



REVOPAK



**THE
REVOLUTIONARY REFUSE COLLECTOR
sets entirely new standards of efficiency**

the challenge of the future ...

The rapidly changing character of the composition of refuse in the 1970s presents complex problems to every officer responsible for Refuse Collection and can briefly be summarised as under :

- ★ **The increase in light bulky material, including shop and trade refuse.**
- ★ **The difficulty of loading and destroying refuse in paper and plastic sacks.**
- ★ **The necessity to maintain adequate payloads with lighter refuse.**
- ★ **The desirability of reducing the noise level of loading mechanisms.**
- ★ **The ability to accept reasonable articles of furniture etc. on normal collection rounds.**
- ★ **The need to simplify refuse loading mechanism to eliminate the use of hydraulic rams and reduce maintenance costs.**

These factors were studied by Shelvocke and Drewry Limited for a period of more than two years prior to the introduction of the new **SD REVOPAK** which not only fulfils all these conditions but in addition offers a standard of performance which has not hitherto been envisaged.

The REVOPAK involves a revolutionary new principle and in particular embodies a moving comb which lifts the refuse from the very large hopper. It is impossible to overload or choke the hopper under any conditions of operation.

The continuous loading cycle ensures maximum productivity and utilisation of labour which is vitally important in the current economic situation.

The simplicity and silence of the mechanism are features which have been given special attention and the complete elimination of hydraulic rams for loading substantially reduces wear and tear. No solenoids or complicated synchronising devices are employed and components moving within the refuse are reduced to a minimum, hence our claim that REVOPAK raises performance levels at all stages and reduces maintenance costs to minimal proportions.

The unbeatable

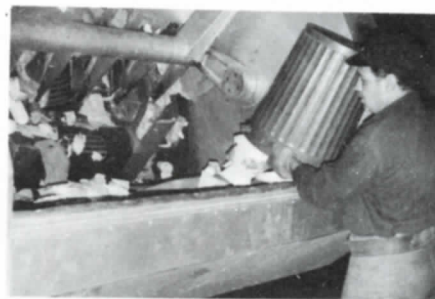
REVOPAK

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COLLECTION FROM STANDARD DOMESTIC DUSTBINS is made much easier by the loading line of only 4 ft. 2 ins. which can be reached from the ground without steps and the large full-width loading hopper is always ready to receive the contents of the bins without strain upon the operators.

Two men can quite easily discharge their bins at the same time and as there is always a space of more than 2 cubic yards available for filling, the facility is inbuilt to make the hopper clearance intermittent if demanded by the operating conditions.



HIGH RATE OF LOADING WITH MATERIAL

Time-wasting "feeding" of the hopper member to move approximately 3 cubic yards by two men in under five minutes. Even under kerbside loading conditions without choking the hopper and irrespective of the material determined entirely by the rate which is determined. The Revopak achieves maximum compacting and crushing of material. Wasting voids within the body are not a problem. Destruction of the sacks also facilitates

els under ALL conditions



CIVIC AMENITIES ACT REFUSE

In many instances separate collections can be dispensed with as within reasonable limits items of furniture and discarded household equipment can be loaded without difficulty during the course of normal collection.



PAPER AND PLASTIC SACKS, CARTONS AND OTHER LIGHT BULKY

er with these types of refuse is entirely eliminated by virtue of the ability of the loading
ic yards per minute and during trials with shop refuse 15 cubic yards have been loaded

