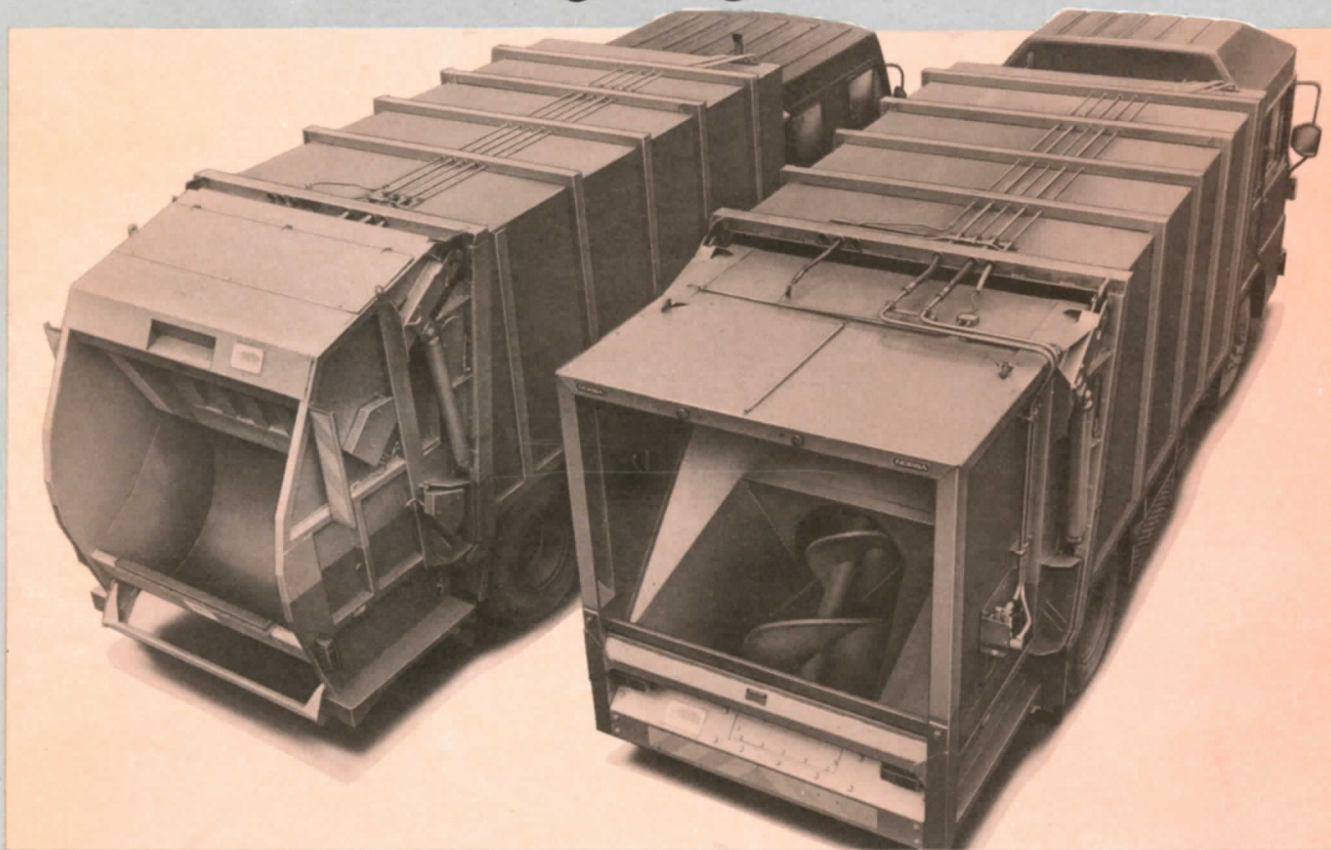


**The widest range of
refuse collection vehicles
for both intermittent and
continuous loading operations**



take a closer look at the Norba range....

Norba Refuse Collectors

The Norba company has, over the past years, become well respected in the British market as manufacturers and suppliers of a fine range of refuse collection vehicles.

Today the range is extensive and enjoys the support of many local authorities throughout the U.K. In a market becoming increasingly competitive our success reflects the quality and cost effectiveness to be gained from specifying Norba.



Why select a Norba Refuse Collector?

Today more than ever before the combination of initial cost and operating costs become the criteria when purchasing new equipment and even in these days of escalating costs the correct Norba model to

suit your requirements does represent excellent value for money. Not only are our initial costs competitive but the high standard of design and engineering embodied in our products ensures high performance figures and a long and trouble free life. In specifying Norba you are safe with the knowledge that the equipment will function to your precise needs and will go on doing so for a long time to come.



