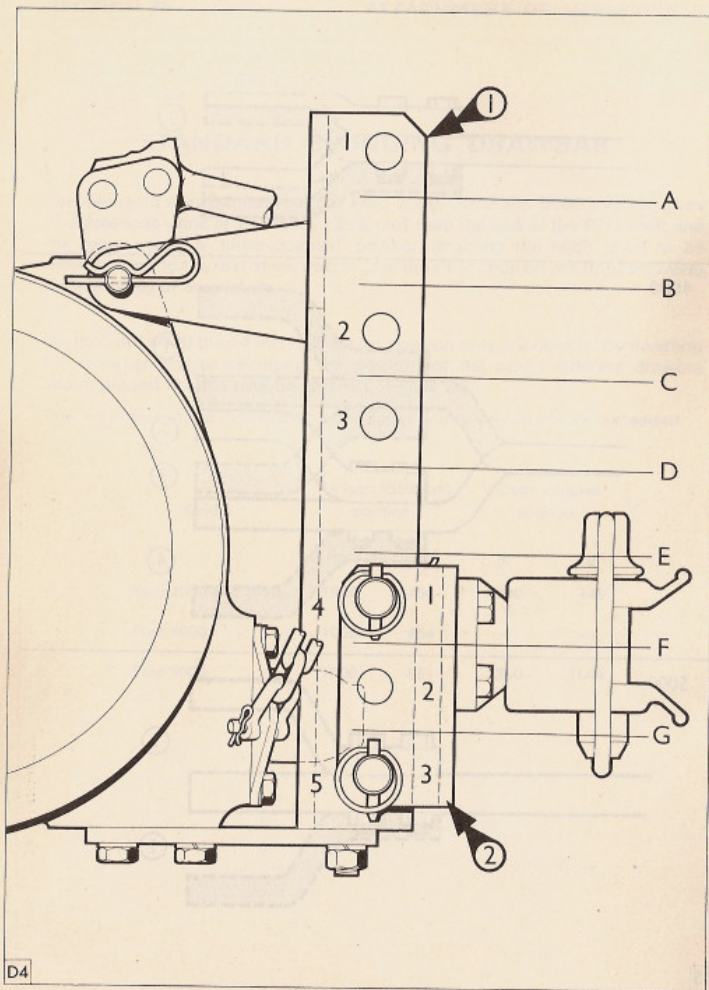
4000



5000



D3



6

ATTACHMENT OF IMPLEMENTS

SECTION D

TOWBAR (Figure D4)

Highway tractors are fitted with a heavy duty towbar assembly consisting of a towbar frame (1) and a towhook bracket (2). The towbar frame is attached to the rear transmission housing and the towhook bracket is secured to the frame by two quick release pins. The height of the towhook may be varied by setting the hook to any of the seven positions shown in the chart below. Three of these positions are obtained by inverting the towhook.

Height of Centre of Towhook from ground		Positioning on (1)		
2000	3000	Position of Towhook on Towbar	Position of Securing Pins On Towbar	Position of Securing Pins On Towhook
32.48 in (82.4 cm)	33.23 in (84.3 cm)	A	1—2	1—3
29.93 in (76.0 cm)	30.68 in (77.9 cm)	B	1—2	3—1
26.05 in (66.1 cm)	26.80 in (68.0 cm)	C	2—3	1—2
24.80 in (65.0 cm)	25.55 in (64.9 cm)	D	3—4	1—3
22.25 in (56.5 cm)	23.00 in (58.4 cm)	E	3—4	3—1
19.68 in (50.0 cm)	20.43 in (51.9 cm)	F	4—5	1—3
17.13 in (43.5 cm)	17.88 in (45.4 cm)	G	4—5	3—1

Use the lower two positions for heavy haulage operation.

7

WHEELS AND TYRES

SECTION E

TYRES

The average operating pressure for *land* work is 16 psi (1.1 Kg/sq. cm.) for all sizes of front tyre, and 12 psi (0.8 Kg/sq. cm.) for all sizes of rear tyre. These pressures may be varied according to operating conditions.

The following table lists the more popular sizes of tyre and the recommended pressures for *road* work. The rear wheel pressures quoted are a maximum but the front wheel pressures may be varied within the limits shown depending on the load being carried.

The table covers world wide options so certain tyres may not be available for your particular territory. Consult your authorized Ford Tractor Dealer for further details.

FRONT TYRES:		ROAD WORK PRESSURES	
Size	Ply Rating	psi	Kg/sq. cm.
4-50 x 16	4	14-25	1.0-1.8
5-50 x 16	4	20-32	1.4-2.3
5-50 x 16	6	20-44	1.4-3.1
6-00 x 16	4	20-32	1.4-2.3
6-00 x 16	6	20-48	1.4-3.4
7-50 x 16	6	20-36	1.4-2.5
7-50 x 16	8	20-48	1.4-3.4
4-00 x 19	4	20-44	1.4-3.1
REAR TYRES:			
9-5/9 x 28	4	18	1.3
11-2/10 x 28	4	16	1.1
11-2/10 x 28	6	26	1.8
12-4/11 x 28	4	14	1.0
12-4/11 x 28	6	22	1.6
13-6/12 x 28	4	14	1.0
13-6/12 x 28	6	20	1.4
16-9/14 x 30	6	16	1.1
16-9/14 x 30	8	22	1.6
12-4/11 x 32	6	22	1.6
16-9/14 x 34	6	16	1.1
12-4/11 x 36	4	14	1.0
12-4/11 x 36	6	22	1.6
13-6/12 x 36	6	20	1.4
13-6/12 x 38	6	20	1.4

SECTION E

WHEELS AND TYRES

FRONT WHEEL TRACK ADJUSTMENT

The front wheel track adjustment is as follows:

All Agricultural and Highway tractors—52-80 ins (132.1-203.2 cm), Figure E1.
Ford 2000 and 3000 Vineyard tractors—33-51 ins (83.8-129.5 cm), Figure E2.
Ford 2000 and 3000 Narrow tractors—44-60 ins (111.8-152.4 cm), Figure E3.
To obtain the track settings indicated thus (*) in Figures E1 and E2, set the track as shown and reverse the wheels.

ADJUSTMENT PROCEDURE (Ford 2000 and 3000)

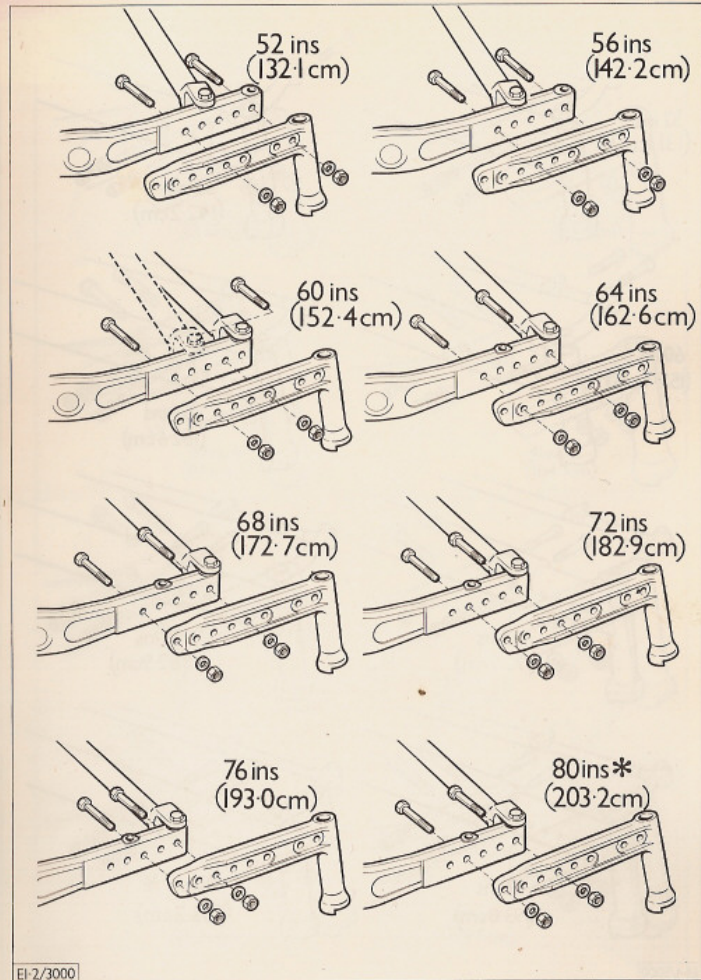
Put the wheels in the straight ahead position and align the marks on the steering arms and stub axle, Figure E4. Work on one outer axle section at a time (this is advisable in order to maintain a toe-in reference):

The procedure is the same for both sides but starting with the left-hand axle:

1. Jack up and remove the bolts holding the axle extension to the centre beam.
2. Move the axle extension to the desired position and replace the bolts in the axle as shown. On Agricultural and Highway tractors the radius rod should be set to the innermost hole on the centre beam when the 52 and 56 inch (132.1 and 142.2 cm) positions are selected and the 60 inch (152.4 cm) position, Figure E1, when equipped with power assisted steering.
3. Check and adjust the toe-in as follows:
Loosen the two clamp bolts on the left-hand drag link, (2) Figure E4, and adjust length of drag link until toe-in marks (1) on the left-hand vertical spindle and arm are in line. Tighten clamp bolts.
4. Repeat procedure for right hand axle adjustment.

ADJUSTMENT PROCEDURE (Ford 4/5000)

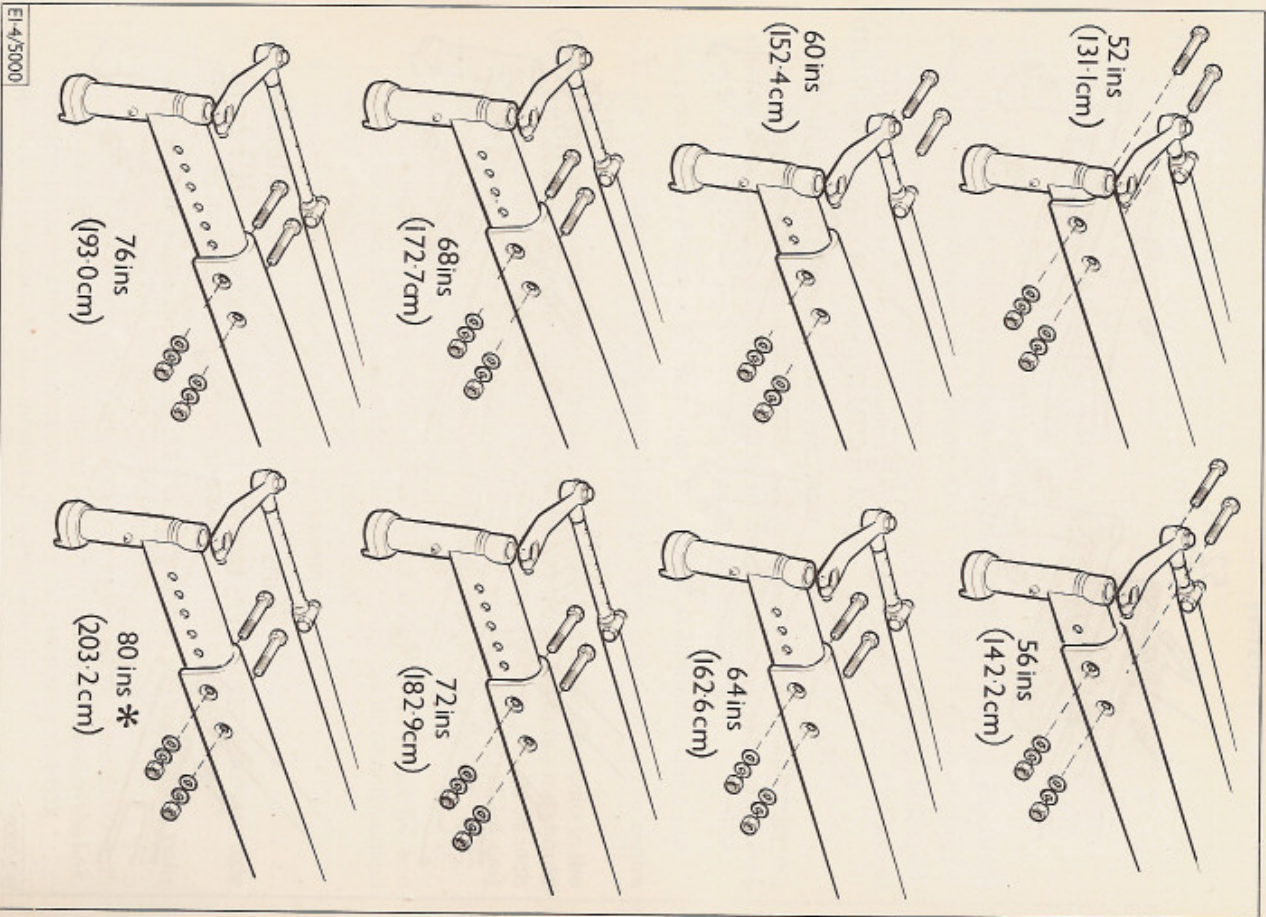
1. Jack up the front axle and remove the bolts which hold the outer axle sections to the centre axle section and the track rod clamp bolts.
2. Move the outer axle sections to the desired position and replace the bolts in the axle sections and the track rod clamp bolts.
3. Finally adjust the length of the drag link (not necessary on Ford 5000 with power-assisted steering) by removing the bolt from the front end of the link, extending the link to the required notch setting and reinstalling the bolt. (Notch 1, corresponds to the shortest drag link length)



