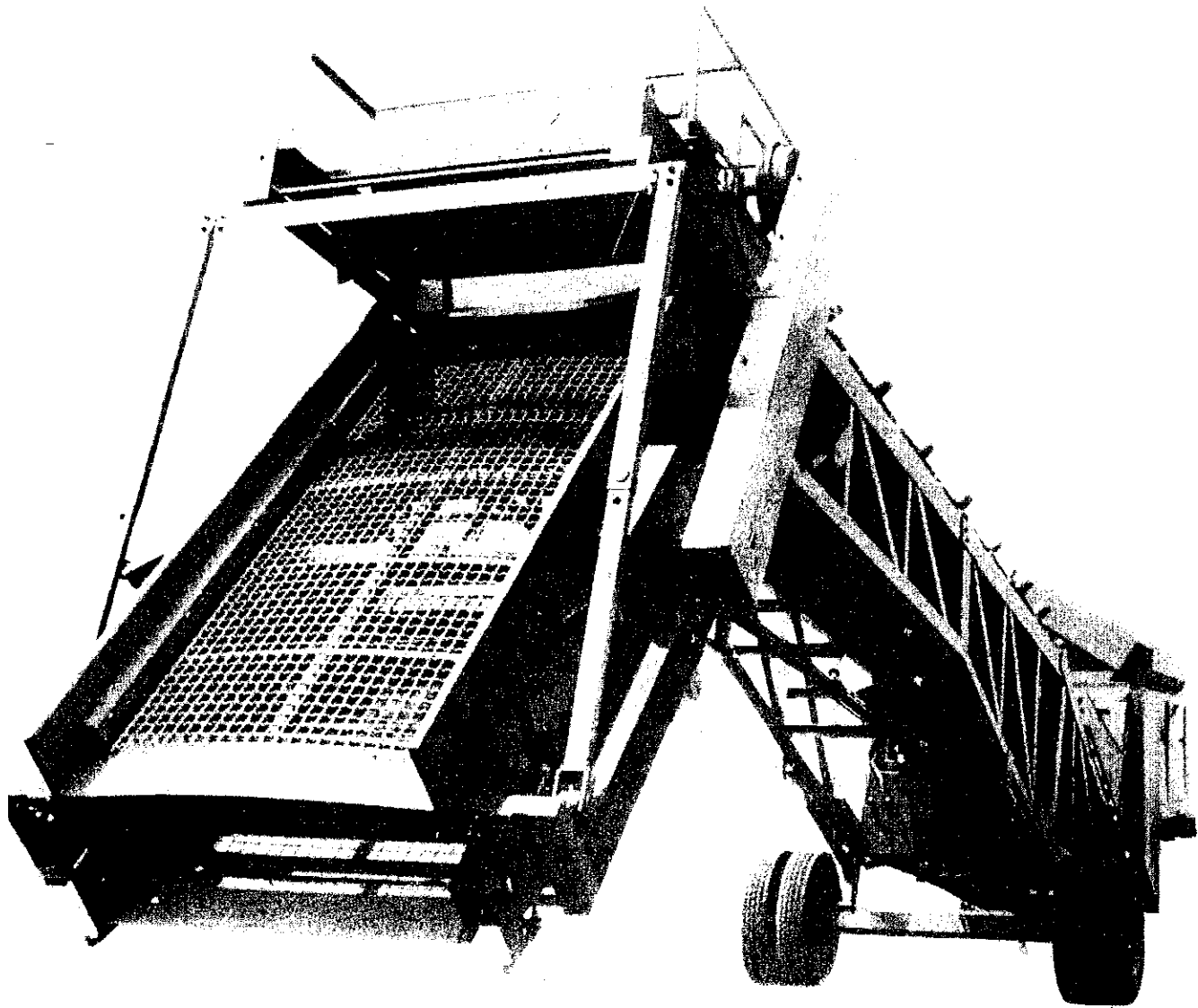




Powerscreen, Mk.3



Powerscreen Mk. 3.