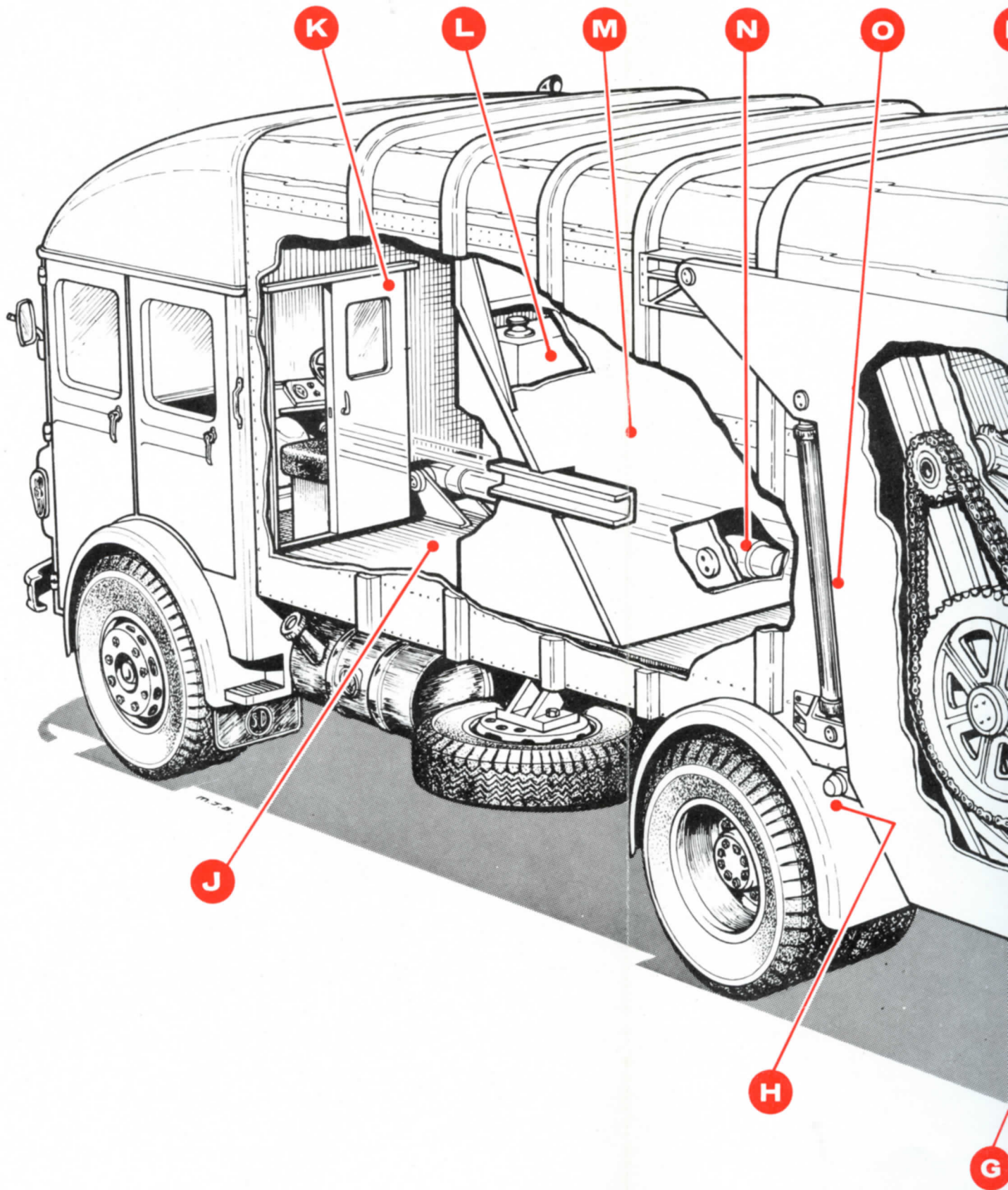
ons, refuse in paper and plastic sacks can be accepted at the rate of 40 per minute
ective of the number of loaders, no hold-up occurs, the speed of collection thus being
the operators can maintain.

mpaction by the fact that the sacks are torn and broken during loading, thus space-
ot created.