E1-2/3000

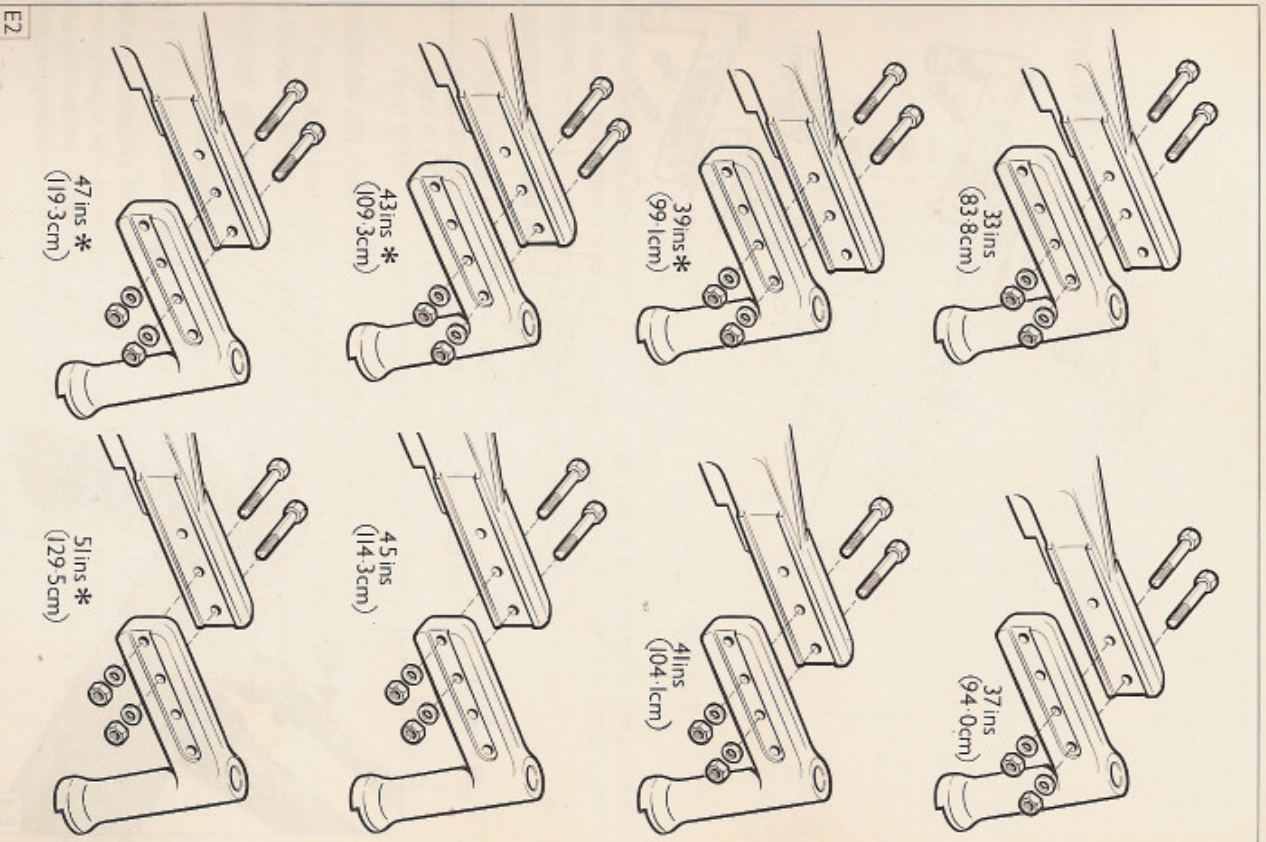
E14/5000

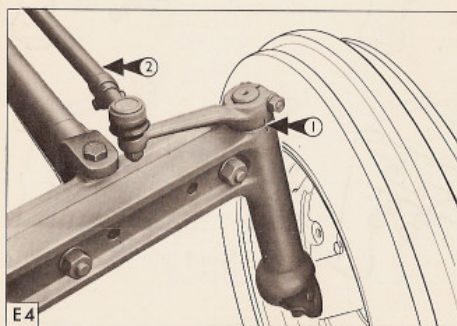
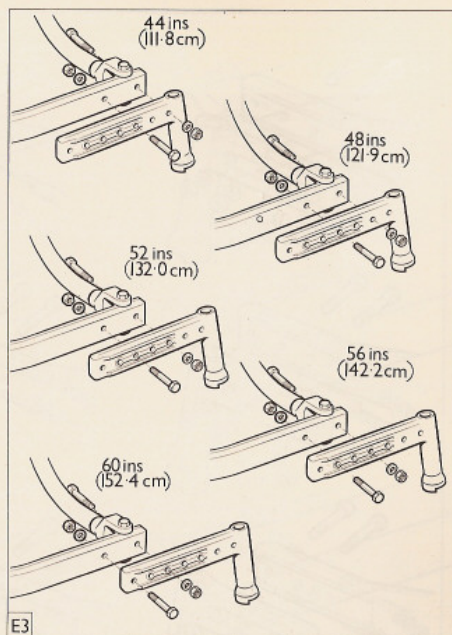
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E2

5





6

WHEELS AND TYRES

SECTION E

The table below lists notch settings for different track positions.

Track Position inches (centimetres)	Notch Setting	
	Ford 4000	Ford 5000
52, 56 (132.1, 142.2)	1	1
60 (152.4)	2	1
64 (162.6)	3	2
68 (172.7)	4	2
72, 80* (182.9, 203.2*)	5	3
76 (193.0)	6	4

* Reverse wheels.

REAR WHEEL TRACK ADJUSTMENT

Rear wheel track adjustment, Figure E5, is obtained by changing the position of the discs and rims relative to the rear axle. The adjustment ranges are as follows:—

AGRICULTURAL AND HIGHWAY

Ford 2000	48-76 inches (121.9-193.0 cm)	(1) Figure E5
Ford 3000	52-76 inches (132.1-193.0 cm)	
Ford 4000	56-80 inches (142.2-203.2 cm)	(2) Figure E5
Ford 5000	56-80 inches (142.2-203.2 cm)	

VINEYARD ((3) Figure E5)

Ford 2000 and 3000 32-52 inches (81.3-132.1 cm)

A 30 inch (76.2 cm) track is obtainable with 9.5×28 tyres only.

NARROW ((4) Figure E5)

Ford 2000 and 3000 45.25-65.25 inches (114.9-165.7 cm)

A 41.25 inch (104.8 cm) track is obtainable with 10×28 tyres only.

When changing from one track width to another it is sometimes necessary to interchange left-hand and right-hand rim or wheel assemblies to obtain the desired setting. After such a change it is important that the 'V' of the tyre tread remains pointing in the direction of forward travel.

7

SECTION E

WHEELS AND TYRES

WATER BALLASTING OF TYRES

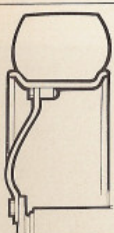
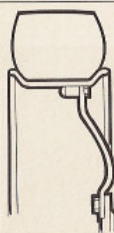
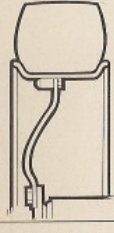
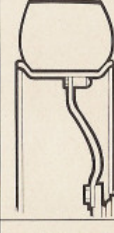
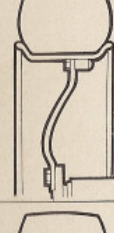
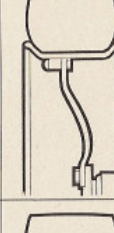
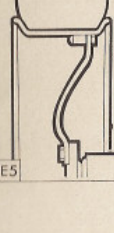
The following table is based on a 2 lb. (1 kg.) of Calcium Chloride per gallon (5 litres) of water solution giving a 75% fill of the tyre. The figures listed are for the more popular sizes of tyre and should only serve as a guide as capacities vary slightly for different makes. Your authorised Ford Tractor Dealer has the the necessary special equipment to liquid ballast tyres and will give advice on tractor ballasting.

Size of Tyre	Total weight added to tractor Pounds	Kilograms
11-2/10 x 28	518	234
12-4/11 x 28	662	300
13-6/12 x 28	806	366
16-9/14 x 30	1386	630
12-4/11 x 36	828	376
13-6/12 x 36	984	446
13-6/12 x 38	1076	490

Weighting Limitations: When adding liquid ballast and/or cast iron weights the following maxima should not be exceeded:

	Ford 2000	Ford 3000	Ford 4000	Ford 5000
1. Overall Tractor Weight (lb) (less driver)	6000 (2722)	6900 (3130)	8250 (3745)	9700 (4400)
2. Trailed Equipment—maximum front and rear ballast that can be added providing maximum tractor overall weight shown above is not exceeded:				
Front Ballast: (lb)	300	400	500	730
(kg)	136	181	227	331
Rear Ballast: (lb)	2300	3000	3400	4000
(kg)	1043	1361	1542	1814
3. Mounted Equipment—maximum rear axle loads* should not exceed:				
(lb)	4150	5000	6200	7350
(kg)	1882	2268	2812	3334

* Total rear axle weight is measured with only the rear wheels on the weigh-bridge with liquid ballast and/or cast iron weights added, and with mounted equipment in the raised position.

	1	2	3	4		1	2	3	4
	48 ins (121.9) cm	52 ins (132.1) cm	— (—)	— (—)		76 ins (193.0) cm	80 ins (203.2) cm	52 ins (132.1) cm	65.25 ins (165.7) cm
	52 ins (132.1) cm	56 ins (142.2) cm	— (—)	41.25 ins (104.8) cm		72 ins (182.9) cm	76 ins (193.0) cm	48 ins (121.9) cm	61.25 ins (155.6) cm
	56 ins (142.2) cm	60 ins (152.4) cm	32 ins (81.3) cm	45.25 ins (114.9) cm		68 ins (172.7) cm	72 ins (182.9) cm	44 ins (111.7) cm	57.25 ins (145.4) cm
	60 ins (152.4) cm	64 ins (162.6) cm	36 ins (91.4) cm	49.25 ins (125.1) cm		64 ins (162.6) cm	68 ins (172.7) cm	40 ins (101.6) cm	53.25 ins (135.3) cm

ES

SERVICING SCHEDULE

SECTION F

DAILY OR EVERY 10 HOURS (*Figures F1—F5*)

F1. Fluid Levels

With the tractor on level ground check the following fluid levels at every 10 hours up to 50 hours and then at the intervals recommended. If necessary add oil of the correct specification, see Section I.

- (a) Sump: The level should reach the upper mark on the dipstick. Allow 15 minutes for a hot engine to cool before making a check.
- (b) Transmission: The level should reach the level plug hole (dipstick mark on Ford 5000).
- (c) Rear Axle: With the hydraulic lift arms raised and with external equipment ram cylinders fully extended the level should reach the level plug hole.
- (d) Power Assisted Steering: With the engine stopped and the wheels in the straight ahead position the level should reach the bottom of the filler neck.

F2. Bowl Pre-Cleaner (where fitted)

Remove the bowl and clean thoroughly. Never allow the dirt to accumulate above the level mark on the bowl and service more frequently in extremely dusty conditions.

F3. Air Cleaner (oil bath type)

Remove the radiator chaff screen, loosen the air cleaner bowl thumbscrew and check the oil and dirt level in both cups. Drain the oil and clean the cups if the dirt level is more than 0.25 inch (6 mm) high. Refill both cups to the proper level. Do not overfill.

Under conditions of extreme dust or chaff, service the two bowls twice daily.

F4. Radiator Coolant Level

Check the coolant level in the radiator and top up if necessary. Remove the cap slowly if the cooling system is hot. If the radiator contains antifreeze top up with antifreeze solution of the correct strength.

F5. Rear Wheel Nuts

During the first 50 hours of operation the rear wheel nuts should be checked for tightness.

SECTION F

SERVICING SCHEDULE

EVERY 50 HOURS (Figures F6—F12)

F6. Air Cleaner (Oil Bath Type)

Drain the oil and clean both cups. Refill the cups with oil to the proper level. Do not overfill. Remove any dirt from the mesh screen element in the base of the air cleaner body.

F7. Battery

Clean the top of the battery, check the electrolyte level and, if necessary, add distilled water to bring the level 0.25 inch (6 mm) above the top of the separators. Do not use an exposed flame for checking the electrolyte level.