The Norba Range

The Norba range consists of four basic types of vehicle. Covering both continuous and intermittent loading facilities and to suit all refuse collections from domestic through to skip and bulk handling. Chassis choice is wide and covers all popular municipal specifications.

The Norba Hippo

Working with an intermittent loading cycle it offers a 3-5:1 refuse compression ratio in a choice of five body sizes, from 40 – 100 cu. yd. As safety is of major importance many additional measures are included as standard, such as unique safety controls, static tailgate locks, safety clearance below hopper and the positioning of inspection hatch above the load ejection controls. As with all Norba models the Hippo is equipped with an ejection panel to discharge the complete load in under one minute.

The Norba Constrictor

The continuous loading facility of this vehicle has proved extremely popular and as the hydraulic operation has been designed simply, downtime is cut to the very minimum. Five body sizes are available offering loading potentials from 40-70 cu. yd.

The Constrictors short continuously rotating screw semi-pulverises and compresses the refuse into the container and against the ejection panel. By this continuous method of compression the volume of refuse is reduced by 3-5:1. As the Constrictor offers low unladen weight, high legal payloads are possible. Safety is again of priority and many strict measures are built in as standard. Wide loading hopper, high speed loading and complete load ejection in under a minute all add up to the sort of performance figures that make economic sense.

The Norba Ferret

As its name suggests has been manufactured to contend with narrow back alleys and lanes, whilst still offering a sizable 30 cu. yd. loading potential, within its 80" wide body. Intermittent loading cycle, bulk loading facility and ejection panel discharge makes the Ferret particularly suitable for domestic and town centre use, and as with all the Norba models safe and trouble free operation are the benefits to be gained from Norba design and engineering.

The Norba Alligator

This vehicle has been designed to bridge the gap between skip loaders and our more conventional refuse collection models.

Many skip unit operators are finding that it is no longer viable to run individual collections so now the Alligator with its unique loading and packing operation can collect some 10-12 skip loads per trip, depending upon the type of refuse, compression ratios of up to 5:1 can be achieved. Three sizes of body are available from 60 to 100 cu. yd.

The packing mechanism unlike most other vehicles comprises a set of 'jaws' which draw the refuse from the elevated skip, eliminating the problem of load jamming, as well as minimising skip wear and tear. Load discharge is by ejection panel and completed in under one minute.

Operating Economy

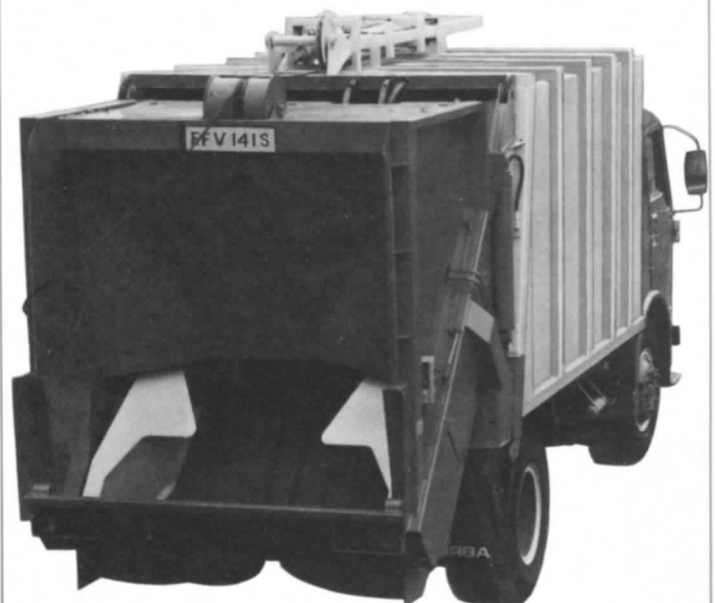
Economy in running costs starts on the drawing board, where a higher degree of reliability is engineered into the Norba range. Apart from creating a remarkably robust structure and hydraulic system to withstand the harsh treatment they will receive, items such as body mounted shock absorbers and static tailgate locks are all part of basic Norba specification.

On the intermittent loading models, fuel saving is another major consideration as the engine revs are only increased during the brief packing cycle thereby reducing fuel consumption by some 40%. Add to this the fast feed rates and improved payloads and you can begin to realise the hard cash savings designed into our products. But don't take our word for it – ask any Norba user – there are plenty of them.

