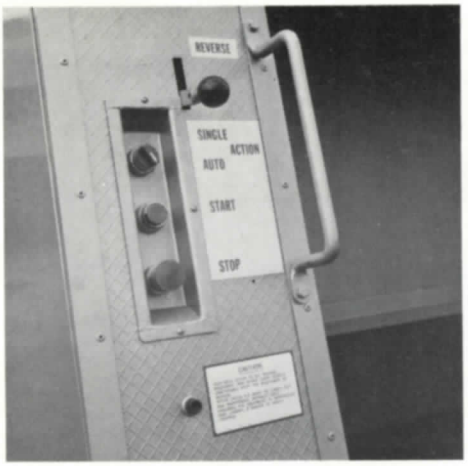
Glover

REFUSE COLLECTION VEHICLES

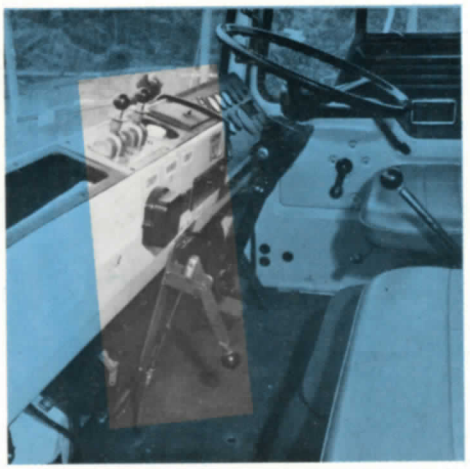
GLOVER WEBB & LIVERSIDGE LIMITED, Hamble Lane, Hamble, Hampshire. SO3 5NY.
Tel; Hamble (042 122) 2811. Telex; 477 527. Tel. address; Glomova Soton.

Grenadier

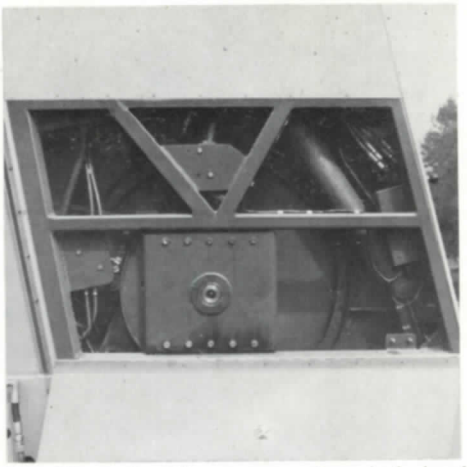
*Intermittent or continuous operation *Bigger payload (6½ tons plus)
*Easy loading and horizontal discharge *Compresses whilst loading
*Operator safe *Quiet in operation



Rear control panel for operating the pressure plate in forward or reverse. The warning buzzer button and optional grab handle are also shown.



The warning light and cab controls which operate the discharge mechanism are all within easy reach of the driver.



The side panels of the canopy can be unlocked and hinged down to allow maintenance and greasing to be carried out on the pressure plate mechanism.

Construction of the horizontal discharge body

The 'Grenadier' body framework is made from all welded high tensile steel sections which are clad with aluminium alloy panels. The body floor and barrier are made from mild steel and where necessary, in highly stressed areas, high tensile wear resisting steels are used. The design caters for maximum strength and rigidity for use on 'off the road' tipping sites and avoids unnecessary weight.

The loading hopper is fitted with a wide bumping rail which helps to avoid damage. It has vertical sides and a replaceable floor, which is built from ¼" Corten Steel. The hopper has a wide aperture to receive refuse.

Hopper operating mechanism

The operating principle of the 'Grenadier' is that when refuse is loaded into the hopper it is carried forward and upward into the body by a rotating single pressure plate. The hopper is cleared of all refuse by one full sweep of the pressure plate. All bearing points in the mechanism have lubrication points. The pressure plate, being hydraulically operated, is the only moving part in direct contact with the refuse. All rams, pipes, pivots etc. are concealed behind the vertical hopper sides which have removable panels for servicing.

Refuse is discharged horizontally from the body by a hydraulically operated pressure plate when the rear hopper assembly has been lifted clear of the body.

Body rear canopy and loading hopper

The rear canopy and loading hopper, being hinged to the body shell, ensures a wide discharge opening and the hinging geometry minimizes the displacement of the centre of gravity when the load is being discharged.

The canopy is automatically locked and unlocked by a special hook arrangement which is operated by the canopy lift ram.