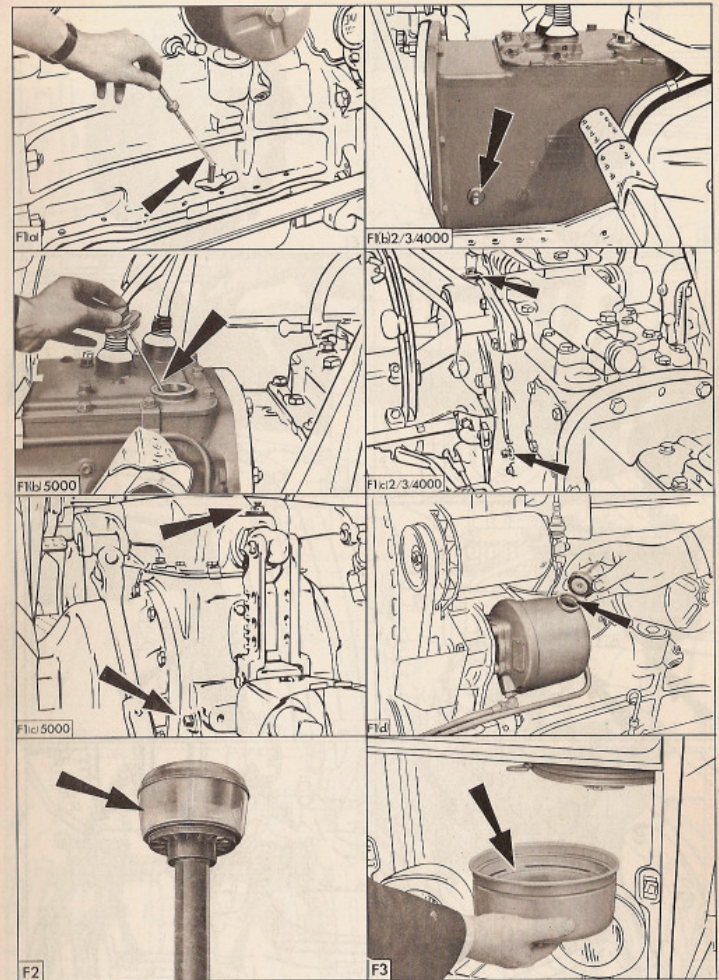
F8. Fuel Filters

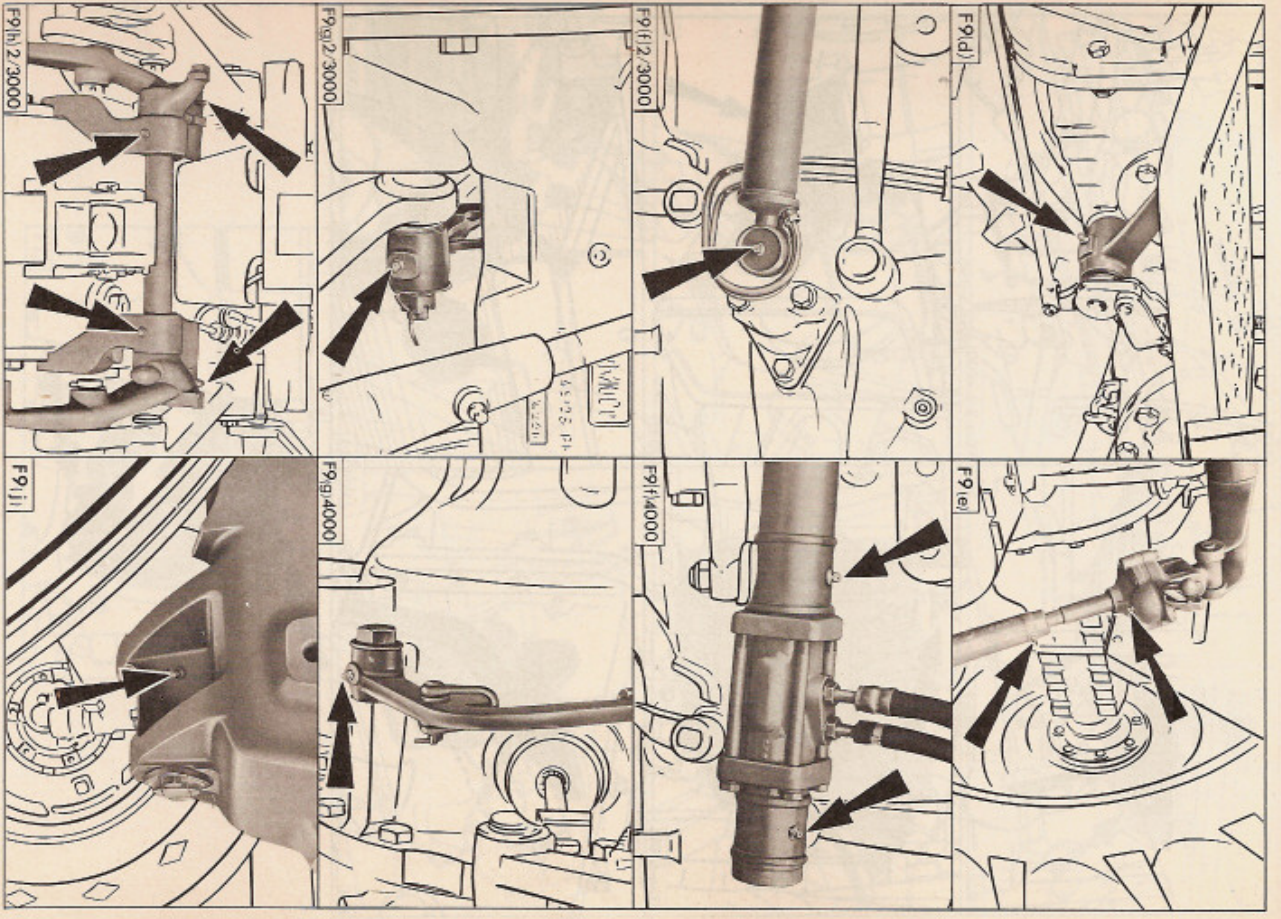
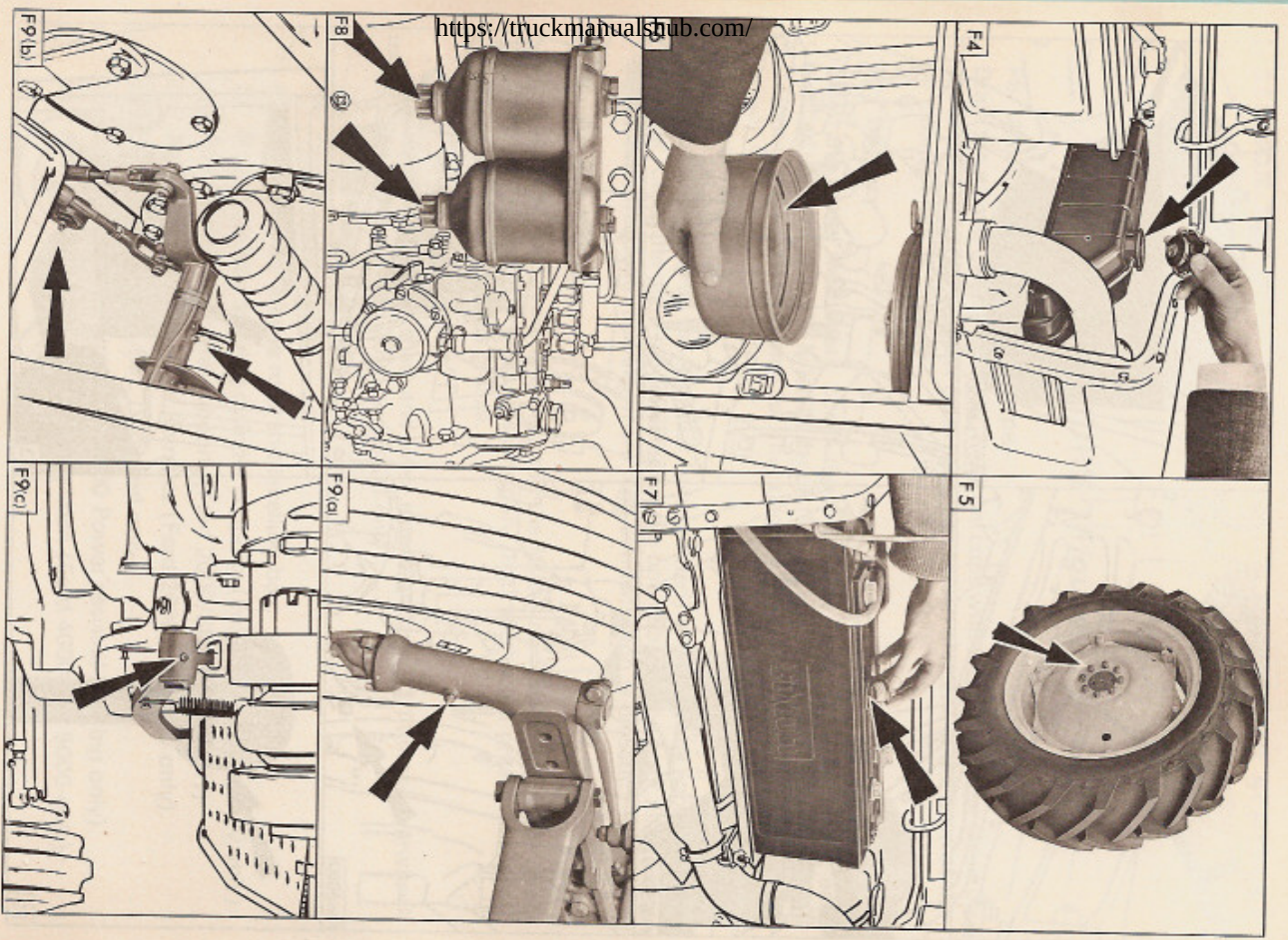
Open the drain plug on the rear filter (where fitted) and drain any accumulation of water. Close the drain plug and repeat the operation on the front filter. Carry out at more frequent intervals where high condensation is present.

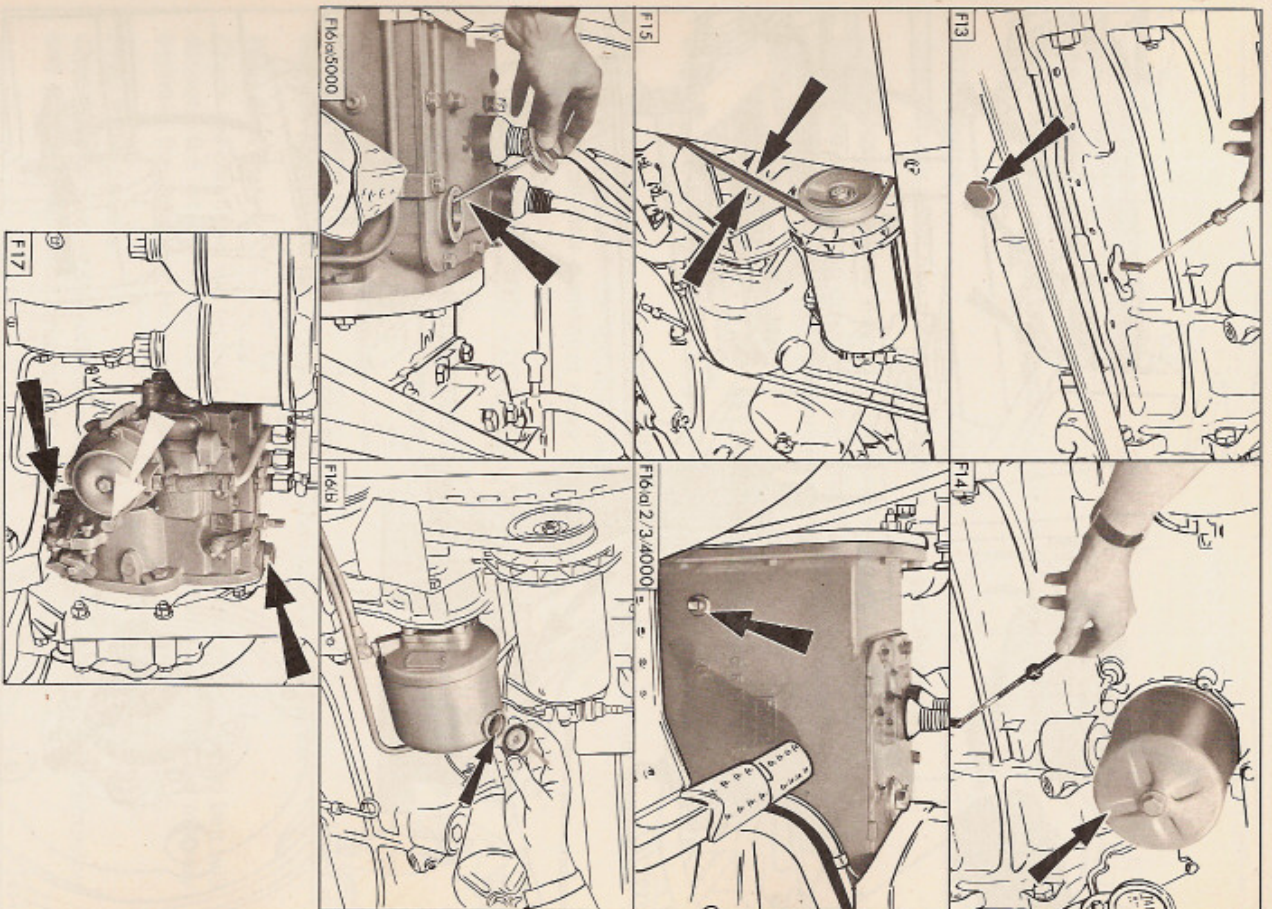
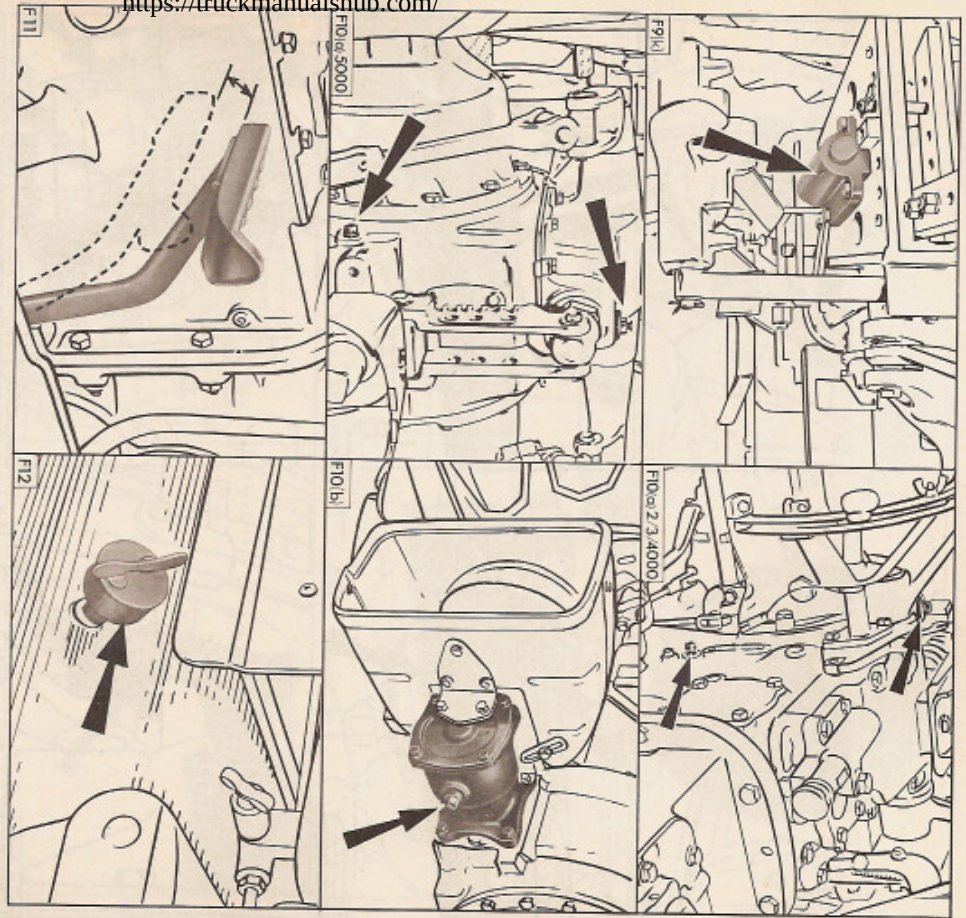
F9. Grease Fittings

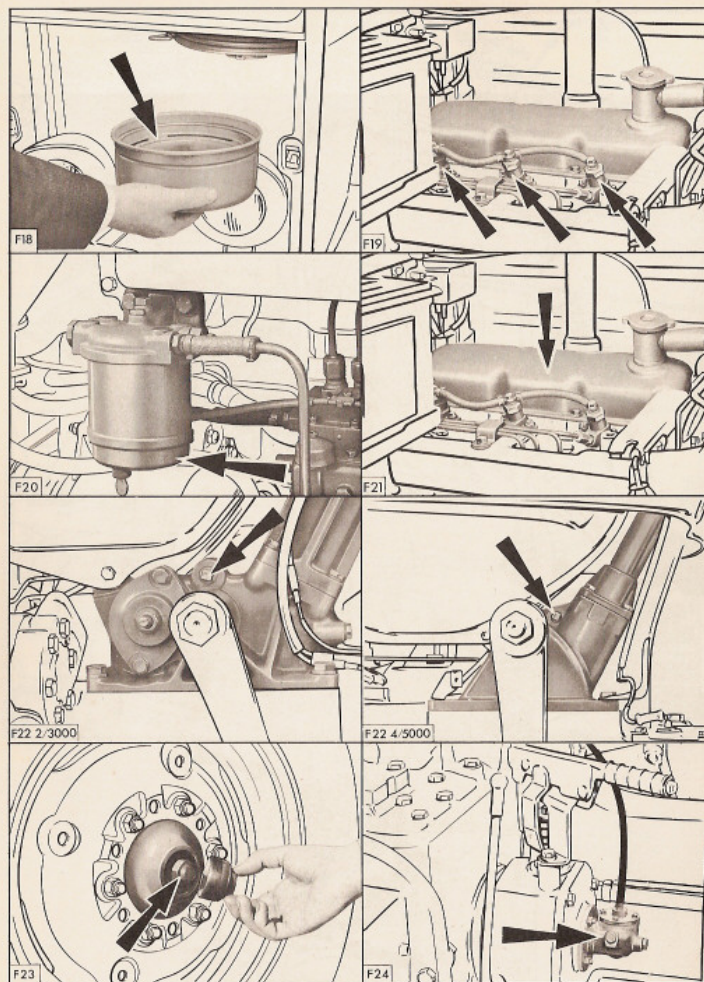
Wipe away all old grease and dirt from the following fittings and apply good quality grease, using a high pressure gun, until all the old grease has been expelled. Wipe off surplus grease.

