BOOK No. 101/BD3

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BEDFORD MAINTENANCE MANUAL

AND INSTRUCTION BOOK

for

4 x 2 MODELS

TRUCK, 15-CWT.

MW

(MWC · MWD · MWR)

LORRY, 30-CWT.

OX

(OXC · OXD)

LORRY, 3-TON

OY

(OYC · OYD)

AND LORRY, 6-TON, 4 x 2—2

SEMI-TRAILER BEDFORD-SCAMMELL OXC

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FOREWORD

The object of this Manual is to present, in a simple and concise form, detailed maintenance and repair instructions for Bedford 4x2 models MW (15 cwt.), OX (30 cwt.) and OY (3 ton). The information given applies to all three models unless otherwise stated, the special Electrical Equipment fitted only to model MWR being clearly indicated.

The maintenance instructions are given on pages 4 to 11. Routine attention carried out by the driver under the Sixteen Tasks system is *not* included, as this information is given in detail in the Driver's Handbook issued with the vehicle.

The service and overhaul section covers most repairs and replacements likely to be necessary during the life of the vehicle. The special tools required for certain operations are illustrated in use, and a complete list is given on page 179.

Unless otherwise stated, oil should be smeared on the working parts before reassembling components which have been dismantled.

We have endeavoured to make the instructions brief but informative. Obvious details have been omitted, but sufficient information is given to enable even those mechanics unfamiliar with Bedford W.D. vehicles to carry out the various operations.

We shall. of course, welcome any suggestions which will help to make the book more useful.

VAUXHALL MOTORS LIMITED

CONTENTS

The following is a list of the chapters or sections into which the book is divided, together with the commencing page numbers. A detailed alphabetical index appears at the end of the book.

GENERAL DATA

The information and figures given below apply to all models —MW, OX and OY—unless otherwise stated.

Engine

Number of Cylinders	6
Bore	85.72 mm. (3⅜ in.)
Stroke	101.6 mm. (4 in.)
Capacity	35,19 c.c. (214.7 cu. in.)
R.A.C. Rating	27.34 H.P.
B.H.P. (max.)	72 at 3,000 R.P.M.
Compression Ratio	6.22 to 1
Firing Order	1-5-3-6-2-4
Sparking Plugs	A.C. K9V (except MWR) Gap .037/.040 in. A.C. SF12R (MWR only) Gap .018/.020 in.
Valve Tappet Clearance (Hot)	Inlet .006 in. Exhaust .013 in.
Oil Capacity	10 pints (refill)
Water Capacity	29 pints

Clutch

Size	10 in.
Type	Single Dry Plate
Throwout	Radial Bearing

Gearbox

Oil Capacity	7 pints

Transmission

Propeller Shaft (Model OY 2 shafts)	Hardy Spicer
Universal Joints	Needle Roller

Rear Axle

Type		Spiral Bevel Drive
Shafts		Fully Floating
Ratio	MW	6.2
	OX	6.83
OY and OXC (Scammell Tractor)		7.4
Oil Capacity	MW	4 pints
	OX	6 pints
	OY	7 pints

Final Drive Ratios

	Top	*3rd*	*2nd*	*1st*	*Rev.*
MW	6.2	10.60	21.51	44.76	44.33
OX	6.83	11.67	23.70	49.31	48.83
OY and OXC (Scammell Tractor) ...	7.4	12.65	25.67	53.42	52.91

Steering

Turning Circle Diameter	...	MW	42 ft.
		OX	48 ft.
		OY	66 ft.

Brakes

MW	Lockheed Hydraulic
OX and OY	Lockheed Hydraulic ; servo-assisted
	Shoe Lining Material. Raybestos C.P.

Chassis

Track	MW Front	5 ft.	3	in.
	MW Rear	4 ft.	$11\frac{3}{8}$	in.
	OX Front	5 ft.	3	in.
	OY Front	5 ft.	4	in.
	OX and OY Rear	5 ft.	$2\frac{1}{2}$	in.
Wheelbase ...	MW	8 ft.	3	in.
	OX	9 ft.	3	in.
	OY	13 ft.	1	in.

Petrol Tanks

Capacity	...	MW 10 galls. each tank (including 3 galls. reserve)
		OX 12 galls. each tank (including 3 galls. reserve)
		OXC (Scammell Tractor) (16 galls., including 3 galls. reserve)
		OY 16 galls. each tank (including 4 galls. reserve)

NOTE.—Models MW, OX and OY have two tanks.