Maintenance & Spare parts

Powerscreen International Ltd.



Powerscreen Mk. 3.

Maintenance & Spare parts

Ref. No. P.32/Issue 2/January 86

Owners Name

Machine serial no.

Motor serial no.

Ford agent

Tel. no.

Machine supplied by

Tel. no.

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Introduction

The machine which you have now received, has been manufactured, assembled and tested with utmost care and was built with first-class materials. Close attention has been paid to all detail in assembly, running tests and final inspection. We are confident that you have received a machine which will give you every satisfaction over a long period.

To be assured of faultless operation we would ask you to carefully read the following paragraphs and give the required time and attention to essential maintenance, cleaning inspection. The machine is simple to operate, adjustments are easy to make, and expert assistance is seldom required provided that ordinary care is extended in daily use.

If in doubt please contact our authorised distributors quoting machine serial number which can be taken from the machine plate or this manual.

General Description

The machine is designed as a self contained mobile unit for shredding and screening material into various sizes. The material is deposited in a feed hopper (a reject grid will discharge oversize material). The feed belt conveys the material into a shredder chamber, from here the processed material is evenly spread on to the main belt which conveys it up to the screen.

Specifications

Overall length:	18.3m
Overall height:	6.0m
Overall width:	2.78m
Hopper opening size:	3.55m x 1.5m
Screen size Width:	1.220m (4 ft.)
Length:	2.440m (8 ft.)
Approximate weight:	12.5 Tonnes
Engine motor:	60 H.P.
Tyre size:	1000 x 20
Pressures:	115 P.S.I.
Hydraulic system capacity:	336 Litres
Transport height:	4.4m

Operation instructions & maintenance

INSTALLATION

Before the machine is put into operation it must stand perfectly level on a firm foundation. Level the machine with a precision spirit level. Ensure that both the axle and the towing end of the machine are level.

On your general inspection of the machine, and before starting the engine (or motor) the following should be checked:

1. Engine fuel and lubrication oil levels (see engine handbook)
2. Hydraulic tank oil level. (Item 10, Fig. 28)
3. Radiator water constant level. (Anti-freeze if necessary).
4. Control valves levers in neutral position.

TO START THE ENGINE:

For starting instructions see engine handbook.

PUTTING MACHINE INTO OPERATION

Always start the screen and conveyor to screen first. This is done by pulling the lever of the hydraulic control valve (Fig. 10, Item 18) to the end of its strokes upwards from the operator. Then pull on the second control valve (Fig. 10, Item 18) which will initiate the feeding conveyor and both cutting shafts simultaneously.

STOPPING THE MACHINE

1. The hopper should be empty and the belts and screen should be free of material before the machine is stopped. Always stop the feeding conveyor and cutting shaft first. This is done by moving the hydraulic control valve (Fig. 10, Item 18) to the neutral position. Then when the conveyor belt and screen are free of material move the second control valve (Fig. 10, Item 18) to the neutral position.
2. Reduce the engine speed.
3. Stop the engine (see engine handbook).
4. Always remember to switch off at the control panel (Fig. 9, Item 48).

FEED CONTROL

The rate of feed onto the main conveyor may be adjusted by altering dial on Flow Control Valve. In all instance of feed requirements consult your Powerscreen agent.

TENSIONING CONVEYOR BELTS

Correct conveyor belt tension should be maintained at all times. Adjustment may be carried out by means of belt adjuster at bottom drum of the main conveyor belt, and for the feed belt they are located on the drum at the tow bar end of the machine. In all belt adjustments the belt should run central on the two drums of both the main conveyor and the feeding belt.

HYDRAULIC SYSTEM

Keep a constant check on the level of oil in the hydraulic tank by observing the indicator regularly. If the oil in the tank falls below the level of the red line on the indicator it should be topped up immediately.

The oil in the hydraulic system should be changed at 1500 hour intervals and it is recommended that the two filters (Fig. 10, Item 47) between the tank and the hydraulic pumps should be changed when an oil change is being carried out.

