

.MACNAY cc



P.O.BOX 12361, ELSPARK, 1418
CARNIVAL INDUSTRIAL PARK
COERT STEYNBERG ST.
UNIT 28 & 29
DALPARK
TEL: 011-9152345
CELL:082-9003992
FAX: (011) 9158553
E-MAIL: macnay@mweb.co.za
WEB: macnay.co.za

REG NO: CK86-11990-23
VAT NO: 4160105336

**TRACTION SWEEPER
MODEL RS96 (patent no: 2008/8440)**

MANUAL FOR:

WORKSHOP

OPERATOR

SPARE PARTS

MACNAY WARRANTY

Macnay warrants all its equipment to be free from defects in material and workmanship, for a period of three (3) months, commencing from the date of collection / delivery.

This warranty covers all components or parts of the equipment, provided that the equipment was used as per specifications and operated under normal working conditions.

On receipt of such defective parts and proven to Macnay's satisfaction to be defective, only then will such items be repaired or replaced without cost to the purchaser.

Macnay accepts no responsibility for any charges or liabilities for loss of product, time or any other consequential damages arising from improper use or operation of the equipment beyond rated capacity.

This warranty will be void when substitute parts are used or modifications and or alterations are made or extras are added to the equipment, which are not supplied or conducted by Macnay.

Macnay does not authorize any person or party other than those authorized in writing to assume repairs or modifications or to change this warranty in any form nor to grant any other warranty on Macnay's behalf.

INTRODUCTION

The sweeper was designed to be used for road construction. Presently the unit is found to operate successfully in street sweeping – also for cleaning of underground roads in coal mines and runways.

The sweeper is a tow-type unit and can be towed with a tractor or L.D.V. (minimum engine capacity 30kw).

The unit is mounted on three wheels, easy to maneuver and with front wheel steering gives it the shortest turning radius of any compatible sweeper.

HOW IT OPERATES

Power to the broom segments is generated from the rear traction wheels, equipped with ratchet type differentials via a drive chain to the two-speed gearbox, from the gearbox to a drive shaft and sprocket, through a chain to a sprocket, which turns the broom shaft.

The unit is fitted with a hand operated lifting beam which is used to raise and lower the broom hood when turning as well as for the setting of the required sweeping height. Once the correct height has been set, the broom hood must be supported with the adjusting chains with springs, and not on the lifting beam chain.

In order to obtain the correct sweeping, set the broom hood height, allowing the bristles to make contact with the road surface (approx. 15mm). This in turn will give a flick action which is ideal for the best sweeping results. When softer bristles are used, the contact with the road surface should be increased.

USES

The sweeper can be used for:

- sweeping the stabilized road surfaces before tar priming.
- sweeping excess chips of the road surfaces.
- slashing in applications (eg. Lime etc.)
- for runway construction / and maintenance.
- street sweeping

For runways an engine with hydraulics can be fitted in order to sustain a constant brush rotation speed.

NORMAL SWEEPING

Set broom hood to the required angle at either 15 or 30 degrees to the left or right. Select gearbox speed on high or low range (100 or 150 RPM).

For light or heavy duty sweeping respectively, adjust the polypropylene segments to obtain a flicking action.

Start sweeping from the middle, sweeping either from left to right, working the debris off the road surface to the sides.

STREET SWEEPING

The sweeper can be used for sweeping especially where there are no curb stones.

OPERATORS INSTRUCTIONS

The unit can be towed by any vehicle at speeds not exceeding:

- traveling from A to B - maximum speed 15km/h
- sweeping speed – maximum speed 5 to 7 km/h.

CAUTIONS

Prior to towing the sweeper from one point to another, the following should be checked and adhered to:

- Lift broom hood and ensure that segments are clear from the ground.
- Ensure that the gearbox is in neutral.
- Pull hood-supporting chains tight.
- Ensure that hood swivel pins are locked.
- Ensure that drawbar is properly coupled to towing vehicle.
- Do not exceed 15km/h.

SWEEPING

- Set broom hood to required direction (left or right).
- Lock both hood swivel pins.
- Set correct sweeping height for flick action.
- Set both hood supporting chain tensions.
- Engage required gearbox speed (100 or 150 rpm)
- Never change gears when sweeper is in motion.
- Do not exceed 7km/h when sweeping.