Tyre Equipment

Model	*Size*
MWD and MWC ...	9.00×16 RF or c.c.
MWR	9.00×16 c.c.
MWV	9.00×16 c.c.
OXD	10.50×16 c.c.
OXC (Scammell Tractor)	10.50×16 c.c.
OYD	10.50×16 c.c.
OYC (Petrol Tanker)	10.50×16 c.c.
OYC (Water Tanker)—	
Front ...	10.50×16 c.c.
Rear ...	10.50×16 Sandgrip

THESE ARE THE

CORRECT W.D. LUBRICANTS

TO USE ON BEDFORD MODELS

Engine	30 HD
Servo Cylinder	30 HD
Gearbox	C. 600
Chassis Lubrication Nipples	C. 600
Steering Box	C. 600
Rear Axle	C. 600
Brake Reservoir	Fluid, Brake, Hydraulic, No. 3
Shock Absorbers	Fluid, Brake, Hydraulic, No. 3
Front and Rear Hubs	Grease No. 2
Dynamo Bearings	Grease No. 3

PERIOD MAINTENANCE
(Including Oil Changing)

The following paragraphs describe the maintenance jobs not regularly attended to by the driver in the Sixteen Tasks system. The items apply to all models—MW, OX and OY—unless otherwise stated. The W.D. lubricants recommended are listed on page 3. The lubrication charts are inserted at the end of the book.

Every Two Months

TYRE PUMP VALVE.—Every two months remove the valve cover from the top of the tyre pump cylinder head and apply two or three drops of 30 HD to the stem of the valve (see Fig. 1). *Do not over-oil.*

After the First 250 and 1,250 Miles

ENGINE OIL.—On new and reconditioned engines change the oil after the first 250 miles and again after a further 1,000 miles.

For details of draining and subsequent changes, see page 7.

CYLINDER HEAD.—Check and tighten the cylinder head bolts, if necessary, after the first 250 and 1,250 miles on new and reconditioned engines (and whenever the cylinder head has been removed and replaced). Use the $\frac{3}{4}$ A/F special ring spanner supplied in the vehicle tool kit and tighten the bolts, with the engine hot, in the order shown in Fig. 17 on page 17. If the bolts are turned the valve clearances will need adjusting. For details see page 20.

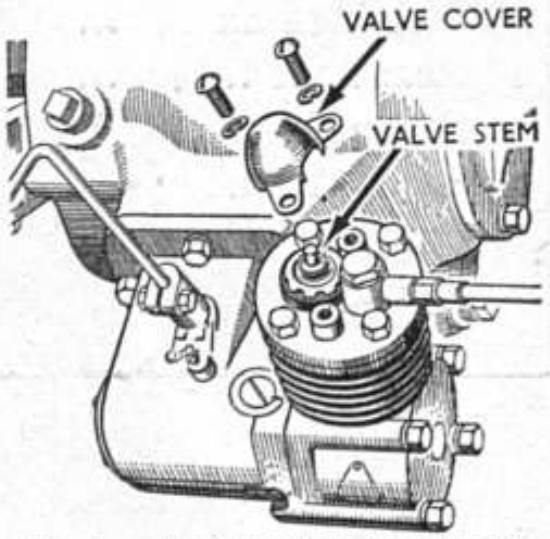

Fig. 1.—Tyre pump valve details.

Every 1,000 Miles

OIL BATH AIR CLEANER (not fitted to earlier models). The air cleaner must be inspected every 1,000 miles, or more often under very dusty conditions.

Remove the filter element and examine the oil container for sludge. If a depth of half an inch of solid sludge is present, the cleaner must be completely serviced as described below.

1. Remove the top cover after slackening the retaining nut.
2. Turn the filter element bridge wing nut fully left-hand, move the retaining bridge round until it can be disengaged from the slots in the filter body flange and lift out the element.

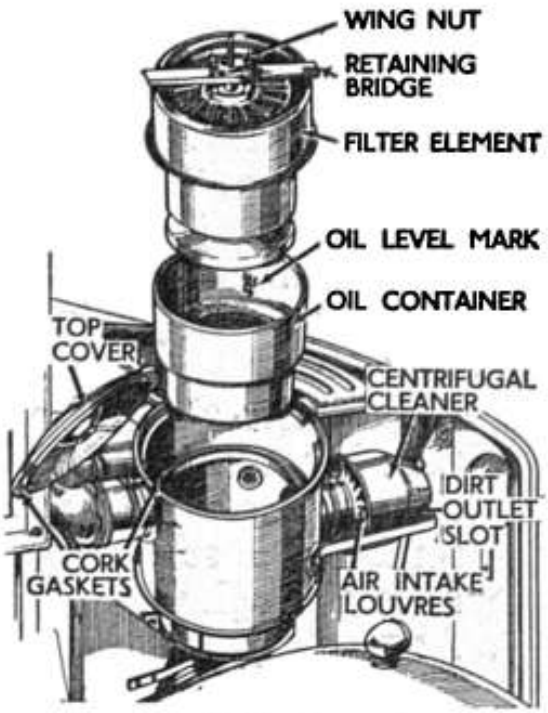

Fig. 2.—Oil bath air cleaner details.