- (a) Front wheel spindles.
- (b) Handbrake cross shaft and lever extension tube (3 fittings—rearwheel handbrake—Ford 2000 and 3000 only).
- (c) Brake pedal pivots.
- (d) Clutch pedal pivots.
- (e) Hydraulic lift linkage rods and levelling box.
- (f) Power assisted steering cylinder supports (Ford 2000/3000/4000 only).
- (g) Differential lock pedal support. (Ford 2000/3000/4000 only).
- (h) Automatic Pick-up Hitch Spindles (Ford 2000 and 3000 only).
- (i) Front axle Trunnion Pin. (Vineyard only).
- (j) Steering Centre Pivot (Ford 5000 Power assisted steering only).
- (k) Automatic pick-up hitch locking latch (Ford 4000 and 5000 only).









SERVICING SCHEDULE

SECTION F

F10. Fluid Levels

Check level and add oil, if necessary, to (a) rear axle and (b) belt pulley (where fitted).

F11. Clutch

Check clutch pedal free travel (see Section G for specifications).

F12. Clutch Release Bearing Greaser (where fitted)

Screw the greaser cap down one half turn every 50 hours (one complete turn if tractor is used on loader work continuously).

EVERY 150 HOURS (Figure F13)

Engine Oil (Engines operating at temperatures below 10°F (−12°C))

Run the engine to normal operating temperature then drain the engine oil. Refill the engine with the specified quantity of oil. Change the oil filter element at every 300 hours.

EVERY 300 HOURS (Figures F13—F17)

F13. Engine Oil (Engines operating at temperatures above 10°F (−12°C))

As 150 hours service.

F14. Engine Oil Filter

Remove and discard the oil filter element, and install a new element.

F15. Fan Belt

Check the condition and tension of the fan belt. A correctly tensioned belt will deflect a 0.5 inch (13 mm) total movement when pressure is applied midway between the generator and crankshaft pulley.

F16. Fluid Levels

Check the oil level of the following and top up if necessary: (a) Transmission and (b) Power assisted steering (where fitted).

SECTION F

SERVICING SCHEDULE

F17. Fuel Pump (Ford 3000 and Ford 5000 only)

Drain the oil and refill with fresh oil to the height of the level plug hole. Remove the cover and gauze from the pump breather, wash in a suitable solvent and reassemble.

EVERY 600 HOURS (Figures F18—F24)

F18. Air Cleaner (Oil Bath Type)

Remove the complete air cleaner assembly from the tractor. Remove the inner and outer cups and discard the oil. Wash the cups and the mesh screen inside the body of the air cleaner in a suitable solvent, and allow to dry. Refill both cups with oil to the proper level, reassemble the air cleaner and install the assembly in the tractor.

F19. Fuel Injectors

Swing out the battery tray to gain access to the injectors, remove the injectors (see section G) and have them checked by an Authorised Ford Tractor Dealer.

F20. Fuel Filter (Single—where fitted)

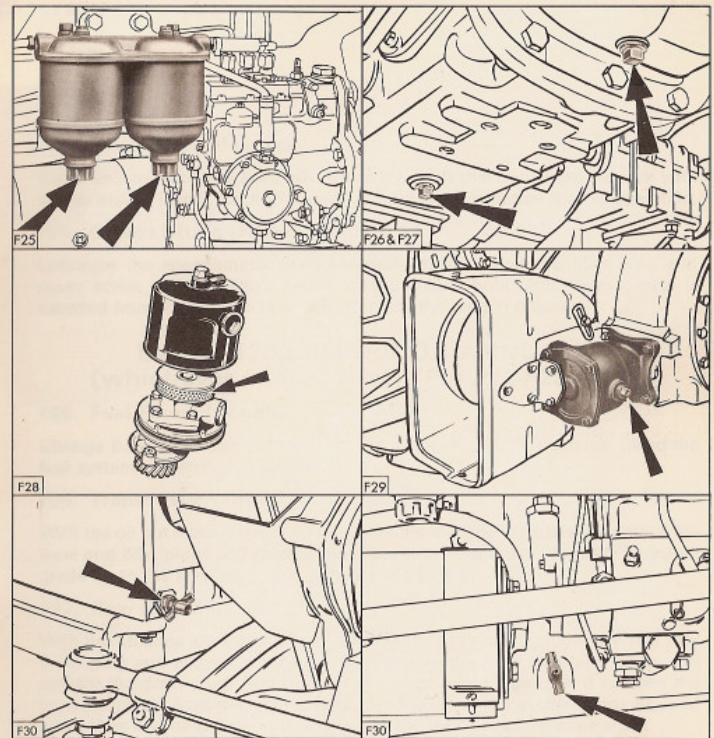
Close the fuel tank shut-off valve and remove the filter bowl from the filter body. Discard the element and the element sealing rings. Wash the bowl and body with a brush and clean fuel. Install a new element and sealing rings. Absolute cleanliness must be observed during this operation. Open the fuel tank shut-off valve and bleed the fuel system as detailed in section G.

F21. Valve Tappet Clearance

Swing the battery tray outwards to gain access to the rocker cover. Check the valve tappet clearances as detailed in Section G.

F22. Fluid Level

Check the oil level in the steering box by first removing the left-hand steering shroud then the combined level and filler plug. If required top up the oil to the level of the filler plug hole.



SERVICING SCHEDULE

SECTION F

F23. Front Wheel Bearings

Clean and examine the front wheel bearings and their housings. Repack with grease and re-install. Section G gives the detailed procedure for this operation.

F24. Grease fitting (Highway only)

Lubricate the speedometer drive assembly by removing the filler plug and cover screw, and injecting grease into the filler hole until clean grease is expelled from the cover screw hole. Replace the plug and screw.

EVERY 1200 HOURS OR ANNUALLY (whichever occurs first) (Figures F25—F29)

F25. Fuel Filters (Double—where fitted)

Change *both* filter elements as outlined in the 600 HOUR service. Bleed the fuel system as detailed in section G.

F26. Transmission Oil

With the oil hot remove the drain plug and allow all the oil to drain. Remove the level and filler plugs and replace the drain plug. Refill with oil of the specified grade up to the level plug hole (dipstick mark on Ford 5000).

F27. Rear Axle Oil

With the lift arms lowered and any external rams retracted remove the rear axle drain plug and allow the oil to drain. Remove the level and filler plugs and replace the drain plug. Add new oil of the specified type until it reaches the level plug hole. Start the engine, fully raise the lift arms and extend any external rams, then add oil to bring the level up to the level plug hole once again.

F28. Power Assisted Steering Pump Oil Filter Element

Replace the filter element by first detaching the complete pump assembly from the tractor, draining the oil from the reservoir, removing the reservoir and finally the element. Before detaching the pump from the tractor thoroughly clean the assembly and observe absolute cleanliness throughout the dismantling operation. Clean the reservoir and, using the two locating lugs on the pump, re-install the pump assembly on the tractor. Fill the reservoir with fresh oil, start the engine and turn the steering from lock to lock to expel any air from the system. Top up the reservoir with oil to the bottom of the filler neck.

SECTION F

SERVICING SCHEDULE

F29. Belt Pulley (where fitted)

Discard the lubricating oil by removing the pulley assembly from the PTO shaft, removing the filler/drain plug and inverting the pulley. To refill with fresh oil it will be necessary to temporarily position the pulley on the PTO shaft to fill with oil correctly to the level hole. Replace the level plug, locate the pulley in the position required and secure with the four attaching bolts.

EVERY 2400 HOURS

Hydraulic Filters

Both inlet and exhaust oil filters in the hydraulic system should be inspected by an Authorised Ford Tractor Dealer and replaced if necessary.

SEASONAL SERVICES

Radiator Coolant (Figure F30)

Drain and flush the radiator every 24 months where a 50% solution of 'permanent' (Ford Part No. ESEM97B-18C) anti-freeze is used. Refill the radiator with 50% 'permanent' anti-freeze and 50% water.

SERVICING SCHEDULE

SECTION F

Rear Axle and Hydraulic Lift System

On tractors fitted with an engine mounted, piston type hydraulic pump (Ford 2000 and 3000, and Ford 4000 Transmission PTO) improved hydraulic system action can be achieved in cold weather by mixing a Blending Fluid with the specified rear axle lubricant. For all locations except North America the Ford Blending Fluid Part Number is ESNM99C-69-A. For North America the Ford Part Number is M-4864-D.

Use the Blending Fluid in the following proportions:—

ESNM99C-69-A	10% fluid to 90% oil for temperatures between +20°F and 0°F (—7°C and —18°C)
	20% fluid to 80% oil for temperatures between 0°F and —20°F (—18°C and —29°C)
M-4864-D	50% fluid to 50% oil for temperatures between +20°F and —20°F (—7°C and —29°C)

Any additional oil required to fill to the level plug or required for auxiliary rams should be blended as above.

To prevent premature rear axle wear tractors having a blend of ESNM99C-69-A must have the rear axle oil drained and refilled annually. When the ambient temperature reaches +40°F (4°C) tractors having 0°F to —20°F (—18°C to —29°C) blend of ESNM99C-69-A or the M4864-D blend must have the oil drained and replenished with one of the following non-blended oils:

Ford 2000 & 3000 SAE 20W/30 or SAE 80EP

Ford 4000 Ford ESN-M2C53-A or Ford ESEN-M2C86-A

VALVE TAPPET CLEARANCE

1. By turning the engine place No. 1 cylinder on Top Dead Centre (TDC) of the **firing** stroke using the flywheel access hole, Figure G1, to indicate TDC. Both valves of No. 1 cylinder will be closed in this position.

- | | |
|--------------------------|--------------|
| Ford 2000, 3000 and 4000 | 1, 5 Inlet |
| | 2, 4 Exhaust |
| Ford 5000 | 1, 3 Inlet |
| | 2, 6 Exhaust |

- | | |
|--------------------------|----------------------------|
| Ford 2000, 3000 and 4000 | 3 Inlet
6 Exhaust |
| Ford 5000 | 5, 7 Inlet
4, 8 Exhaust |

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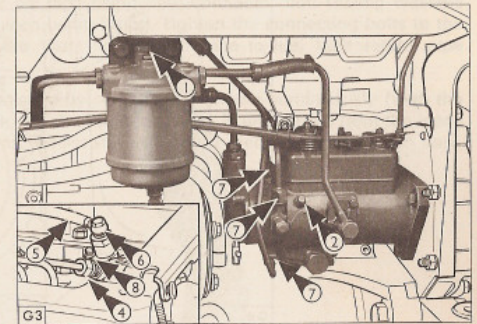
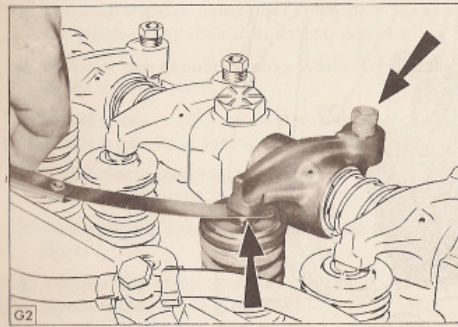
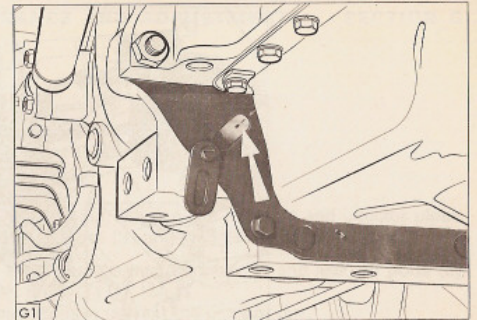
SECTION G GENERAL MAINTENANCE AND ADJUSTMENTS

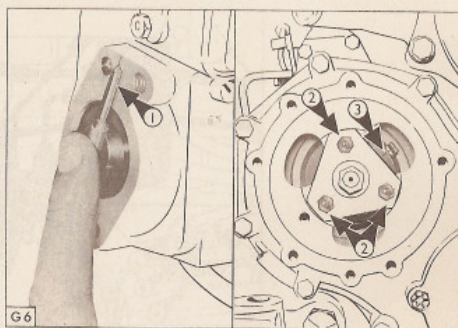
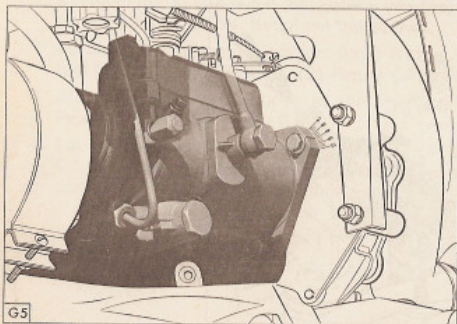
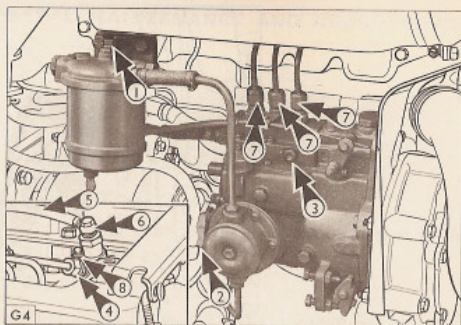
FUEL SYSTEM

BLEEDING THE FUEL SYSTEM (Figure G3 and Figure G4)

When the filter elements have been changed or when air is present in the system the fuel system should be bled as follows:

1. Ensure that there is adequate fuel in the tank.
2. Loosen the bleed screw(s), (1) Figure G3 and (1) Figure G4, on top of the fuel filter(s) and bleed the system until fuel free of air bubbles issues from the bleed points. Retighten the screws.
To bleed the system on tractors fitted with a Simms pump, operate the fuel lift pump priming lever, (2) Figure G4.
3. Bleed the system as above at the injection pump bleed screw, (2) Figure G3 and (3) Figure G4.
4. Loosen the injector pipes at the injectors, (4) Figure G3 and (4) Figure G4, and turn the engine until fuel, free of air bubbles, flows from each connection. Retighten each connection.





GENERAL MAINTENANCE AND ADJUSTMENTS SECTION G

INJECTOR REPLACEMENT (Figures G3 and G4)

Change the injectors as follows:

1. Thoroughly clean the area surrounding the injectors and injector pipes, then remove the leak-off pipes (5) and the injector-to-pump pipes.
2. Cover the ends of the pipes, the injector inlet (4) and leak-off ports (6) and the pump outlet ports (7). This is extremely important to prevent the entry of dirt.
3. Unscrew the two injector retaining nuts (8) at each injector and remove the injectors and their dust sealing washers.
4. Remove the copper seating washers from the injector locating bores in the cylinder head.
5. Install a new copper seating washer in each injector locating bore and locate a new dust sealing washer over each bore.
6. Install the replacement injectors and tighten the retaining nuts evenly. Do not overtighten.
7. Re-install the injector-to-pump pipes tightening the connections finger tight.
8. Tighten the connections at the pump, leaving the connections at the injectors loose (see 10 below).
9. Re-install the leak-off pipe using new connector bolt sealing washers above and below each banjo fitting. Tighten the connecting bolts to the injectors and ensure that the leak-off pipe-to-fuel tank return pipe fittings are tight.
10. Finally, bleed the system by cranking the engine continuously (with the stop control pushed in) until fuel free of air is discharged from the loose injector connections. Whilst still cranking the engine tighten each connection in turn.