Rear view of a 'Grenadier' showing the automatic guard rail and the emergency stop bar. Below them are the optional loading steps.

Controls

The controls for the pressure plate are situated on a control panel at the rear of the machine.

The horizontal discharge operating controls are situated in the driver's cab and the special interlock mechanism, also controlled by the driver, ensures that the rear hopper is lifted clear before the discharge controls are engaged.

Safety device

The rear hopper is fitted with a full width emergency stop bar, which stops the packing mechanism instantaneously.

Cleaning and maintenance

Access panels are provided, where necessary, for ease of cleaning and maintenance.

Painting and finishing

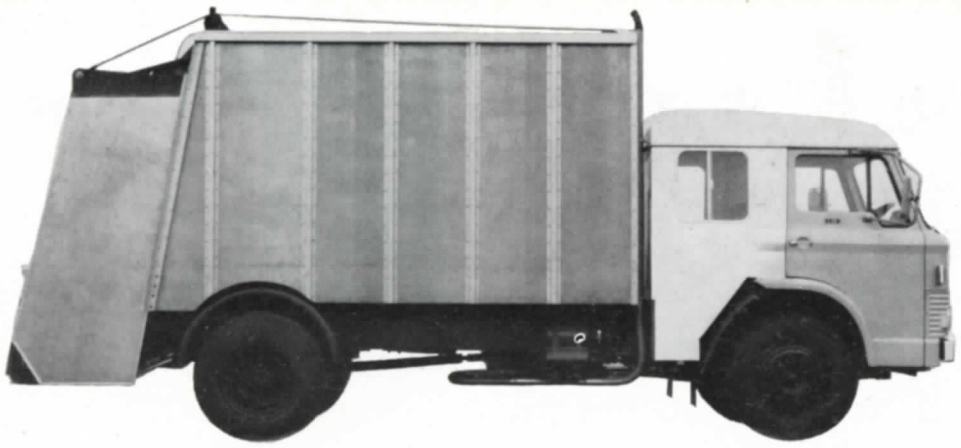
Depending on customers requirement's the 'Grenadier' can be either finished painted and lettered in the customer's own livery, or in primer when required.

Extras

Salvage racks, towing attachments, loading steps, sack hooks, paper sack pockets and skip cradles are available as extra equipment.

Musketeer

*Strong aluminium alloy body *Easy loading hopper *20″ diameter screw compresses refuse, minimises snags in the transfer station *Continuous compaction during loading *Good weight distribution for maximum legal capacity *Simple, robust and foolproof mechanism requiring minimum maintenance *Wide range of extra equipment available



Body construction

The 'Musketeer' body underframe is made from all welded steel section channel. The floor is made from 10 gauge zinc coated steel, flanged upwards x 6" giving extra strength at the floor to body sides joint and is completely seam welded throughout. The body sides and roof are manufactured from corrosion resistant aluminium attached to specially designed side pillars and rib section which give great strength. Huckbolts and rivets are used throughout.

The body is mounted to the chassis incorporating a full length sub-frame with body hinge brackets.

Rear canopy and loading hopper

This is hinged at the top of the body shell and whilst a large discharge opening is provided the centre of gravity of the hinged unit is limited in its displacement allowing for safer tipping.

The canopy is raised by two steel wire ropes which pass over two pulleys, the ropes then being anchored to the chassis. When the body is resting on the chassis the canopy is locked to it by a locking hook arrangement using the weight of the body and a specially designed lever linkage to pull the canopy tight against the rear end of the 'Musketeer' body. When the body is tipped the canopy is automatically unlocked.

The hopper is fitted with a wide rubber bumping rail providing easy loading into the screw impeller. It is made from $\frac{3}{16}$" steel and has galvanised slopes at the side and rear and has a wide opening to receive the refuse. The rear aperture is fitted with an aluminium shutter which can be raised to form a canopy or when lowered will automatically lock into position without any manual locking device.

Mechanism

The simple loading operation of the 'Musketeer' is that refuse, when loaded into the hopper, is carried forward by a large diameter steel impeller screw which suitably crushes and compresses the material into the body aperture. The 20" diameter impeller screw is driven by a heavy duty double reduction worm gear box which is housed in the rear of the canopy. It is easily removable for repair or replacement and dust is excluded from the gear box using a face plate seal, housed in a large bell housing which forms the rear end of the screw shaft, the latter also having a dust exclusion ring. Behind the face seal is a further double oil seal which means that all moving parts are suitably protected from dust.