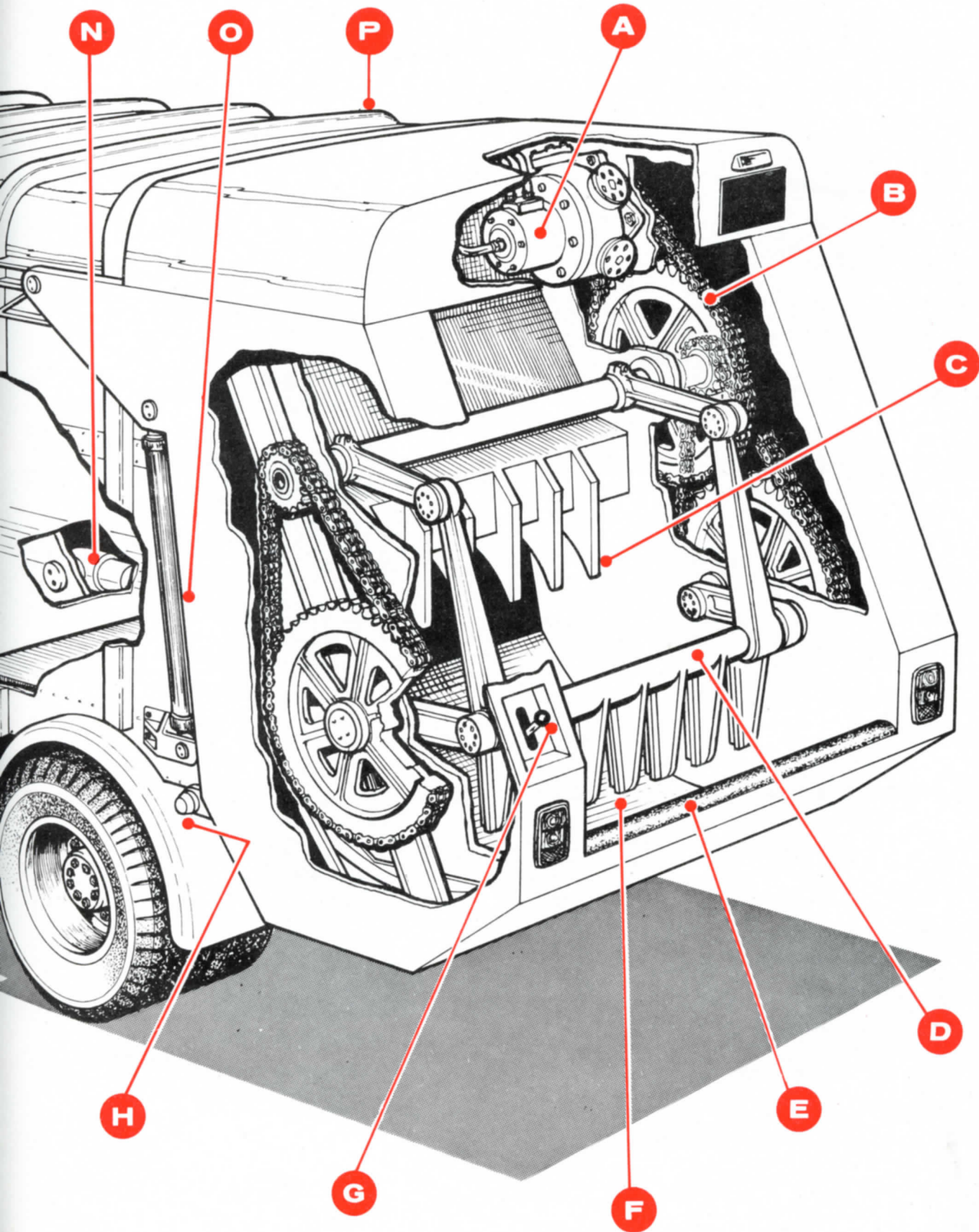
es disposal, particularly where separation plants are involved.

LOOK INTO A

REVOL



REVOPAK



DESIGNED FOR THE *seventies*

*Minimal maintenance is indicated
by the silence of operation...*

Study also the following:

- ★ SIMPLICITY OF DESIGN
- ★ "BUILT-IN" FACTORS OF SAFETY TO ENSURE LONG LIFE
- ★ NO HYDRAULIC RAMS USED IN LOADING MECHANISM
- ★ LOW HYDRAULIC PRESSURE AND MINIMUM PIPEWORK
- ★ ALL BEARINGS FULLY SEALED
- ★ NO COMPLICATED SYNCHRONISING DEVICES
- ★ FOOLPROOF CONTROLS
- ★ ACCESSIBILITY FOR CLEANING AND SERVICE

REVOPAK explained...