SECTION G GENERAL MAINTENANCE AND ADJUSTMENTS

TIMING THE FUEL INJECTION PUMP

If at any time the fuel injection pump is removed the pump must be correctly timed when re-installed.

Proceed as follows:

(a) C.A.V. PUMP (Figure G5)

Before fully tightening the three pump retaining bolts align the mark on the pump mounting flange with the zero mark on the engine front mounting plate, the pump will then be correctly timed.

(b) SIMMS PUMP (Figure G6)

Remove the flywheel inspection cover, Figure G1, and the cover from the rear of the injection pump.

The engine is correctly timed if a suitable pointer (1), placed in the vee-notch in the pump camshaft, aligns with the mark on the pump housing when the flywheel mark is set to 19° BTDC (before top dead centre) on the **compression** (both valves closed on No. 1 cylinder) stroke.

If the timing marks are not aligned:

1. Remove the inspection plate from the front of the engine timing cover (for easier access, remove the lower radiator hose after draining the radiator coolant).
2. Slacken the three pump drive gear securing bolts (2) and rotate the pump until the marks (3) are aligned.
3. Tighten the gear securing bolts (if removed, replace the lower radiator hose, and refill the radiator).
4. Replace the injection pump end cover and flywheel inspection cover. Finally, bleed the system.

ENGINE SPEED ADJUSTMENTS

The idling and maximum no load speeds of the engine are set by adjustments on the fuel pump.

The maximum speed (no load) is set at the factory to

2225–2275 rpm for the Ford 2/3000

2425–2475 rpm for the Ford 4000

2325–2375 rpm for the Ford 5000

The correct idle speed is 600–700 rpm and if either the idling or maximum no load speeds are incorrect, consult your Authorised Ford Tractor Dealer.

GENERAL MAINTENANCE AND ADJUSTMENTS SECTION G

WHEELS

REPACKING THE FRONT WHEEL BEARINGS (Figure G7) (see also Section F)

With the tractor on level ground, lock the rear wheels and jack up one of the front wheels. Remove the hub cap (1), the split pin (2), the slotted hexagonal nut (3), the thrust washer (4) and the outer bearing (5), then the wheel and hub assembly (6). Finally remove the grease retainer (7) from the rear of the hub, and the inner bearing (8).

Thoroughly clean all parts in a suitable solvent and allow to dry naturally. Do not use compressed air. Inspect the bearing cone/roller assemblies for excessive discoloration or wear of the rollers; similarly check the bearing cups.

Repack the cones, and pack the space between the bearing cups in the hub, with clean No. 2 Lithium type grease. Place a film of grease on the spindle.

Re-install the assembly using the reverse of the removal procedure fitting a new grease retainer in the rear of the hub.

Tighten the slotted nut, while turning the wheel, until a slight drag is felt. Then slacken off the nut until the nearest slot lines up with the hole in the spindle. Install a new splitpin and replace the hub cap.

Repeat the operation for the opposite front wheel.

It is recommended where operating conditions are consistently wet and muddy that wheel bearings should be greased more frequently than every 600 hours. To simplify this operation special hub caps (9) incorporating grease nipples are available as an accessory.

BRAKES

FOOTBRAKE ADJUSTMENT

Whenever the travel of the foot brake pedals becomes excessive, or if the travel of one is unequal to that of the other, adjustment should be made in the following manner.

SECTION G GENERAL MAINTENANCE AND ADJUSTMENTS

FORD 2000 AND 3000 (Figure G8)

1. With the brake drums cold and the differential lock (where fitted) disengaged, block one rear wheel and jack up the other.
2. Remove the adjustment slot plug in the brake back plate and using a screwdriver through the slot rotate the adjuster (1) to expand the brake shoes. Expand the shoes until they lock the wheel then back off the adjuster until the wheel is just free to rotate without binding. Replace the adjustment slot plug.
3. Lower the tractor, block the adjusted wheel, raise the opposite wheel and adjust the other brake.
4. After both brakes have been adjusted road test the tractor to ensure the brakes are applied evenly.

FORD 4000 AND 5000 (Figure G9)

1. Position a 1½ inch (3.8 cm) high block (1) between the right-hand brake pedal shank and the platform support. Loosen the adjuster locknut (2) and turn the adjuster (3) until the brake is solid. Re-tighten the lock-nut.
2. Release the pedal and repeat the above procedure on the left-hand pedal.
3. After adjustment road test the tractor. If either brake is found to pull, turn the adjuster to give a small increase in length of the appropriate rod until the brakes apply evenly.

Check the tightness of the lock-nut.

HANDBRAKE ADJUSTMENT (All Models)

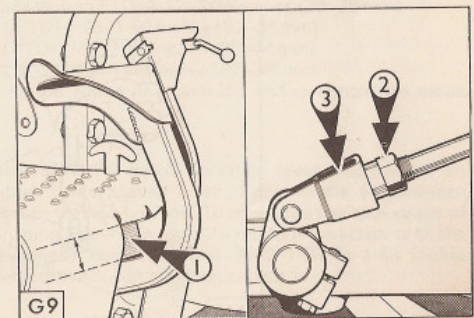
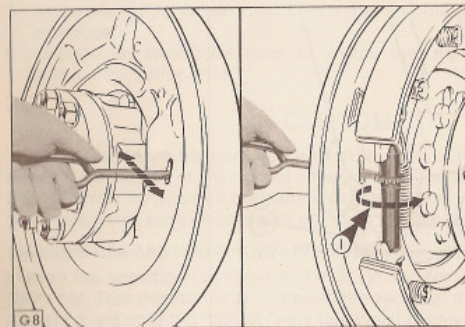
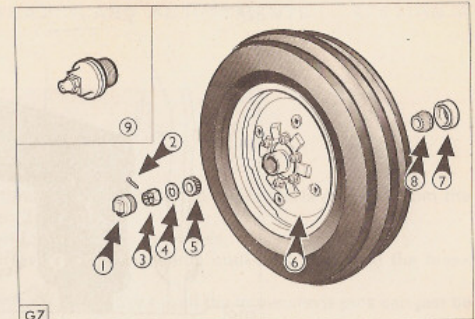
TRANSMISSION TYPE (Figure G10)

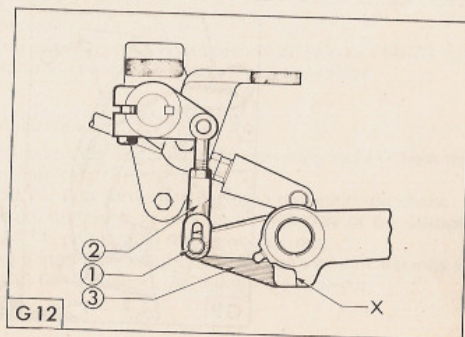
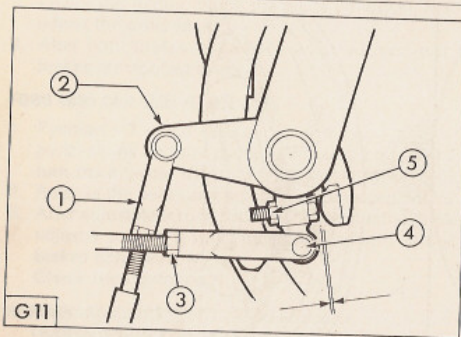
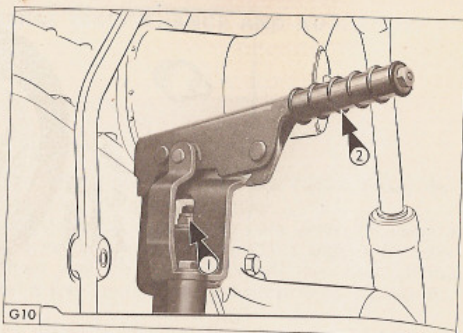
1. Fully release the handbrake.
2. Turn the self-locking nut (1) until it requires a 30–45 lb (14–20 kg) pull (2) at the handgrip to engage the first notch of the sector.

REAR WHEEL TYPE

FORD 2000 AND 3000 (Figure G11)

1. First adjust the footbrakes then disconnect the operating rod (1) from the left-hand brake camshaft lever (2).
2. With the handbrake lever fully forward, loosen the operating rod clevis lock-nut (3) and rotate the clevis to take up all free play in the linkage. Replace the clevis pin (4) and tighten the clevis lock-nut.
3. Loosen the adjustment stop bolt lock-nut (5) and adjust the clearance to 0.025–0.035 inches (0.64–0.89 mm). Re-tighten the lock-nut.





GENERAL MAINTENANCE AND ADJUSTMENTS SECTION G

REAR WHEEL TYPE FORD 4000 AND 5000 (Figure G12)

1. First adjust the footbrakes then remove the lower clevis pins (1) from the two adjustable links (2).
2. Fully release the handbrake and brake pedals.
3. Pull the cross shaft levers (3) downwards until they abut with the brake pedals at 'X'.
4. Alter the length of the adjustable links until the lower clevis pins can just be inserted at the bottom of the slotted clevis.
5. Assemble the cotter pins and tighten the lock-nuts on both adjustable link assemblies.
6. Operate the handbrake lever to ensure that the system operates freely without excessive slack.

CLUTCH

To obtain maximum life from the clutch it is essential that the clutch pedal free travel is maintained at the correct specification. The free travel is the distance the pedal can be moved before any resistance is met. If the pedal free travel is incorrect adjust as follows:

TRANSMISSION AND INDEPENDENT PTO ONLY (Figure G13)

Loosen the operating rod clevis lock-nut (1) and remove the split pin and the clevis pin. Turn the clevis (2) to increase or decrease the effective length of the operating rod until the correct pedal free travel is obtained:

Ford 2000 and 3000 (Transmission PTO)	1.12–1.38 inches (29–35 mm)
Ford 4000 (Transmission PTO)	1.25–1.50 inches (32–38 mm)
Ford 4000 (Independent PTO)	1.62–1.88 inches (41–48 mm)
Ford 5000 (Independent PTO)	1.25–1.50 inches (32–38 mm)

Replace the clevis pin, secure with a new split pin and re-tighten the clevis locknut.

LIVE PTO (Figure G14)

With this type of transmission the clutch operating lever incorporates an adjusting screw (1) which bears against a 'stop' cast in the transmission housing when the pedal is in the free position. To adjust the free movement of the pedal loosen the adjusting screw lock-nut (2) and turn the screw until the correct free travel is obtained: Ford 2000 and 3000 1.38 to 1.63 inches (35 to 41 mm). Re-tighten the lock-nut after adjustment.

SECTION G GENERAL MAINTENANCE AND ADJUSTMENTS

LIGHTING EQUIPMENT BULB REPLACEMENT

INTERNAL HEADLAMPS

(a) SEALED BEAM TYPE

1. Remove the radiator chaff screen.
2. Ease the sealed beam unit from the rubber rim.
3. Detach the connector socket from the rear of the sealed beam unit.
4. Fit a new sealed beam unit to the connector socket and re-install the parts using the reverse of the removal procedure.

(b) BULB TYPE

1. Remove the radiator chaff screen.
2. Detach the bulb holder retaining spring and remove the bulb.
3. Fit a new bulb and re-install.

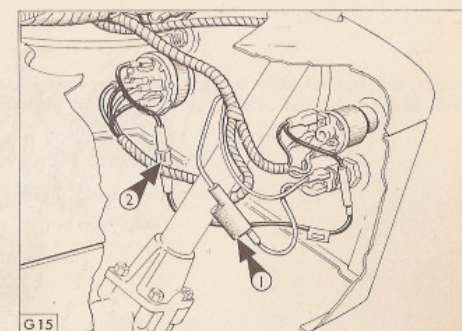
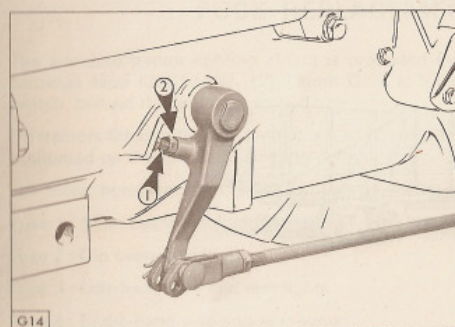
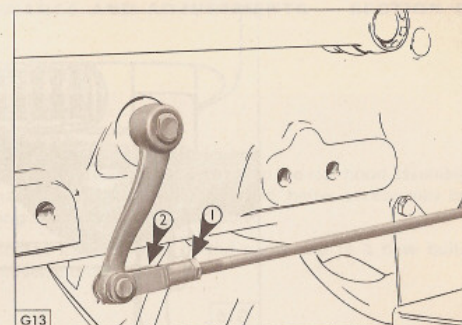
NOTE: On Vineyard tractors the side-light bulbs are contained within the headlights.

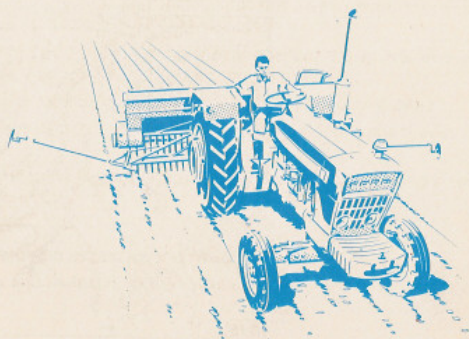
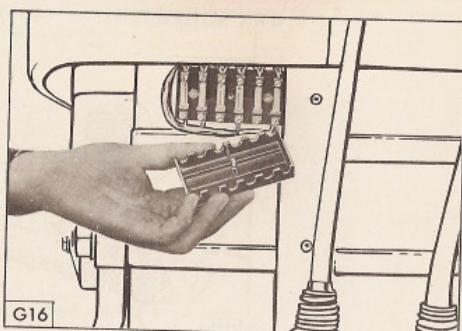
EXTERNAL HEADLAMP BULB

1. Loosen the rim locking screw and detach the rim and reflector assembly from the lamp body.
2. Remove the bulb holder from the reflector by pushing the holder inwards and anti-clockwise. Remove the bulb from the holder.
3. Fit a new bulb in the reflector making sure that it is correctly located.
4. Replace the bulb holder noting that it will only locate in one position in the reflector.
5. Refit the assembly into the lamp body and secure with the rim locking screw.

SIDE/REAR LIGHT BULB

1. Remove the lens and rim assembly and the bulb.
2. Install a new bulb and re-install in the reverse order.





GENERAL MAINTENANCE AND ADJUSTMENTS SECTION G

PANEL OR WARNING LIGHT BULB

1. Remove the screws securing the instrument panel to the rear hood assembly and pull the instrument panel outwards. If required, better access may be obtained by detaching the proofmeter drive cable.
2. Remove the bulb socket from the rear of the panel and fit a new bulb. Re-assemble in the reverse order.

FUSE REPLACEMENT

The standard tractor lighting circuit is protected by a 15 amp fuse and the cartridge type fuse holder, (2) Figure G15, is located close to the lighting switch, behind the fuel tank shroud.