PARKING

When parking the unit, never permits the segments to lie on the ground.

TYRES

Pressure: Front is 2 bar
Rear is 3 bar

GEARBOX

The gearbox is filled with oil prior to deliver. It is, however, advisable that the oil level be checked at least once a month.

To check the oil level, remove the filler plug and note that the oil level should be at the bottom of the filler pipe bend for correctness. Should the gearbox be filled to the top of filler pipe, it will hold approx. 20 litres of oils and when in operation a hydraulic pump reaction will take place, pushing oil out through the bearings.

This may result in being diagnosed as a bearing fault and the unnecessary replacement of the gearbox bearings.

Only 5 litres oil is required in the gearbox.

NOTE

When constantly sweeping with broom hood in one direction, one rear tyre will wear off more rapidly than the other.

Therefore, equal tyre pressure is very important, and if possible, regularly change the broom hood direction (right to left etc).

SPARES

When ordering spares, always quote the sweeper serial number. The older models still use imperial sizes, and where these parts have been superseded by metric sizes, the serial number will eliminate the incorrect supply of parts.

TO REPLACE SEGMENTS

OLD TYRE UNITS WITH HAND WINCH

- Release chain tighter
- Remove bearing on chain side
- Remove drive chain
- Remove bolt securing sprocket and broom shaft
- Withdraw sprocket from broom shaft
- Replace worn segments
- Reassemble in the reverse

LATEST UNITS WITH LIFTING BEAM

- Remove bearing on opposite side of hood chain
- Loosen grub screw on metal flange
- Remove flange
- Replace worn segments
- Reassemble in the reverse