3. Wash the element thoroughly in petrol or paraffin.
4. Lift out the oil container, pour away the oil and clean out sediment.
5. Replace the oil container and refill up to the oil level marking with 30 HD.
6. Make sure that the filter element bridge wing nut is screwed fully left-hand.
7. Replace the filter element and press it down to engage the retaining bridge with the slots. Move the bridge round until it is at right angles to the slots, then turn the bridge wing nut right-hand, fully finger tight.
8. Replace top cover and tighten nut fully finger tight.
9. Examine the louvres and dirt outlet slots of the centrifugal air cleaner and remove any foreign matter, such as dead leaves, bracken or fluff.

NOTE.—*Make sure that the cork gaskets are in good condition.*

Every 2,000 Miles

DISTRIBUTOR (EXCEPT MODEL MWR).—Lubricate the spindle every 2,000 miles, Remove distributor cap, lift

off rotor and apply a few drops of 30 HD around and through the hole in the spindle (see Fig. 3). At the same time, smear a trace of grease on the contact breaker cam. Clean the distributor points, if necessary, and check the gap. (See para. 3 and Fig. 11 on page 12.)

DISTRIBUTOR (MODEL MWR).—Fully slacken the two screws securing the screening cover and lift it off.

There are three points to lubricate (see Fig. 3), as follows :—

1. CAM.—Give the cam a very light smear of 30 HD.
2. CAM BEARING.—Lift off the rotor arm and apply a few drops of 30 HD to the top of the spindle. Do not remove the screw exposed to view ; there is a clearance through which the oil passes to the cam bearing.
3. AUTOMATIC TIMING CONTROL.—Add a few drops of 30 HD down the hole in the contact breaker base plate through which the cam passes.

NOTE.—*Do not allow oil to get on to the contact points.*

CONTACT POINTS.—Clean the contact breaker points, if necessary, and check the gaps. (See para. 3 and Fig. 11 on page 12.)

When refitting the screening cover see that the copper washer is fitted under the head of each of the screws and tighten evenly.

VENTILATION COVER BAND.—For efficient ventilation of the distributor, the gauze and felt strip of the cover band

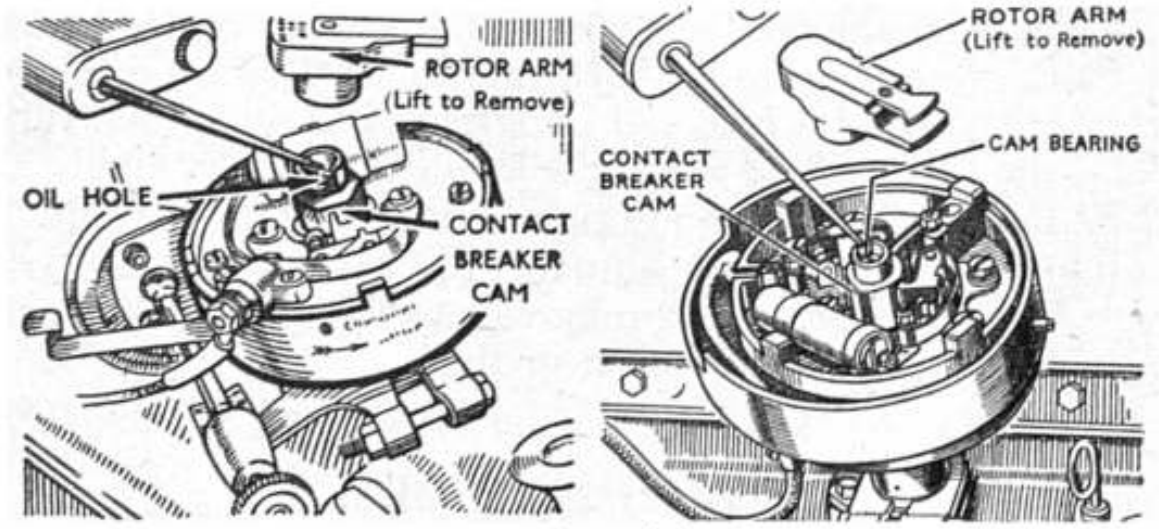

Fig. 3.—Distributor lubrication.
Left. All models except MWR. Note where oil is injected with spout of oil can. *Right. Model MWR. There are three points to lubricate.*