- | | |
|---|---|
| A Powerful hydraulic motor. | J Heavy gauge steel floor. |
| B Silent chain drive. | K Inspection and maintenance door. |
| C Heavy duty fixed teeth. | L Oil reservoir. |
| D Loading member. | M Moving bulkhead. |
| E Ground loading—no steps. | N Double-acting hydraulic ram. |
| F 2 cubic yard capacity refuse hopper. | O Twin single-acting rams. |
| G Control Lever. | P Non-corrodible light alloy body shell. |
| H Hydraulically operated hopper locks. | |

TRIPLE COMPACTION SYSTEM

STAGE 1

The loading member moves in an elliptical path and refuse is lifted from the hopper to be forced beneath the fixed teeth, thus achieving the first stage of compression.

At the commencement of loading, the moving bulkhead is positioned at the extreme rear of the body.

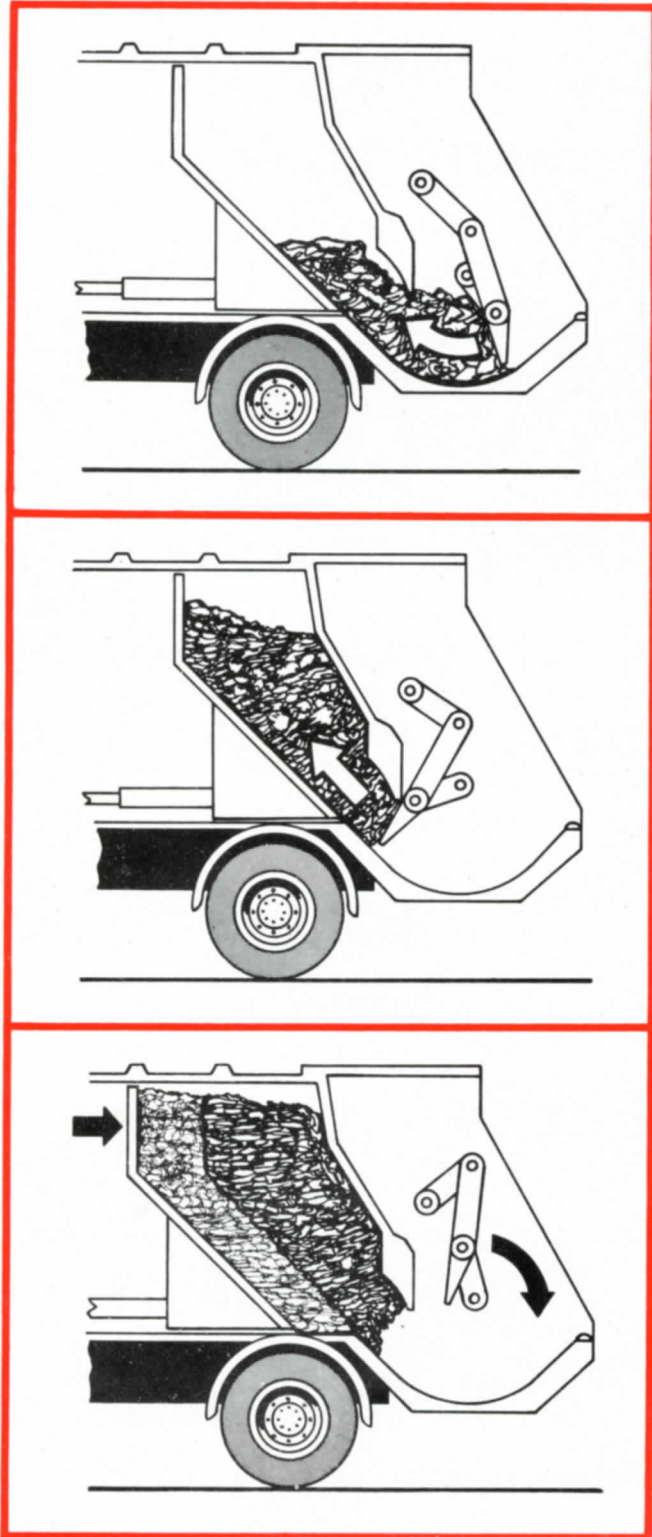
It is unimportant whether the refuse is placed behind or in front of the moving comb as the cycle is continuous.

STAGE 2

The second stage of compaction occurs when deliveries of refuse from the hopper are compressed into the material previously loaded and this process continues until a pre-determined density is obtained.