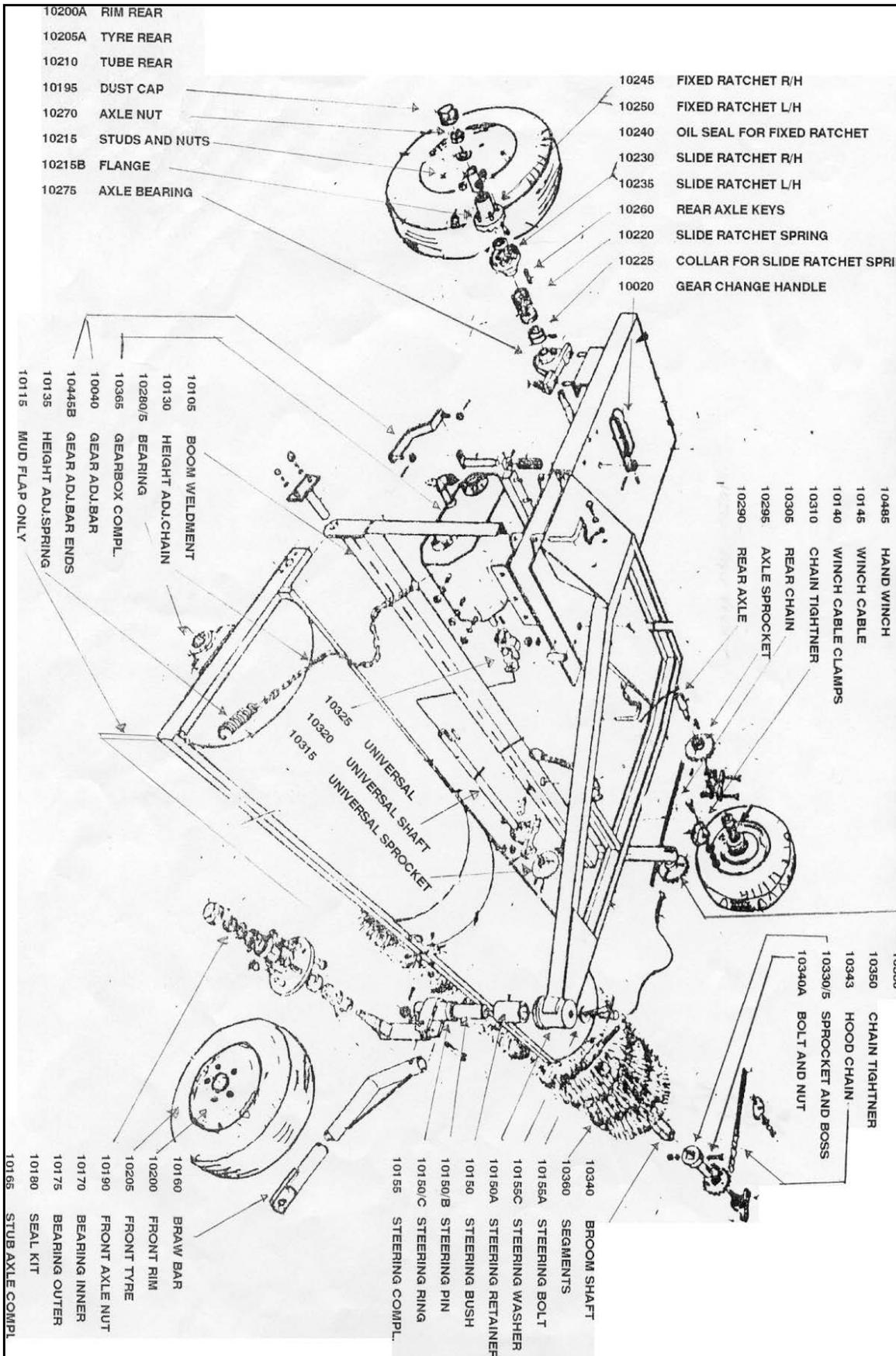
MAINTENANCE INSTRUCTIONS

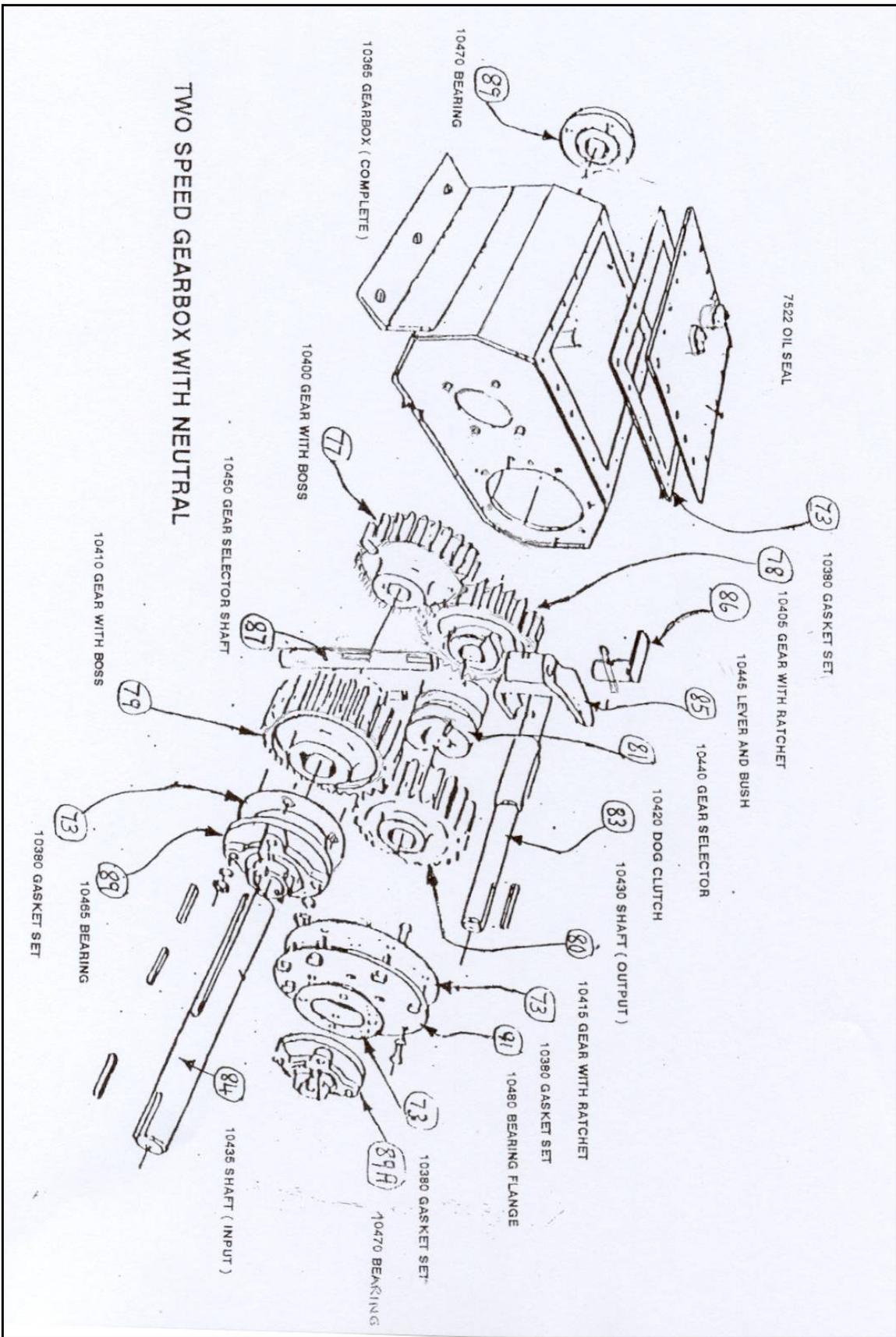
- Grease steering pivot of front retainer once a week.
- Grease universal coupling once a week.
- Ensure weekly that all drive chains are clean and dry.
- All bearings are lubricated and sealed for life, however check weekly and grease slightly if necessary.
- Check gear linkages weekly and adjust for proper engagement.
- Check drive chain tension weekly and adjust (sag approx. 6 to 10mm).
- Pack front wheel bearings yearly with water repellent grease.
- Rear wheel bronze bushes must be cleaned and greased yearly.
- Rear wheel ratchets must be cleaned regularly and ensure that sliding ratchets move freely.
- Replace segments when bristles are worn approx. 50mm from wood or when sweeper does not sweep clean any more.