The return line filter (orange coloured) (Fig. 10, Item 11) should be changed whenever the needle on the small pressure gauge crosses the lower edge of the red indicator fixed to the face of the gauge.

IMPORTANT — When changing or topping up the oil in the hydraulic system or when checking the filter element the utmost cleanliness should be observed at all times as impurities in the oil will ruin the system.

NOTE: If the hydraulic system requires any major repairs contact an agent approved by Powerscreen International immediately. Hydraulic pumps, motors, valves etc. must not be tampered with, otherwise the guarantee will be invalidated.

The fitting cap (Fig. 10, Item 29) of the hydraulic tank should be cleaned every 250 working hours. The air vents in the cap must be kept open to allow the hydraulic system to 'breathe' —

IMPORTANT.

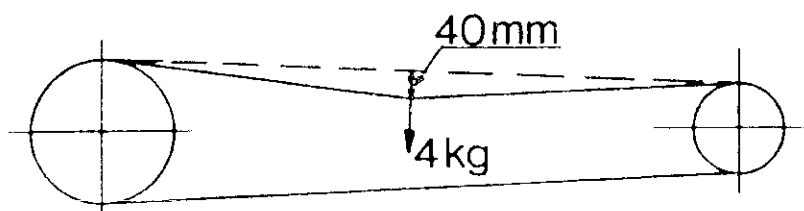
Check the condition of all parts of the Hydraulic system regularly.

SCREEN MAINTENANCE

Any slight vibration outside of the screen must be immediately eliminated. Regular checks should be carried out on V-Belts, Screen meshes, Rubber bushing and all screen bolts. When renewing meshes check the condition of the rubber cushions on the bars across the screen. Greasing should be to the "Greasing Schedule".

CORRECT TENSION OF V-BELTS — IMPORTANT

It is very important that the V-Belts (Item 3, Fig. 6) are correctly tensioned. Too much strain will damage the bearings or the drive shaft. For correct tension the belts will deflect 40mm (1.6 inches) at the mid point as illustrated below when a force of 4 Kg (9 lb) is applied.



Feeder Maintenance

IMPORTANT — To ensure that the machine functions efficiently it is essential that the feeder end of the machine, including the tail drum (Item 13, Fig. 8) and the tail drum scraper (Item 21, Fig. 8), is kept well cleaned.

Maintain correct chain tension by adjusting the tension sprocket.

Note: All Guards must be fitted when the machine is in operation.

FORD ENGINE SERVICE DETAILS:

SUMMARY OF REGULAR MAINTENANCE

After first 15 hours running	1.	Change engine oil
	2.	Adjust Valve Clearances
	3.	Adjust Fan Belt Tension
	4.	Adjust Idling Speed Setting
	5.	Check Oil Level in Injection Pumps
After first 40 hours running	6.	Tighten Cylinder Head Retaining Bolts
Every 10 hours running	7.	Empty Dust Cap or Paper Element Air Cleaner
		(where fitted)
	8.	Check Engine Oil Level
	9.	Check Radiator Coolant Level -- Open System
Every 50 hours running	10.	Clean or Replace Paper Element Air Cleaner
		(where fitted)
	11.	Check Level of Electrolyte in Battery
	12.	Check Oil Level in Injection Pumps
	13.	Adjust Fan Belt Tension
Every 200 hours running	14.	Lubricate Generator Rear Bearing (where fitted)
	15.	Change Oil in Cambox of Injection Pumps
	16.	Change Engine Oil and Oil Filter
	17.	Clean Fuel Lift Pump
	18.	Clean Sediment Boel and Filter (where fitted)
	19.	Replace Fuel Filter Element
	20.	Remove and Service Injectors
	21.	Adjust Valve Clearances
	22.	Adjust Idling Speed Setting

Lubrication

ENGINE LUBRICATION

For details of Engine Lubrication see Engine Handbook.

GEARBOX LUBRICATION (Fig. 9, Item 21)

CAPACITY (If Oil Lubricated)

1.4 litres (2.5 pts.) Change oil every 1,000 hours of operation, remembering to clean the magnetic drain plug. A list of recommended oils is given in the chart below.

