



# FORE AND AFT TIPPING

**“Double Ram”**

**REFUSE COLLECTION BODIES**

CAPACITY 12 CU. YARDS TO 25 CU. YARDS

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Available on a Comprehensive Range  
of Chassis

*ALSO WITH EXCLUSIVE*

**POWERPRESS**

AND CONTAINER BULK LOADING EQUIPMENT

FOR DUAL PURPOSE USAGE

# NEW BODY DESIGN

The principle of the **SD** Fore and Aft Tipper has by this time become so well established as to make further explanation unnecessary and no more eloquent testimony can be given than the impressive number of repeat orders received.

This derives from the inherent simplicity and freedom from moving parts in contact with the refuse, allied to the general robustness of construction.

However, our Engineers are constantly applying the experience gained over many years to the development and improvement of the design which has resulted in this new **DOUBLE RAM MODEL**.

## PATENTED BODY OUTER SUBFRAME



The highly successful tipping subframe which has been an exclusive feature of all **SD** Fore and Aft Tippers has been retained and still embodies the method of pivoting the body on large diameter heavy-duty roller bearings when tipping forward, and this built-in factor of safety cannot be over-emphasised.

A single Triple expansion-type hydraulic ram is mounted in the subframe for forward tipping and is provided with a separate hydraulic circuit and pressure relief valve.

## REAR TIPPING

The single Triple expansion-type hydraulic ram employed for this purpose is mounted on the chassis mainframes, arranged to give a maximum angle of body elevation with lowest possible working pressures in the system.

The cut-out is automatic and when the body is tipped rearwards the forward tipping ram is carried in the subframe, thus leaving the chassis clear of all obstructions and facilitating maintenance.

## STABILITY AND SAFETY

The rear of the tipping subframe is carried in massive bearings pivoting on a full-length shaft, the overhang of the pivots from the rear spring brackets being reduced to a minimum to preserve the highest possible degree of stability when the body is tipped to the rear for discharging.

As in the case of the forward tipping, the cut-out is automatic and foolproof, and there is a complete absence of mechanical gear which might be tampered with accidentally or otherwise.

The tipping control levers, one for each direction, are conveniently but safely positioned within the cab and are interlocked to prevent misuse.



## EASE OF LOADING

The design of the hopper enables a substantial number of bins to be loaded before forward tipping takes place and the full width rave at a height of only 4 ft. 6 in. permits two men to work at the same time, without impeding each other, thus speeding up the loading rate.

The aperture cover is of the spring-loaded 'up and over' pattern easily operated by one man.

The forward tipping of the body to transfer the load and returning it to the 'down' position to receive further bins can be accomplished in approximately 45 seconds, and to achieve a full load this operation is repeated 8 to 12 times according to the density of the refuse.



## TOTALLY ENCLOSED BODY

The body is of heavy-gauge all-steel welded construction with external reinforcing ribs and is designed to the high standard set by the well-proven predecessors of this model, of which more than 2,500 are in daily service, and differs only in detail refinements.

Note the clean appearance when the rear flap is closed for travelling and the light alloy loading steps which are standard equipment.

## CLEAN DISCHARGE OF LOAD

The load is discharged by rear tipping and the rear door is very carefully spring balanced to open automatically when the locks are released and lowers itself into position for relocking as the body comes down.

An exceptionally wide opening is presented for the refuse to slide out immediately and the balance of the rear door enables it to ride over the tipped load when the vehicle is drawn forward.

This important feature is particularly valuable when discharging on level ground, as is practised by many Authorities, and effectively prevents 'dragging' of the load.



# POWERPRESS

INCREASES **PAY LOAD** and is

**EXCLUSIVE** to  **Fore and Aft Tippers**

Introduced in 1957 and improved by progressive development the now well-known and service-tested **POWERPRESS** is specified for approximately 95% of the **SD** Fore and Aft Tippers sold at the present time, this universal acceptance of its advantages being due to the substantial increase in body capacity achieved by the principle of applying **PRESSURE** to aid the compaction obtained from gravity.

As the problem of increasing bulk in refuse becomes more acute and it is certain that the trend will continue in this direction, the pattern for the future clearly indicates that this feature, designed to meet **MODERN CONDITIONS**, will have an even more important effect upon the economics of collection.

In the case of light refuse containing a high proportion of cartons, paper and tins, when consolidation by gravity is lowest, the effective capacity can be increased to give a total volume of as much as 50% greater than that of an uncompressed load. This ensures that the vehicle is operated at maximum efficiency and eliminates additional runs to the tip.