IMPORTANT

It is very important that the universal coupling is correctly located and properly secured. The center line of the universal coupling must at all times be on the center line of the kingpin and be free from material defects.







TRACTION ROAD AND RUNWAY SWEEPER MODEL RS96



PRIME MOVER

The Macnay Model RS96 Traction Sweeper can be used with any truck or tractor. The unit is of the tow type, easily attachable and with a three wheel chassis gives the shortest turning radius of any comparable sweeper.

2-SPEED DRIVE

The Sweeper has no engine and therefore the brushes are powered from the rear wheels, which are fitted with ratchet-type differentials. Drive is completed through a two speed gearbox with a neutral universal coupling, heavy duty chains and sprockets. The transmission provides for the selection of two brush speeds for light and heavy type sweeping. The brush rotation speeds can be set at either 100 or 150 R.P.M. , and the prime mover not to exceed 8km/h when sweeping.

POWERFUL SWEEPING

For road construction the sweeper is highly suited for cleaning the surfaces prior to black topping, leveling chips, lime or crushed rock. A simple manual adjustment permits the brushes to be angled at either 30 degrees to the left or right.

MODEL RS96B

Same as RS96 except that the steering front wheel and drawbar are replace with a solid drawbar, bolt on drawbar eye and a height adjustable landing leg.

EXTRAS

Hood/mud flap fitted in front of the broom hood to eliminate most of the stones being flicked onto the driver and towing vehicle.

TECHNICAL DETAIL

FRAME	Rigid all-welded heavy-duty steel construction
REAR AXLE	50,8mm dia. Steel axle with self-aligned H/D prelubed bearings
FRONT AXLE	Stub axle on tapered roller bearings
FRONT TYRES	155 x 13 x 4 ply passenger
REAR TYRES	600 x 16 x 4 ply traction
BRUSH FRAME ASSY	30 degree left or right angle
BRUSHES	762mm diameter 304,8mm brush sections 1 set equals 8 loose sections
SWEEPING PATH	2133,6mm at 30 degrees left or right
DIMENSIONS	Length (including tow bar): 4928mm Length (excluding tow bar): 3404mm Width: 2750mm Height: 2150mm Weight: 997,9kg



HYDRAULIC SWEEPER



**LIGHTS CAN BE MOUNTED
ON SWEEPER**