On tractors fitted with wide fenders a fuse box Figure G16 containing six fuses is situated on the left-hand steering shroud.

The fuses, numbered on the box, protect the following circuits:—

Fuse 1: Main beam headlights

Fuse 2: Dip beam headlights

Fuse 3: Left-hand side and rear lights

Fuse 4: Right-hand side and rear lights

Fuse 5: Flasher unit

Fuse 6: Brake lights and horn

Tractors supplied with direction indicators but not wide fenders have three cartridge type fuses adjacent to the lighting switch, behind the fuel tank shroud.

The fuse leads are colour-coded as follows:—

Red: Right-hand side and rear lights

Red/Black: Left-hand side and rear lights

Green/Light Green: Flasher unit

SECTION G GENERAL MAINTENANCE AND ADJUSTMENTS

TRACTOR STORAGE

If a tractor is to be stored for an extended period carry out the following operations:

1. Thoroughly clean the tractor.
2. Lubricate the tractor; drain all oil from the engine, the transmission and rear axle, and refill with new oil to the correct specification.
3. Drain the fuel tank of ordinary fuel and pour about two gallons of special calibrating (lubricating) fuel (consult your authorised Ford Tractor Dealer for availability) into the fuel tank.
4. Run the engine for about 10 minutes to ensure complete distribution of the special oil throughout the fuel system. There is no need to remove the injector nozzles.
5. Remove the battery and check that it is fully charged. Store the battery in a warm place and re-charge periodically.
6. Place supports under the tractor axles to take the weight off the tyres.
7. Drain all coolant from the radiator and engine block.
8. Support the lift arms in the fully raised position.
9. Cover the exhaust pipe opening.

To prepare the tractor for service after the storage period:—

1. Inflate tyres to the recommended pressures; refill the cooling system and the fuel tank; check the oil levels in the engine sump, transmission, and rear axle; install a fully charged battery.
2. Remove the exhaust pipe covering (if other than rain cap attachment).
3. Start the engine and let it idle a few minutes. Check that all controls are functioning correctly and that the engine is receiving lubrication.
4. Drive the tractor without a load to ensure that it is operating satisfactorily.

OPTIONS AND ACCESSORIES

SECTION H

3-POINT LINKAGE

AUTOMATIC PICK UP HITCH

The hydraulically operated pick-up hitch installation, available as a production option or accessory, provides a means whereby trailers, etc., can be quickly attached to the tractor without it being necessary for the operator to leave the seat.

The design of the auto-hitch is such that equipment may be operated on the normal 3-point linkage without removing the auto-hitch from the tractor. Raising and lowering of the hitch hook is controlled by the standard hydraulic lift lever. A special device is incorporated in the hitch unit to mechanically lock it in the raised position.

To operate the automatic pick-up hitch, (Figure H1 and Figure H2) (hitch in raised position)

1. Set the Position/Draft selector lever to Position Control.
2. Move the hydraulic lift main control lever to the fixed stop at the top of the quadrant to take the weight of the hitch off the locking struts (1).
3. Pull the release handle (2) (forwards on the Ford 2000 and 3000 tractors, upwards on the Ford 4000 and 5000 tractors) while moving the hydraulic lift main control lever down the quadrant. Allow the spring loaded release handle to return to its normal position as soon as the hitch arms (3) have lowered sufficiently for the locking lugs (4) to clear the locking struts.
4. Position the hitch hook directly under the eye of the drawbar of the trailed equipment.
5. Move the main control lever slowly up the quadrant until the hook engages with the eye. Continue moving the main control lever to the fixed stop at the top of the quadrant to fully raise the hook, then drop the lever slightly to allow the locking lugs on the hitch lifting arms to rest on the locking struts. The downward load on the automatic pick-up hitch hook should not exceed 3000 lbs (1361 kg).

Adjustments (Ford 2000 and 3000)

Periodically check, with the lift arms in the fully raised position, the clearance between hook and the drawbar support assembly plate, (5) Figure H1.

The specified clearance is 1/32 inch (0.8 mm) and if any adjustment should be required turn the yokes on the lifting rods an equal amount until the correct gap is obtained (half a turn of the yoke will alter the clearance by 1/50 inch (0.5 mm)).

SECTION H

OPTIONS AND ACCESSORIES

Adjustments (Ford 4000 and 5000)

Set the distance between the lock nut and adjustment guide shoulder, (6) Figure H2 to 0.75 in (19 mm) and raise the hydraulic linkage to the fully raised position. Adjust both guides equally to raise the hook high enough to allow free movement of the locking latch during engagement and disengagement. Tighten both lock nuts.

SWINGING DRAWBAR FOR AUTOMATIC PICK-UP HITCH

A swinging drawbar is available that has been specially designed for use with the auto-hitch.

The drawbars for the Ford 4000 and 5000 have the same range of adjustment as those mentioned in Section D, but the drawbar for the Ford 2000 and 3000 differs as follows:

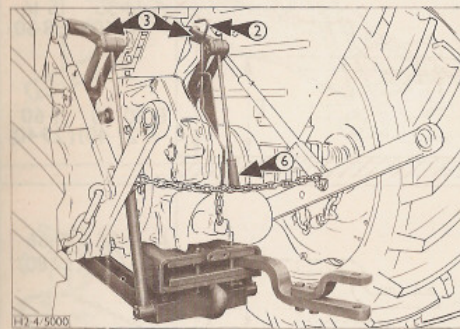
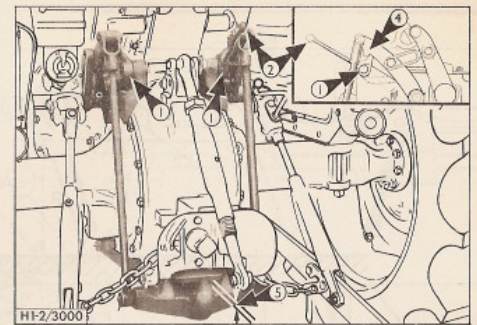
1. Three holes in the front of the drawbar provide alternative fixing positions on the front anchor bracket giving 9 inch (22.9 cm), 14 inch (35.6 cm) and 16 inch (40.6 cm) positions, measured from the end of the PTO shaft.
2. The effective height of the drawbar can be varied to give eight different positions, Figure H3, by changing the position of the support bracket pin and/or inverting the drawbar/drawbar clevis.

The swinging drawbar for the Ford 2000 and 3000 uses the same support points as the auto-hitch so it is not possible to install both pieces of equipment at the same time, however, it takes only a few minutes to convert to either installation.

To do this it is recommended that the following instructions are followed:

To install swinging drawbar (Figure H4)

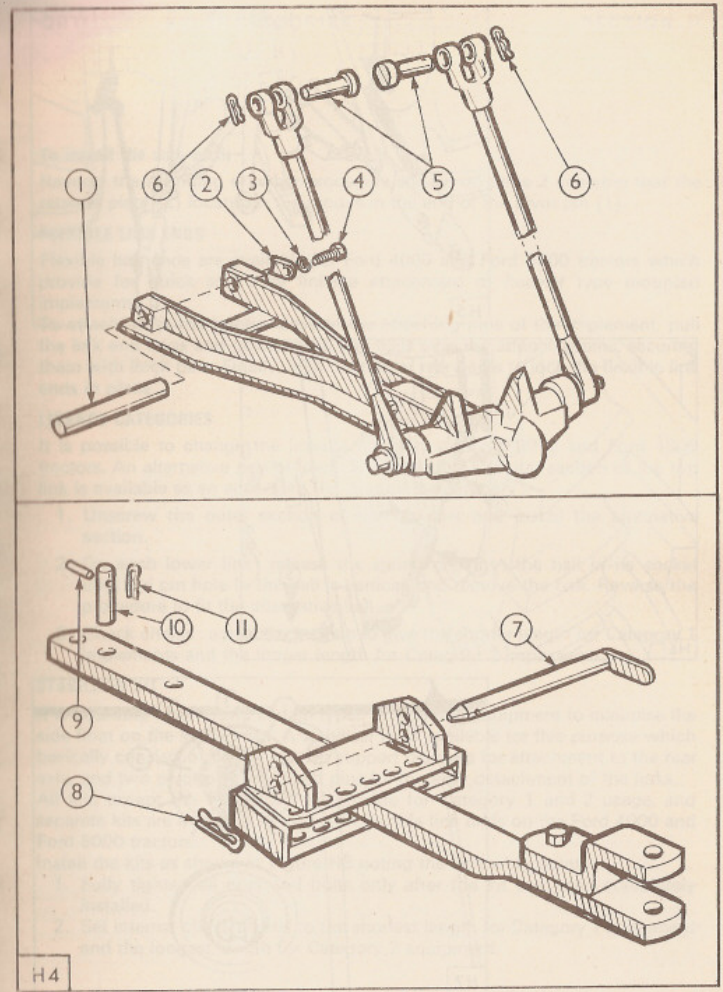
- (a) Fully lower the pick-up hitch.
- (b) Disconnect the hook frame at the rear by removing (1), (2), (3) and (4).
- (c) Disconnect the lift arms by removing (5) and (6).
- (d) Remove the lift arms and hook frame from the tractor.
- (e) Install the drawbar support plate using (7) and (8).
- (f) Install the swinging drawbar using (9), (10) and (11) at any one of the three front holes depending on the rearward extension required.



	FORD 2000	FORD 3000
	ins (cms)	ins (cms)
	A 16-36 (41-53)	17-16 (43-57)
	B 12-80 (32-40)	13-60 (34-50)
	A 14-36 (36-40)	15-16 (38-50)
	B 10-80 (27-40)	11-60 (29-40)
	A 14-86 (37-60)	15-66 (39-80)
	B 11-30 (28-80)	12-10 (31-50)
	A 12-86 (32-50)	13-66 (34-70)
	B 9-30 (23-60)	10-10 (25-50)

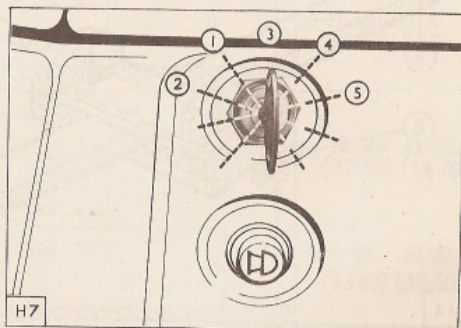
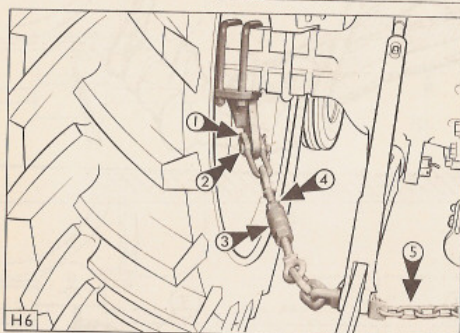
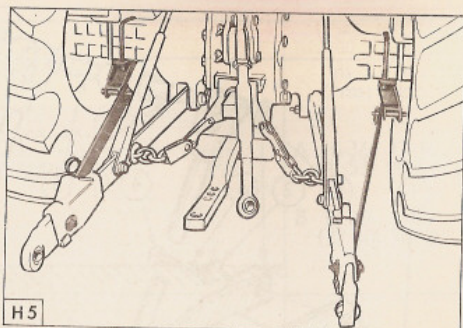
H3

4



H4

5



OPTIONS AND ACCESSORIES

SECTION H

To install the auto-hitch

Reverse the swinging drawbar procedure shown on page 2 ensuring that the retainer plate (2) locates in the groove in the end of the pivot pin (1).

FLEXIBLE LINK ENDS

Flexible link ends are available for Ford 4000 and Ford 5000 tractors which provide for quick and easy linkage attachment of heavier type mounted implements.

To attach, back the tractor close to the attaching pins of the implement, pull the link end rings and position the link balls over the attaching pins, securing them with linch pins. Finally, inch the tractor rearwards to lock the flexible link ends in place.

LINKAGE CATEGORIES

It is possible to change the linkage category on Ford 3000 and Ford 4000 tractors. An alternative pair of lower link balls and an outer section of the top link is available as an accessory. To change the category:—

1. Unscrew the outer section of the top link and install the alternative section.
2. On each lower link: release the spring clip turn the ball in its socket until the pin hole in the ball is vertical, and remove the ball. Reverse the procedure to fit the alternative ball.
3. Check chains: adjust each chain to give the shorter length for Category 1 implements and the longer length for Category 2 implements.

STABILIZER KIT

It is desirable when using certain types of mounted equipment to minimise the side float on the lower links. A stabilizer kit is available for this purpose which basically consists of two links, two support brackets for attachment to the rear axle, and two pivot pins and linch pins for the easy detachment of the links. All kits except the Ford 2000 kit provide for Category 1 and 2 usage, and separate kits are available for use with flexible link ends on the Ford 4000 and Ford 5000 tractors.

Install the kits as shown in Figure H5 noting the following points:—

1. Fully tighten all nuts and bolts only after the kit has been completely installed.
2. Set internal check chains to the shortest length for Category 1 equipment and the longest length for Category 2 equipment.

SECTION H

OPTIONS AND ACCESSORIES

EXTERNAL CHECK CHAINS

On the Ford 4000 and 5000 tractors sideways restraint of the lower links may also be obtained by fitting external check chains Figure H6. Attach the clevis at hole (1) for Category 1 linkage and hole (2) for Category 2 linkage. The amount of lower link movement may be varied by adjusting the turnbuckle (3). Always ensure that the locking nut (4) has been securely tightened after this operation.

When the lower links are not being used connect the safety chains (5). Never connect these chains *below* the swinging drawbar.

COLD WEATHER STARTING AIDS

THERMOSTART

The thermostart operates by means of a heater plug located in the inlet manifold which heats the air before it enters the combustion chambers. The thermostart is suitable for use in temperatures down to 0°F (−18°C). To operate:

1. Move the throttle lever to the wide open position.
 2. Turn the starting key to the 'heat' position, (1) Figure H7.
 3. Hold the key in this position for approximately 15 seconds.
 4. Turn the key to the 'Heat Start' position, (2) Figure H7, and turn the engine for not more than 10 seconds until the engine starts.
- If the engine fails to start:
5. Release the key and return it to the 'Heat' position for a further 10 seconds.
 6. Turn the engine again for a maximum of 10 seconds.
 7. When the engine starts the key must always be turned to the 'On', (4) Figure H7, position otherwise the warning lights will not be operative.

If the engine does not start after carrying out the above procedure turn the key to the 'Off' position, (3) Figure H7, and allow 4-5 minutes for the battery to recover then repeat the sequence. (5) Figure H7 is the 'Start' position for a warm start.

OPTIONS AND ACCESSORIES

SECTION H

ETHER START

The ether start kit is available as an accessory and is suitable for use in temperatures down to −10°F (−23°C).

To operate:

1. Fully open the throttle.
2. Turn the key to start the engine and while the engine is being turned depress the plunger on the spray primer tank for **1 or 2 seconds only**. If the engine does not start, clear the system of ether by turning the engine for about 5 seconds.
3. Repeat the starting procedure again.