Note: If gearbox is not "Oil Lubricated" maintenance should not be required.

If however this is necessary replace with 4.5 kilos grease of type stated in "Recommended Oils and Greases".

GREASING SCHEDULE

The following greasing schedule should be observed.

Item	Description	Frequency	Grease Gun Strokes
6 & 19, Fig. 1	Screen Bearings	50 hours	2
7 Fig. 3	Drive Drum Bearings	100 hours	2
17 Fig. 8	Drive Drum Bearings	100 hours	2
35 Fig. 4	Tail Drum Bearings	100 hours	2
7 Fig. 5	Drive Drum Bearings	100 hours	2
7 Fig. 5	Shredder Bearings	100 hours	2
63 Fig. 5	Shredder Bearing	100 hours	2
4 Fig. 6	Shredder Bearing	100 hours	2
10 Fig. 6	Shredder Bearing	100 hours	2
35 Fig. 8	Return Idlers	500 hours	2

RECOMMENDED OILS AND GREASES

Engine

Below 0°C

Shell Rotella S 10W
Essolube HDX 10W
Gulflube HD 10W
Mobil Delvax 1210-10W
B.P. Vanellus SAE 10W
Castrol Deusol CRB-10
Caltex Delo 200-10W

Between 0°C and 30°C

Shell Rotella S 20/20W
Essobule HD 20/20W
Gulflube HD 20/20W
Mobil Delvac 1220-20/20W
B.P. Vanellus S.A.E. 20W
Castrol Deusol CRB-20
Caltex Delo 200 20/20W

Above 30°C

Shell Rotella SX30
Essolube HD 30
Gulflube HD 30
Mobil Dalvac 1230-30
B.P. Vanellus SAE 30
Castrol Deusol CRP 30
Caltex Delo 200-30

Hydraulic System

Between 0°C and 30°C

Shell Tellus 37
Esso Nuto H 44
Gulf Harmony 43
Mobil DTE 24
B.P. Energol HLP 65
Castrol Hyspin AWS 32
Caltex Regal Oil
AR and O

Above 30°C

Shell Tellus 41
Esso Nuto H 64
Gulf Harmony 61
Mobil DTE Extra Heavy
B.P. Energol HLT 150
Castrol Hyspin AWS 100
Caltex Rando
Oil B

Gearbox (Oil Lubricated)

Shell Vitrea 41
Esso Esstic 65
Gulf Harmony 69
Mobil DTE Oil Heavy Duty
B.P. Energol OE 175
Castrol Companies Aplha 317
Caltex Regal Oil GR and O

All Grease Points

Shell Alvania RA Grease
Esso Beacon 3 Grease
Gulf Crown Grease No. 3
Mobilus 3 Grease
B.P. Energ grease LS 3
Castrol Spheerol Grease AP 3
Caltex Regal Starfak
Premium 3 Grease

Gearbox (Grease Lubricated)

Shell Tivela Compound A

Spare parts ordering procedure

When ordering spare parts, the following must be carefully observed.

1. State the type of machine and the machine serial number. The serial number may be found on the machine plate or on the first page of this manual.
2. State clearly the Item No., the description and the Fig. No. for the part required.
3. State the quantity required of each part being ordered.
4. State name and address clearly as well as method of delivery required.
5. Engine spare parts should be obtained from your nearest Ford Agent. His Name, Address and Telephone No. may be found on the first page of this manual.

N.B. Left and Right Hand of Machine.

Left and Right hand of the machine is obtained by viewing the machine from the tow bar end.

When purchasing parts customers should, in their own interest, always use genuine Powerscreen International parts.

Parts that have not been supplied by Powerscreen International Ltd., and Powerscreen of America Inc., cannot be relied upon for correct material, dimensions or finish. Powerscreen International Ltd., and Powerscreen of America Inc., cannot therefore be responsible for any damage arising from the use of any such parts and the Guarantee will be invalid.