The impeller screw is driven from the engine via a power take-off attached to the chassis gear box and through a universal joint propeller shaft on to which is mounted an overload clutch device. A spring loaded dog drive provides a detachable connection to the double reduction gear box. If the impeller screw becomes over-loaded an automatic safety device disengages the drive which must be manually re-set. The impeller screw can be reversed by hand if necessary.

The body is tipped when necessary by twin front hydraulic rams.

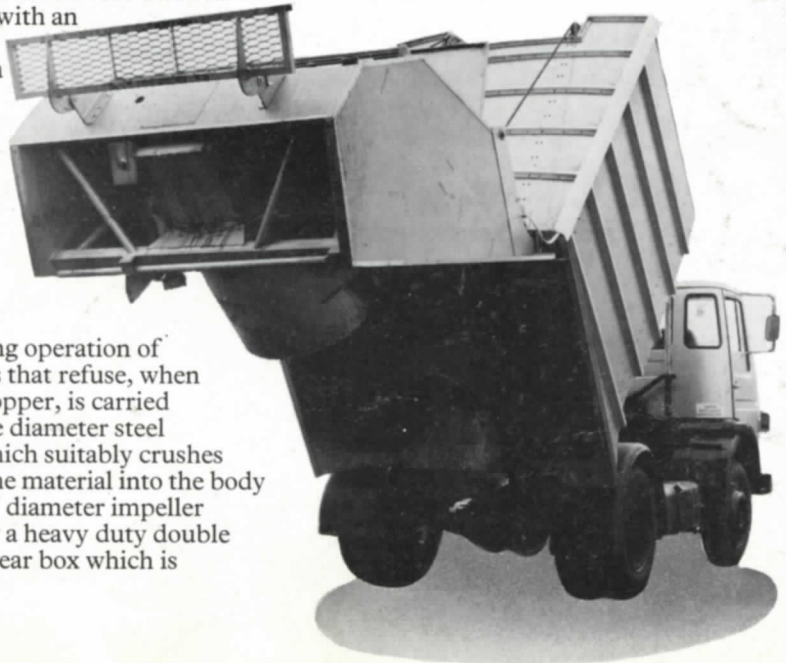
The 'Musketeer' design provides adequate strength and rigidity especially for use "off the road" and avoids unnecessary unladen weight.

Special features

A warning light is fitted in the cab to warn the driver when the body is tipped.

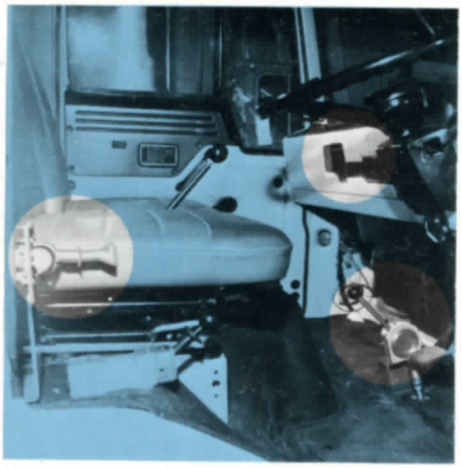
Safety props are fitted to both the body and the canopy as prevention of accident when men are working in that area.

An emergency stop button is fitted to the rear of the body which stops the engine and can only be re-engaged by the driver.

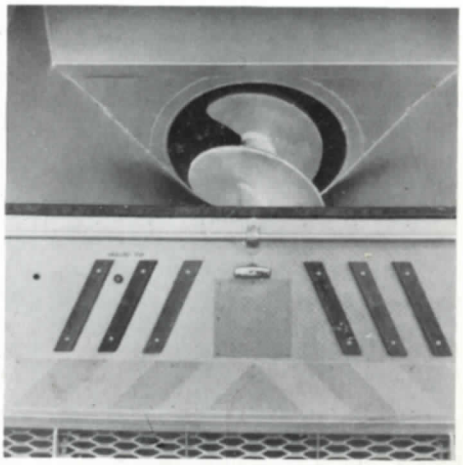


Controls

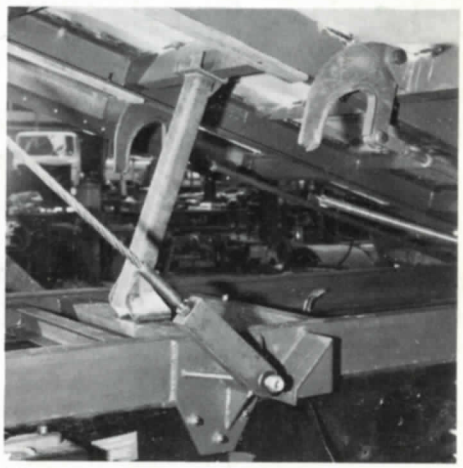
All the necessary controls for compaction or discharge are within easy reach of the driver in the cab.