Ether is highly combustible and must never be used with the thermostart aid.

STEERING

POWER ASSISTED STEERING

Power assisted steering, available on all models as an option and in specified countries as an accessory, gives lighter steering and less driver fatigue.

The system is designed so that the tractor may be manually steered if the engine is not running or if the power assist mechanism should fail.

POWER TAKE-OFF

BELT PULLEY (Figure H8)

The belt pulley (1), available as a production option or an accessory, may be installed to the left, right and downwards on all models except the Ford 5000 where only the position shown should be used.

Before fitting the belt pulley it is advisable to remove the drawbar, drawbar hanger, and/or automatic pick-up hitch, to give the driving belt maximum clearance.

To install:

Remove the PTO safety cap and the four bolts securing the check chain brackets (where fitted). Install the PTO pulley in the desired position using the bolts supplied. On the Ford 4000 only, re-install the check chain brackets beneath the pulley flanges, or where check chain brackets are not fitted, the special spacers provided.

SECTION H

OPTIONS AND ACCESSORIES

To operate the pulley at a belt speed of 3000-3200 feet per minute (915-976 metres per minute):

1. Fully raise the lower links and secure them clear of the pulley.
2. Line up the tractor with the belt which must have full width contact on both pulleys without contacting any other part of the tractor.
3. Engage the handbrake and block the tractor wheels to prevent any movement due to vibration.
4. Set the appropriate engine speed, see table below, and engage the PTO.
5. Check on live PTO tractors that the clutch operating rod clevis is attached to the release arm by the rear holes, (5) Figure C2, in the clevis.
6. Hang a chain or lean an iron bar against the tractor to earth any build-up of static electricity.

Model	Transmission Type	Pulley size		Engine speed
		(inches)	(cms)	(rpm)
Ford 2/3000	8 speed Trans	9	(22.8)	2000
Ford 2/3000	6 speed Trans & Live	10.25	(26.0)	2000
Ford 2/3000	8 speed Live	10.25	(26.0)	2000
Ford 4000	8 speed Trans & Ind	10.25	(26.0)	2200
Ford 5000	8 speed Ind	11.00	(27.9)	2100

(1900 UK only)

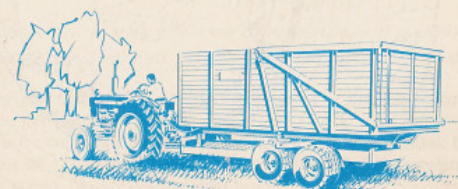
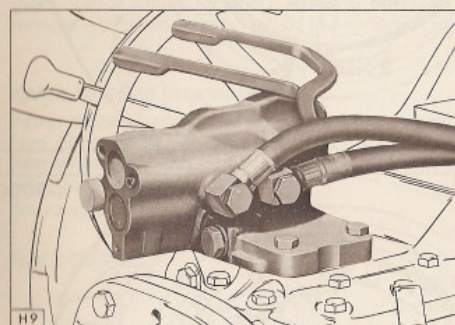
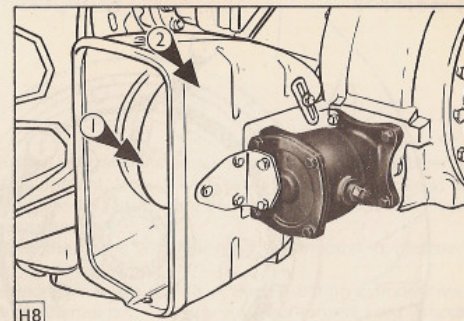
In certain territories it is compulsory to fit a safety guard, (2) Figure H8 whenever the belt pulley is used. Specially designed safety guards are available from authorised Ford Tractor Dealers.

REMOTE CONTROL VALVE

The following types of remote control valve are available:

- Single spool — with detents
- Single spool — without detents
- Double spool — with detents
- Double spool — without detents

Figure H9 shows a double spool valve with detents fitted to a Ford 5000 tractor.



OPTIONS AND ACCESSORIES

SECTION H

Operation:

Pulling the lever(s) rearward will raise the equipment and pushing the lever(s) forward will lower the equipment. Valves with detents hold the lever(s) in position until the external cylinder reaches the end of its stroke when the lever(s) will automatically return to neutral. On valves without detents the levers will spring back to neutral immediately they are released.

With remote control valves both single-acting or double-acting cylinders may be operated in various combinations. Consult your authorised Ford Tractor Dealer for full details, for advice on fitting, operating procedures and the many services which can be provided by these valves.

WHEELS

POWER ADJUSTED REAR WHEELS

Power adjusted rear wheels are available for use with 12-4/11 x 28 tyres on the Ford 2000 and 3000, and 13-6/12 x 38 tyres on the Ford 4000 and 5000.

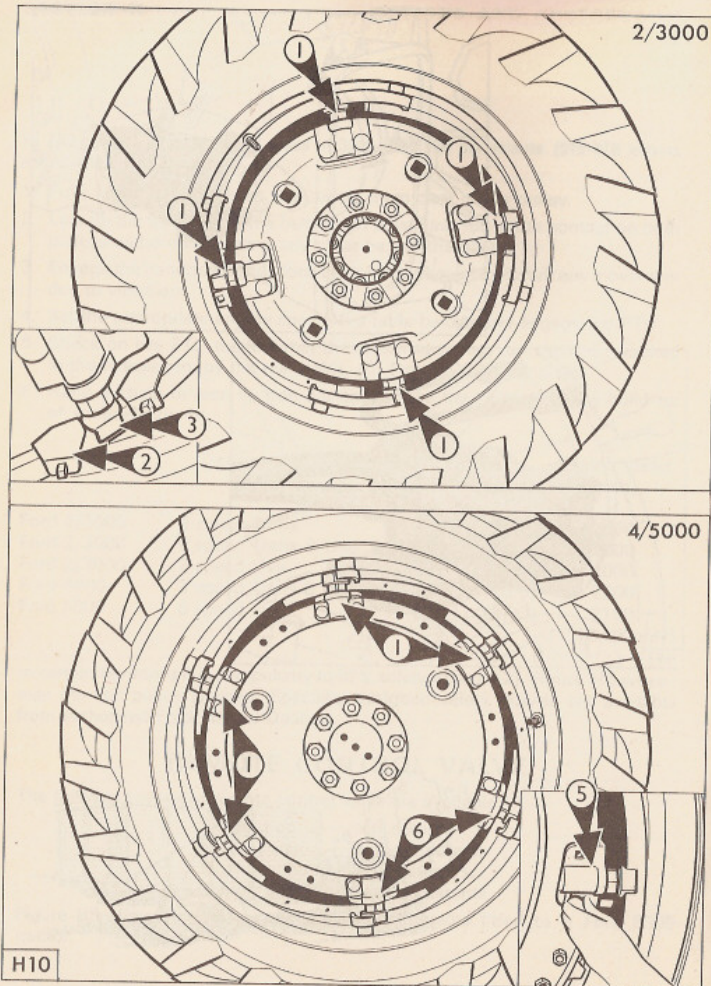
Rear wheel track can be easily adjusted in 4 inch (10.2 cm) steps over two width ranges.

The ranges are as follows:

	Full range	Two width range
Ford 2/3000	52-80 inches (132.1-203.2 cm)	(1) Disc concave 'in' 52-72 ins (132.1-182.9 cm) (2) Disc concave 'out' 60-80 ins (152.4-203.2 cm)
Ford 4/5000 Agricultural	56-90 inches (142.2-228.6 cm)	(1) Blocks inside disc 56-80 ins (142.2-203.2 cm) (2) Blocks outside disc 66-90 ins (167.6-228.6 cm)

To increase the width of the rear wheel track within one of the two ranges, (Figure H10)

- Loosen the adjusting screw lock nuts (1). Mark the loosened nuts on the Ford 4000 and 5000.
- Move the stop lug (2) to the new setting (each hole in the rail gives a 2 inch step in track per wheel).
- Select a low forward gear and hold down the right-hand brake pedal. By gradual application of the clutch move the LEFT-HAND rim outwards until the adjusting screw (3) strikes the stop lug.



H10

SECTION H

OPTIONS AND ACCESSORIES

- (d) Secure the other stop lug.
- (e) Move the RIGHT-HAND rim outwards using the above procedure with low reverse gear selected and the left-hand brake pedal held down.
- (f) Using the special spanner provided tighten the locking nuts (1). On the Ford 4000 and 5000 tighten only the marked nuts with the wheel in the original position as (a). Tighten the nuts gradually, ensuring that the exposed thread outside each nut is the same.

To decrease the width of the rear track within one of the two ranges:

Use the above procedure selecting directly opposite gears to those stated in stages (c) and (e).

To change from one width range to the other:

FORD 2000 AND 3000

Interchange the left-hand and right-hand wheel assemblies ensuring that the 'Vee' of the tread is pointing in the forward travel direction.

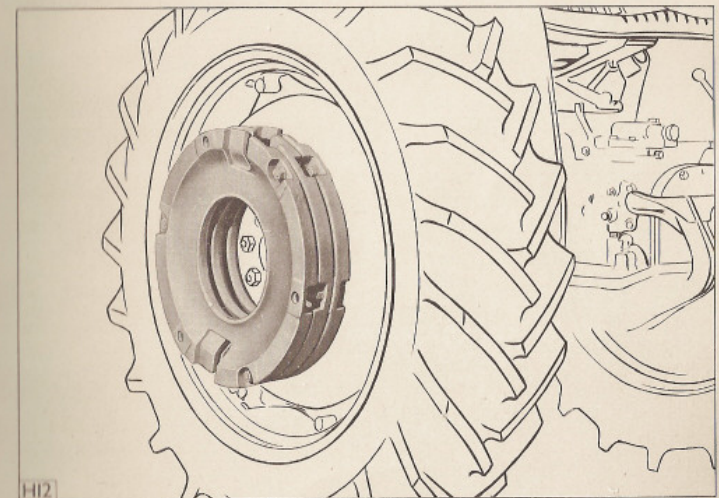
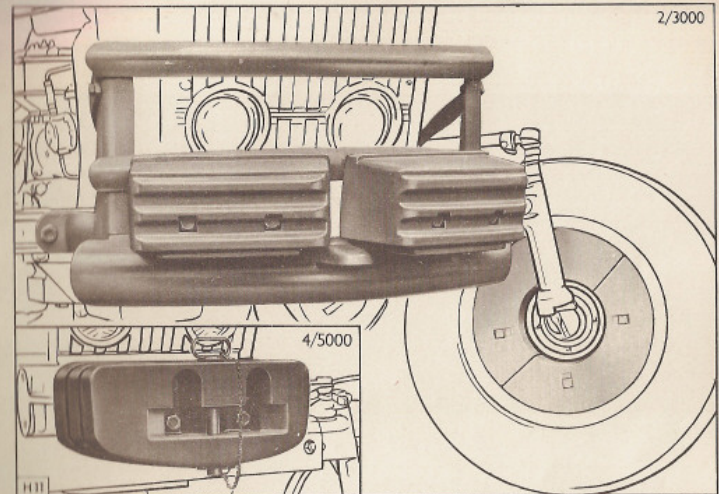
FORD 4000 AND 5000 (Figure H10)

- (a) Loosen and mark the adjusting screw lock nuts (1).
- (b) Remove the support blocks and position them, one at a time, on the opposite side of the disc (5).
Tighten the support block bolts checking that they are well seated against the disc face and edge.
- (c) Move the wheel to position the unmarked blocks (6) at the top; remove and position them on the opposite side of the disc. Tighten the block bolts.
- (d) To increase or decrease the track width proceed as before.

WHEEL WEIGHTS

Cast iron weights are available for both the front and rear wheels.

Further weight may be added to the front end of the tractor by securing front end weights to the special bumper bracket on the Ford 2000 and 3000, or directly to the front axle support mounting pad of the Ford 4000 and 5000. Figure H11 and Figure H12 illustrate the various types of weights. See Section E for details of weighting limitations.



SPECIFICATIONS

SECTION I

SPECIFICATIONS

GENERAL DIMENSIONS (Agricultural and Highway)

		Ford 2000	Ford 3000	Ford 4000	Ford 5000
Height to top of exhaust	(ins)	80	83	85	87
	(cm)	203	211	216	221
Height to hood line	(ins)	53	53	58	61
	(cm)	135	135	147	155
Ground clearance under front axle	(ins)	21	21	19.5	18
	(cm)	53.3	53.3	49.5	45.7
Ground clearance under transmission	(ins)	12.6	13.4	17.3	16.3
	(cm)	31.9	34.0	44.0	41.4
Height to steering wheel	(ins)	57	58	63	65
	(cm)	145	147	160	165
Overall length	(ins)	126.5	127	138	144
	(cm)	321	322	350	365
Width at minimum track	(ins)	63.4	64	67	68
	(cm)	162	163	170	173
Width at maximum track	(ins)	87.4	88	95	96
	(cm)	222	224	241	244
Wheelbase at minimum track	(ins)	75.7	75.7	85	88
	(cm)	192	192	216	224

		Ford 2000	Ford 3000	Ford 4000	Ford 5000
Turning Radius:					
Without brakes	(ft)	10.75	10.75	12.00	12.00
	(metres)	3.40	3.40	3.66	3.66
With brakes	(ft)	9.75	9.75	10.00	10.00
	(metres)	2.92	2.92	3.05	3.05

SECTION I

SPECIFICATIONS

GENERAL DIMENSIONS (Vineyard and Narrow)

		Ford 2000		Ford 3000	
		Vineyard	Narrow	Vineyard	Narrow
Height to hood line	(ins)	49	53	54	53
	(cm)	124	135	137	135
Ground clearance under front axle	(ins)	19	21.5	21	21.5
	(cm)	48	55	53	55
Width at minimum track	(ins)	43.0	54.25	43.0	54.25
	(cm)	109.0	138.0	109.0	138.0
Width at maximum track	(ins)	62.75	72.50	62.75	72.50
	(cm)	159	184	159	184
Wheelbase at minimum track	(ins)	80	77	80	77
	(cm)	203	195	203	195
Turning Radius:					
Without Brakes	(ft)	12.75	10.75	12.75	10.75
	(metres)	3.9	3.40	3.9	3.40
With brakes	(ft)	11.6	9.75	11.6	9.75
	(metres)	3.5	2.92	3.5	2.92

WEIGHT (Agricultural and Highway)

		Ford 2000	Ford 3000	Ford 4000	Ford 5000
Total with fuel, oil and water	(lb)	3615	3700	4375	5330
	(kg)	1640	1680	1986	2420
On Front Wheels	(lb)	1545	1550	1565	1960
	(kg)	701	703	710	890
On Rear Axle	(lb)	2070	2150	2810	3370
	(kg)	940	976	1276	1530

SPECIFICATIONS

SECTION I

WEIGHT (Vineyard and Narrow)

		Ford 2000		Ford 3000	
		Vineyard	Narrow	Vineyard	Narrow
Total with fuel, oil and water	(lb)	3589	2950	3589	3150
	(kg)	1629	1339	1629	1430