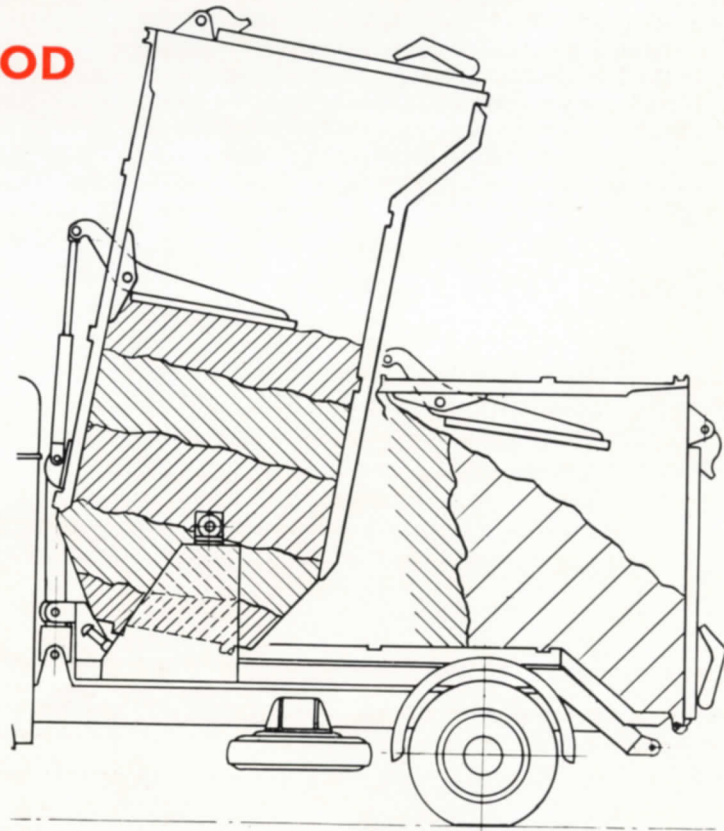
## **ACTION AND METHOD OF OPERATION**

The action is simple, no moving parts other than the actual Pressure Plate being in contact with the refuse and, as illustrated, compressing of the refuse is carried out when the body is tipped forward.

It will be appreciated that the compression device is not employed for loading but is brought into action only as required to achieve maximum compaction of the refuse which has already been transferred within the body by gravity.

Note that when raised the Pressure Plate rests on the underside of the body roof and does not interfere with either loading or discharging.

All hydraulic pipes, both steel and flexible, are arranged to fit closely and neatly to the chassis and exterior of the body.



# SD FORE AND AFT TIPPING BODY SPECIFICATION

(subject to alteration without notice)

**BODY—STANDARD** The body shell is of all-welded construction, made from heavy-gauge steel plate throughout, stiffened by pressed and rolled steel channels. The shell is mounted on a subframe of rolled-steel channels and main longitudinals carrying heavy-duty roller-bearing trunnions for forward tipping. Continuous welding of all seams prevents ingress of moisture. The rear hopper has a capacity of 1½ cu. yd.

**BODY—POWERPRESS MODEL** When Powerpress is fitted the roof of the fore and aft tipping body is specially strengthened and incorporates additional longitudinal members to withstand the stresses imposed by the action of the rams and compressing gear.

**REAR DOOR** The rear door is of heavy-gauge steel plate, stiffened with pressed-steel sections, pivoted on roller-bearing trunnions and carefully balanced by springs and cables. The full-width manually operated flap to enclose the loading aperture is mounted on a pressed-steel framework and is spring balanced to operate on the 'up and over' principle.

**POWER TAKE-OFF** A power take-off for the hydraulic pump is driven from the gearbox reverse shaft and engaged by a control situated conveniently to the driver's seat.

**HYDRAULIC SYSTEM** A high-efficiency nine-cylinder swash-plate type pump of heavy-duty construction, driven by a universally jointed shaft from the gearbox power take-off provides oil-pressure supply for forward and rearward tipping gear. The triple expansion ram mounted at the front of the body is employed for tipping rearward to discharge. A separate triple expansion ram mounted between body and subframe controls forward tipping. The selector valve, controlled from the cab

by two levers with interlock mechanism which ensures that oil cannot be fed to both rams simultaneously, has independently adjustable pressure release valves and the entire hydraulic circuit is constructed with a minimum of components and pipe work. Large-bore weldless steel tubing and heavy-duty flexible hoses are used throughout.

**PRESSURE PLATE** Heavy-gauge steel all-welded construction plate, corrugated to achieve maximum compaction. The extremely robust fabricated steel channel section actuating levers are carried on substantial bearings mounted in brackets attached to the roof of the body and connected to two double-acting hydraulic rams.

**HYDRAULIC RAMS** Two 3¼ in. diameter double-acting rams are mounted on the roof of the body; therefore only the pressure plate itself is in contact with the refuse. Spherical bearings are fitted at both ends of rams to maintain true alignment and prevent damage to the oil seals. The ram piston rods are chrome-plated for resistance to wear and corrosion. NOTE: In the case of Models Nos. P15/2 and P15/4 the rams are mounted inside the body.

**CONTROL VALVE** The mechanism of the valve is totally enclosed and foolproof and placed in a position within the cab to enable the operator to have complete control of both the compressing mechanism and forward tipping of the body. A built-in relief valve is incorporated to automatically cut out when maximum pressure is reached.

**PUMP AND OIL SUPPLY** Hydraulic power is obtained from the same pump and oil reservoir that is employed for the body tipping gear, driven by a power take-off from the gear box.

## AFTER-SALES SERVICE

Undoubtedly the most important factor to every Cleansing Officer is to employ a vehicle which can be relied upon to **STAY ON THE JOB** with a minimum of lost time and this is a vital aspect to which we give very special attention.

It is recognised as an obligation that the **AFTER-SALES SERVICE** must be of the highest possible standard and we take pride from the fact that the facilities we offer have contributed largely to the goodwill we are privileged to enjoy among Local Authorities and has resulted in our being favoured with repeat orders in substantial numbers.

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**ALWAYS**



**AHEAD**

**IN REFUSE COLLECTION**

**UNSURPASSED AFTER-SALES SERVICE**