Conveniently positioned controls for the body tipping mechanism and the canopy lift are operated by the driver.



Shown here are the impeller screw, bumping rail, warning buzzer and emergency stop buttons and the optional loading step.



The body tipped with the body prop in position to allow maintenance work to be carried out in safety. The body locking hooks can also be seen.

Additions

The following extras and additions can be fitted at the factory; salvage racks, towing attachments, loading steps, sack hooks, paper sack pockets and skip cradles.

Painting and finishing

The complete vehicle can be painted in primer or finished painted and lettered to customer's requirements.

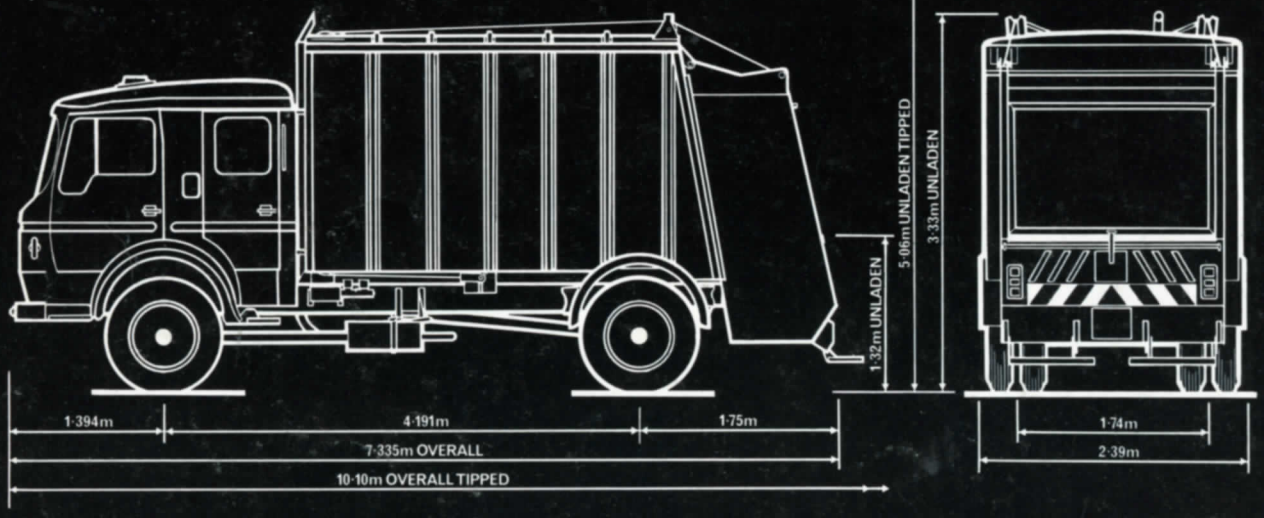
This uncompleted canopy shows the position of the canopy safety prop in use (common to both models) and the accessibility of the 'Musketeer's' impeller screw gearbox.

Interior of a crew cab which can accommodate up to seven men (including the driver) and any necessary equipment without impeding the driver in any way.