CAPACITIES:

		Ford 2000	Ford 3000	Ford 4000	Ford 5000
Fuel Tank	(Imp. Galls)	10.8	10.8	13.3	16.6
	(litres)	49.2	49.2	60.5	75.7
Cooling System	(Imp. Pts.)	22.0	23.0	23.2	25.5
	(litres)	12.5	13.0	13.2	14.5
Engine (less filters)	(Imp Pts)	10.0	10.0	10.0	13.34
	(litres)	5.65	5.65	5.65	7.58
Oil Filter	(Imp Pts)			3.4	
	(litres)			1.93	
Transmission	(Imp Pts)	22	22	22	18
	(litres)	12.5	12.5	12.5	10.2
Rear Axle and Hydraulic System:					
Trans and Live PTO	(Imp Pts)	42	42	—	—
	(litres)	23.9	23.9	—	—
Trans PTO	(Imp Pts)	42	42	56	—
	(litres)	23.9	23.9	31.8	—
Independent PTO	(Imp Pts)	—	—	54	58
	(litres)	—	—	30.7	32.9
Steering Box	(Imp Pts)	1.6	1.6	1.2	1.6
	(litres)	0.9	0.9	0.65	0.91
Power Steering System (where fitted)	(Imp Pts)	3.8	3.8	3.1	2.9
	(litres)	2.1	2.1	1.76	1.65
Belt Pulley (where fitted)	(Imp Pts)	1.0	1.0	2.0	2.0
	(litres)	0.57	0.57	1.13	1.13

SECTION I

SPECIFICATIONS

ENGINE

		Ford 2000	Ford 3000	Ford 4000	Ford 5000
No. of cylinders		3	3	3	4
Bore	(ins)	4.2	4.2	4.4	4.4
	(mm)	106.7	106.7	111.8	111.8
Stroke	(ins)	3.8	4.2	4.4	4.2
	(mm)	96	106.7	111.8	106.7
Displacement	(ins ³)	158	175	201	256
	(cm ³)	2588	2868	3294	4195
Compression Ratio		17.5 : 1	16.5 : 1	16.5 : 1	16.5 : 1
Firing Order		1.2.3.	1.2.3.	1.2.3.	1.3.4.2.
Idle Speed (rpm)			600-700		
Maximum No Load speed	(rpm)	2225-2275	2225-2275	2425-2475	2325-2375
Maximum rated speed	(rpm)	2000	2000	2200	2100
Tappet clearance (cold)					
Intake	(ins)		0.014—0.016		
	(mm)		0.36 —0.41		
Exhaust	(ins)		0.017—0.019		
	(mm)		0.43 —0.48		

COOLING SYSTEM

Type		Pressurised	Liquid	Recirculating	By-Pass
Fan					
No. of blades			4		
Diameter	(ins)		16		
	(cm)		40.6		
Thermostat					
Starts to open at	(°F)		168		
	(°C)		75.6		
Fully open at	(°F)		212		
	(°C)		100		
Pressure cap	(psi)	7 (13 on tropical option)			
	(kg/cm ²)	0.5 (0.9 on tropical option)			

FUEL SYSTEM

Injection Pump

Type		Ford 2000	Ford 3000	Ford 4000	Ford 5000
Timing (BTDC) (°)		Distributor	In-Line	Distributor	In-Line
		19	19	19	19

SPECIFICATIONS

SECTION I

POWER TAKE OFF:

Engine speed for 540 rpm

PTO Speed

	Ford 2000	Ford 3000	Ford 4000	Ford 5000
6 Speed Trans and Live PTO (rpm)	1800	1800	—	—
8 Speed Live P.T.O.	1800	1800	—	—
8 Speed Trans PTO	1600	1600	1800	—
Independent PTO	—	—	1800	1900
				1700*

*UK only

ELECTRICAL SYSTEM:

Generator	12 V Shunt Wound
Output	22 amps
Regulator	Current/Voltage
Ground (Earth)	Negative
Starter Motor	Positive engagement solenoid operated
Headlights	Sealed Beam 40/40 watt (Optional 35 watt)
Side/Tail light bulbs	6 watt
Instr./Warning light bulbs	2.2 watt

CLUTCH

Transmission PTO		Single	Single	Single	—
Type		Dry Plate	Dry Plate	Dry Plate	—
Plate dia	(ins)	11	11	11	—
	(cm)	28	28	28	—
Live PTO		Double	Double	—	—
Type		Dry Plates	Dry Plates	—	—
Trans Plate dia	(ins)	11	11	—	—
	(cm)	28	28	—	—
PTO Plate dia	(ins)	8.5	8.5	—	—
	(cm)	21	21	—	—
Independent PTO		—	—	Separate transmission and PTO clutches	—
Transmission clutch type		—	—	Single	Single
				Dry Plate	Dry Plate
Plate dia	(ins)	—	—	11	12
	(cm)	—	—	28	30.5
PTO clutch type		—	—	Multi-Wet	Multi-Wet
				Plate	Plate
Plate dia	(ins)	—	—	5.19	5.88
	(cm)	—	—	13.2	14.9
No. of friction plates		—	—	6	3

SECTION I

SPECIFICATIONS

TRANSMISSION:

	Ford 2000		Ford 3000		Ford 4000		Ford 5000
Gear Ratios:	6 spd	8 spd	6 spd	8 spd	8 spd	8 spd	8 spd
1st	30-53	26-91	30-54	26-91	14-49	9-13	9-13
2nd	17-03	21-56	17-00	21-56	11-61	7-32	7-32
3rd	10-27	12-29	10-29	12-29	6-61	4-17	4-17
4th	7-54	9-03	7-55	9-03	4-86	3-06	3-06
5th	5-73	7-54	5-73	7-54	4-06	2-54	2-54
6th	2-54	6-03	2-53	6-03	3-25	2-05	2-05
7th	—	3-44	—	3-44	1-85	1-17	1-17
8th	—	2-53	—	2-53	1-36	0-86	0-86
RL	18-69	18-72	18-71	18-72	10-08	6-36	6-36
RH	6-29	5-24	6-29	5-24	2-82	1-78	1-78

REAR AXLE:

Overall Ratio:	6-16:1	6-16:1	15-75:1	23-78:1
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HYDRAULIC SYSTEM

Type	Ford 2000	Ford 3000	Ford 4000	Ford 5000
	Position and Draft Control	Position and Draft Control	Draft Control with double acting top link	
Nominal System Pressure (psi) (kg/cm ²)			2500 175	
Hydraulic Pump Engine driven	Piston type	Piston type	Piston type (Trans. PTO only)	—
PTO driven	—	—	Gear type (Ind. PTO only)	Gear type

STEERING:

Manual steering type		Ball and nut		
Steering wheel turns (lock to lock)	4-10	4-10	4-80	6-01
Steering gear ratio	15-4 : 1	15-4 : 1	24-2 : 1	32-71 : 1
Power assisted steering (where fitted)				
Pump Type			Gear	
Max pressure (psi) (kg/cm ²)	600—700 42-0—49-2	600—700 42-0—49-2	800—900 56-2—63-3	1050—1150 74—81

SPECIFICATIONS

SECTION I

BRAKES:

		Ford 2000	Ford 3000	Ford 4000	Ford 5000
Type		Expanding shoe	Expanding shoe	Disc	Disc
Drum Diameter	(ins) (cm)	14 35-5	14 35-5	—	—
Shoe width	(ins) (mm)	1-5 38-1	1-5 38-1	—	—
Disc Diameter	(ins) (cm)	—	—	8-0 20	8-75 22
No. of discs		—	—	3 per side	4 per side
Total friction area	(in ²) (cm ²)	98-46 635-23	98-46 635-23	139-5 899-77	274-1 1757-84
Pedal free travel	(ins) (mm)	1-625 41-3	1-625 41-3	1-5 38-1	1-5 38-1

Handbrake

Standard agricultural type:

Operates on footbrake linkage

Optional type

Dry Disc—operating on transmission drive pinion

No. of discs

2

Friction Area

(in²) (cm²)

33-9

218-7

LUBRICATING OILS (All Models)

Front Transmission, Rear Transmission, Steering and Belt Pulley.

	Ford 2000/3000	Ford 4000/5000
Manual Transmission	Ford Oil M2C-85-A or SAE 20W/30 or SAE 80 E.P. ESN-M2C41-A	Ford Oil M2C-85-A or SAE 20W/30 or SAE 80 E.P. ESN-M2C41-A
Select-O-Speed Transmission	As Manual Transmission	Ford Oil ESN-M2C53A or Ford Oil ESEN-M2C86-A
Rear Axle	As Manual Transmission	Ford Oil M2C-94-A or SAE 90 EP Ford Oil M2C-92-A or SAE 10W
Steering Box	Ford Oil M2C-94-A or SAE 90 EP Ford Oil M2C-92-A or SAE 10W	Ford Oil M2C-94-A or SAE 90 EP Ford Oil M2C-92-A or SAE 10W
Power Steering Reservoir	As Manual Transmission	As Manual Transmission
Belt Pulley	As Manual Transmission	As Manual Transmission
Clutch Release Bearing	—	High Temperature
Greaser (where fitted)	—	Lithium Based Grease

SECTION I

SPECIFICATIONS

LUBRICATING OILS. (All Models)

Diesel Engine, In-Line Fuel Injection Pump and Air Cleaner.

	Ambient Temperatures			
	Below 10°F	10°F to 40°F	32°F to 90°F	Consistently above 75°F
(1) Ford Oil Spec.	M2C87—A5W*	M2C87—A10	M2C87—A20	M2C87—A30
Viscosity	SAE 5W or 5W/20	SAE 10W	SAE 20W	SAE 30W
Type	Supplement 1	Series 3	Series 3	Series 3
A.P.I. Classification	DM	DS	DS	DS

Oil Change Period—When fuel sulphur content is less than 1%

150 hours 300 hours 300 hours 300 hours

Oil Change Period—When fuel sulphur content is between 1% and 1.3%

100 150 hours 150 hours 150 hours

(2) Oil Change Period—When fuel sulphur content is more than 1.3%

— 150 hours 150 hours 150 hours

(1) Consult your Authorized Ford Tractor Dealer for details on the availability of these oils.

(2) Not generally recommended.

NOTE: Where operation is at temperatures below, 10°F (—12°C) in the Winter and above 10°F (—12°C) in the Summer and it is required to change from a Supplement 1 oil to a Series 3 oil or vice versa, the following first oil and oil filter change should be at half the normal specified period. Subsequent changes thereafter should be at the normal specified period.

* M2C87—A5W to be used only when temperatures are consistently below —12°C.

SPECIFICATIONS

SECTION I

TRACTOR SPEED (Miles per hour)

Engine Speed (rpm)	Ford 2000			Ford 2000/3000			
	6-speed transmission			8-speed transmission			
	1000	1800	2000	1000	1600	1800	2000
1st	0.7	1.3	1.4	0.8	1.3	1.4	1.6
2nd	1.3	2.3	2.6	1.0	1.6	1.8	2.0
3rd	2.1	3.8	4.2	1.8	2.9	3.2	3.6
4th	2.9	5.2	5.8	2.4	3.8	4.3	4.8
5th	3.8	6.8	7.6	2.9	4.6	5.2	5.8
6th	8.7	15.7	17.4	3.6	5.8	6.5	7.2
7th	—	—	—	6.4	10.3	11.5	12.8
8th	—	—	—	8.7	13.9	15.7	17.4
R.L.	1.2	2.2	2.4	1.2	1.9	2.2	2.4
R.H.	3.5	6.3	7.0	4.2	6.7	7.6	8.4

Engine speed (rpm)	Ford 4000			Ford 5000			
	8-speed transmission			8-speed transmission			
	1000	1800	2200	1000	1700	1900	2100
1st	0.7	1.3	1.5	0.8	1.3	1.4	1.6
2nd	0.9	1.6	2.0	0.9	1.5	1.6	2.0
3rd	1.6	2.9	3.5	1.7	2.9	3.1	3.5
4th	2.1	3.8	4.7	2.3	3.9	4.1	4.7
5th	2.6	4.7	5.6	2.7	4.6	4.9	5.6
6th	3.2	5.8	7.0	3.3	5.6	5.9	7.0
7th	5.6	10.1	12.3	5.9	10.0	10.6	12.4
8th	7.6	13.7	16.8	8.0	13.6	14.4	16.8
R.L.	1.0	1.8	2.3	1.1	1.9	2.0	2.3
R.H.	3.7	6.7	8.1	3.9	6.6	7.0	8.1

SECTION I

SPECIFICATIONS

TRACTOR SPEED (Kilometres per hour)

Engine speed (rpm)	Ford 2000			Ford 2000/3000			
	6-speed transmission			8-speed transmission			
	1000	1800	2000	1000	1600	1800	2000
1st	1.1	2.1	2.2	1.2	1.9	2.2	2.4
2nd	2.1	3.8	4.2	1.6	2.6	2.9	3.2
3rd	3.4	6.1	6.8	2.8	4.5	5.0	5.6
4th	4.7	8.5	9.4	3.8	6.1	6.8	7.6
5th	6.1	11.0	12.2	4.5	7.2	8.1	9.0
6th	14.0	25.2	28.0	5.7	9.1	10.3	11.4
7th	—	—	—	9.9	15.9	17.8	19.8
8th	—	—	—	13.5	21.6	24.3	27.0
R.L.	1.9	3.4	3.8	1.9	3.0	3.4	3.8
R.H.	5.6	10.1	11.2	6.5	10.4	11.7	13.0

Engine speed (rpm)	Ford 4000			Ford 5000		
	8-speed transmission			8-speed transmission		
	1000	1800	2200	1000	1900	2100
1st	1.1	2.0	2.5	1.2	2.2	2.6
2nd	1.4	2.5	3.2	1.5	2.7	3.2
3rd	2.5	4.5	5.6	2.7	4.9	5.6
4th	3.4	6.1	7.6	3.6	6.5	7.6
5th	4.1	7.4	9.1	4.3	7.8	9.1
6th	5.1	9.2	11.3	5.4	9.7	11.3
7th	9.0	16.2	19.9	9.5	17.2	19.9
8th	12.3	22.2	27.0	12.9	23.2	27.0
R.L.	1.7	3.1	3.7	1.7	3.1	3.6
R.H.	5.9	10.6	13.0	6.2	11.2	13.0

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SECTION J

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Lighting ..	A13	Towbar ..	D7
Linkage Categories ..	D3	Tractor Storage ..	G16
—Interchanging ..	H7	Transmission	
Live PTO ..	C2	—Oil ..	F13
		—PTO ..	C1
		Tyre Pressures ..	E1
		Valve Tappet Clearance ..	F10
		..	G1
Power Adjusted Rear Wheels ..	H13	Warning Lights ..	A5
Power Assisted Steering ..	F13	..	G15
..	H9	Water Ballasting of Tyres ..	E8
Power Take-Off Shaft ..	C1	Weight Limitations ..	E8
Pre-Start Check ..	A6	Wheel Weights ..	H14
Proofmeter ..	A5		