STAGE 3

To achieve the third stage of compaction, the moving bulkhead retracts automatically and slowly against the back pressure of the hydraulic ram and this process continues until the body is completely full with evenly compacted refuse.



EXPLANATORY NOTES: The normal rate of loading is four cycles per minute and in the event of some heavy bulky article being loaded which is too large to pass beneath the fixed teeth and/or too substantial to be crushed by the mechanism, the relief valve on the hydraulic motor will come into operation, thus obviating any possibility of damage. This relief valve is preset to the normal maximum operating pressure and also arrests movement of the loading member when the body is full. This is quite automatic and requires no attention.

BODY SPECIFICATION

(Subject to alteration without notice)

BODY SHELL Fabricated from heavy gauge high tensile strength aluminium, reinforced with heat-treated aluminium-alloy extruded sections. The Ejector Plate is guided by two runners which are incorporated within the shell. The hopper pivot is carried by substantial brackets. The aluminium exterior does not require painting.

BODY FLOOR Sub-frame and floor constructed from heavy gauge pressed and rolled steel sections welded into a rigid fabrication. The ejector ram anchors are heavily reinforced.

EJECTOR PLATE Strength and rigidity are built into the ejector plate by a lattice-work fabrication of triangles. The whole faced with steel sheet. The ejector moves on adjustable, heavy duty pads.

REAR HOPPER Welded construction having an exterior clad in aluminium sheet. Twin hopper lifting rams are single-acting, and are carried on heavy reinforced mountings. The body is locked to the hopper by large diameter pins operated by a hydraulic system actuated by the hopper control lever. All parts of the hopper floor exposed to wear and friction are made from high tensile alloy-steel. The hopper capacity is approximately 2 cu. yds. A low rake height and good clearance between the moving tines and rubber cushioned rake makes loading easy. Special racks for carrying salvage, paper or plastic sacks are available as optional extras.

COMPRESSION UNIT The silent chain driven mechanism is situated between two shells, the top chain is adjustable and the entire drive is protected from contact with refuse. The moving tines which transfer the refuse from the hopper to the body are mounted on a high strength steel cross-shaft, incorporating heavy duty taper roller bearings. These are lubricated on assembly and sealed, with provision to lubricate these when necessary. Simplex driving chains for primary reduction, and Duplex for secondary reduction. The fixed tines are welded fabrication, arms and cranks are high quality steel forgings.

HYDRAULIC SYSTEM A high efficiency dual hydraulic pump provides the power for all services, and gives maximum loading effort and high speed re-cycling motion. The primary chain is driven by a high efficiency five-cylinder hydraulic motor giving high output torque at very low revolutions. A single valve at the nearside of the hopper controls all motions of the loading mechanism. An automatic unloader valve, mounted directly on the hydraulic pump, acts as a safety relief for the entire system. Anti-cavitation devices within the control valve provide protection to the motor. A double-acting hydraulic ram operates the ejector plate, which also serves as a compression barrier. Twin single-acting rams are employed for lifting the loading hopper. A 40-gallon oil reservoir is mounted in the front of the body with easy access from the driver's cab.

ACCESSORIES Large warning lamp in the driver's cab to indicate when the hopper is raised. Trailer towing attachment with lighting connections is available as optional extra.



REVOPAK



EJECTOR DISCHARGE

The load is discharged by means of the moving bulkhead which in a matter of seconds moves the entire length of the body under the influence of the three-stage hydraulic ram, pushing out the refuse cleanly and quickly.

Before discharging, the loading hopper is raised by twin hydraulic cylinders, leaving a completely unobstructed path for the refuse to pass through.

The bulkhead has a smooth surface, shaped to ensure

immediate clearance and there are no protruberances to cause blockages or other difficulty in clearing the load.

The hydraulic ram powering the bulkhead is double acting which enables a shaking motion to be made should any wet or sticky refuse adhere to the bulkhead.

The refuse remains heavily compacted after discharge, thus conserving valuable space at an open tipping site and assisting consolidation.

When discharging at a Refuse Plant, the rate of ejection can be controlled to suit the reception hopper.

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