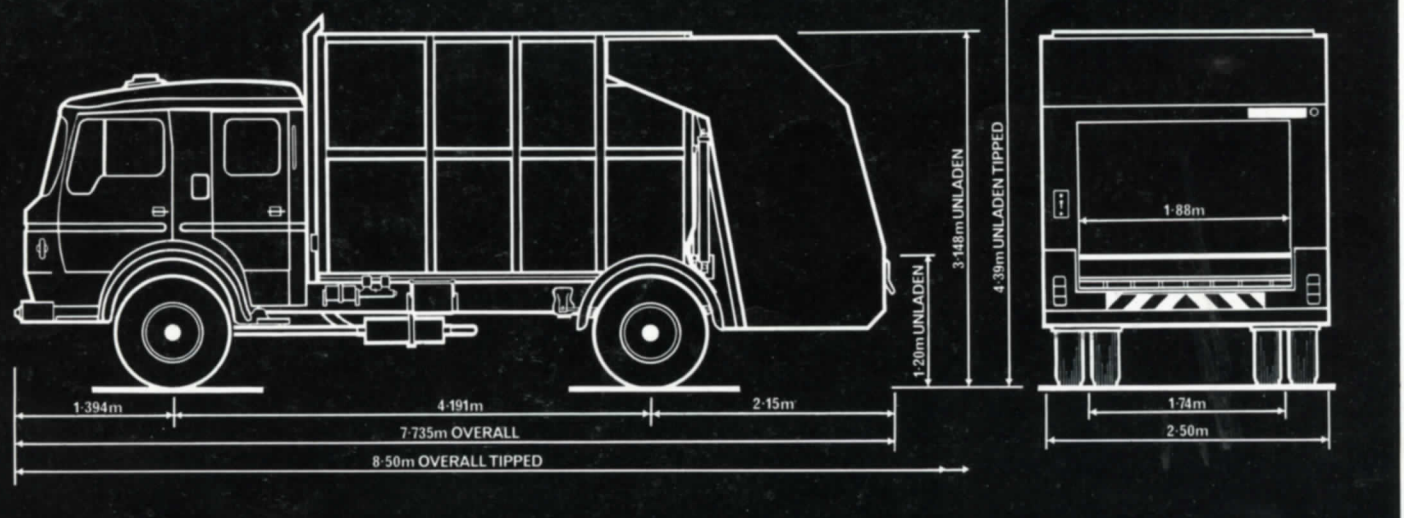
Craftsmen working on the horizontal discharge body of a 'Grenadier'. The body structure is mounted onto the chassis, the canopy and pressure plate mechanism being added later.

Overall dimensions mounted on Chrysler RG13

MUSKETEER 19/60



GRENADIER 18



Chassis and Crew Cab alternatives

MUSKETEER

MODEL	14/45		19/60		22/70	
CAB	CREW	STANDARD	CREW	STANDARD	CREW	STANDARD
CHRYSLER CHASSIS BASIC WHEEL BASE	G1385 136″ (3·45m)	G1385 120″ (3·04m)	G1385 159″ (4·03m)	G1385 136″ (3·45m)	G1585 181″ (4·59m)	Not available
FORD CHASSIS BASIC WHEEL BASE			D1210 Municipal Pack 156″ (3·96m)	D1210 Municipal Pack 134″ (3·40m)	D1614 179″ (4·54m)	Not available
LEYLAND CHASSIS BASIC WHEEL BASE			Boxer 1300 171″ (4·34m)	Boxer 1300 131″ (3·32m)	Boxer 1600 182″ (4·62m)	Not available
SEDDON CHASSIS BASICWHEEL BASE			Lowline 135″ (3·42m)	Not available	Lowline 161″ (4·08m)	Not available
BEDFORD CHASSIS BASIC WHEEL BASE			KHL 163″ (4·14m)	Not available	KHE 189″ (4·80m)	Not available

GRENADIER

MODEL	18		21	
CAB	CREW	STANDARD	CREW	STANDARD
CHRYSLER CHASSIS BASIC WHEEL BASE	G1385 159″ (4·03m)	G1385 136″ (3·45m)	G1385 181″ (4·54m)	Not available
FORD CHASSIS BASIC WHEEL BASE	D1210 Municipal Pack 156″ (3·96m)	D1210 Municipal Pack 134″ (3·40m)	D1614 197″ (4·54m)	Not available
LEYLAND CHASSIS BASIC WHEEL BASE	Boxer 1450 Municipal 171″ (4·34m)	Boxer 1450 Municipal 131″ (3·32m)	Boxer 1600 182″ (4·08m)	Not available
SEDDON CHASSIS BASIC WHEEL BASE	Lowline 135″ (3·42m)	Not available	Lowline 161″ (4·08m)	Not available
BEDFORD CHASSIS BASIC WHEEL BASE	KHL 163″ (4·14m)	Not available	KHE 189″ (4·80m)	Not available

Basic wheel base sizes quoted here are manufacturers' sizes. Glover-Hamble alter these dimensions, when necessary, to suit body designs.

View of Glover main office and factory at Hamble, Hampshire.

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A member of the Charringtons Group

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We wish to thank the Basingstoke District Council, Newbury District Council, South Derbyshire District Council and their employees for allowing us to take photographs, for the production of this brochure, of their Glover built refuse collection vehicles in operation.

The company's policy, with progression in mind, reserve the right to make detailed alterations without notice. Patents applied for.