Built in Operational Safety

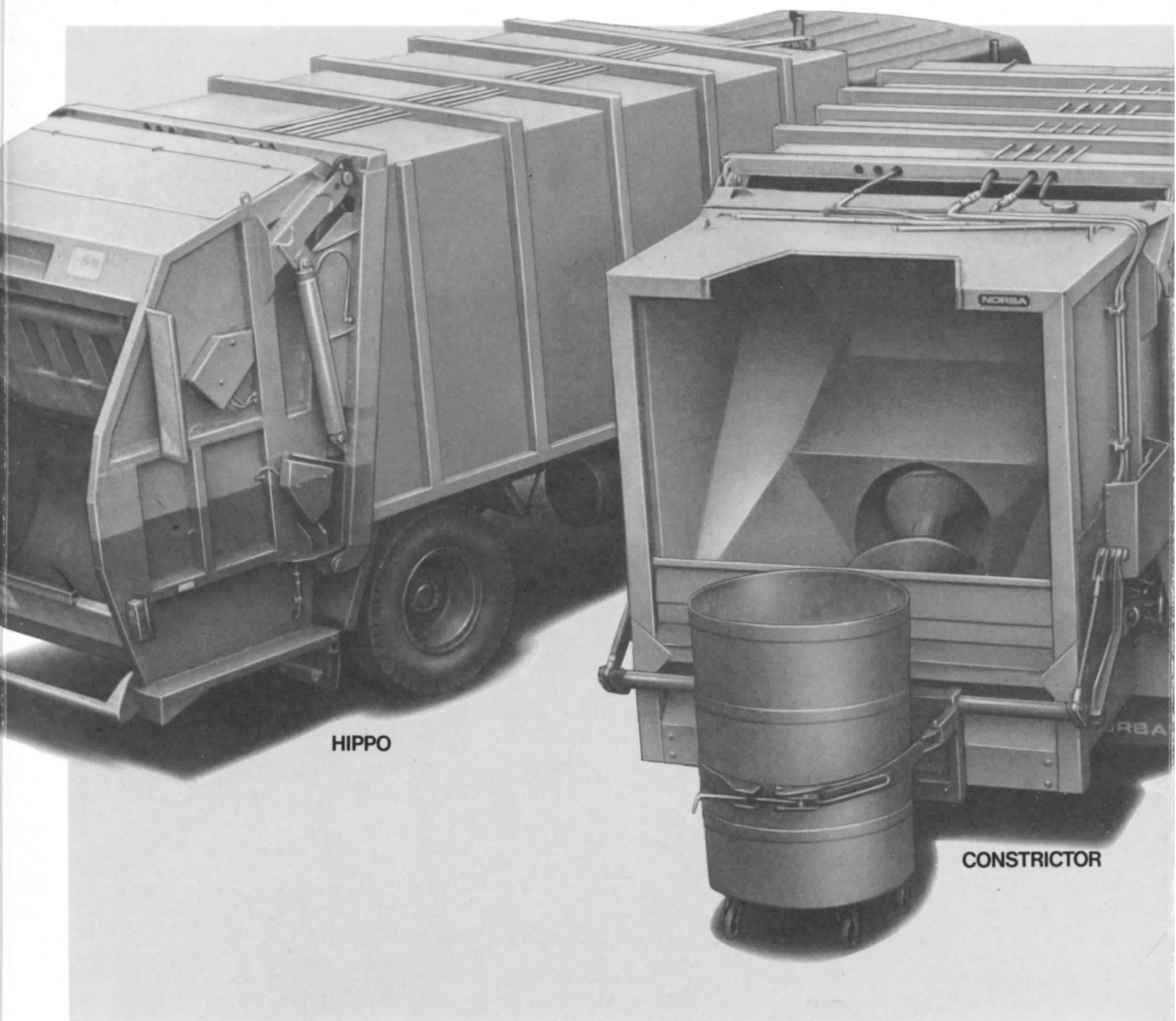
The safety aspects of equipment such as ours, are of paramount importance, not only for the operators but also the onlooker, and it is for this reason that our measures are strict. For example, on all intermittent loading models the packing operations are controlled from the hopper, take your hand from the control and the operation ceases. Emergency stop buttons on all models are within easy reach of the loaders. All feed areas are well lit.

Inspection hatches are located immediately above the load ejection and tailgate controls and when discharging the load at incinerator plants the operator has no need to approach the tailgate during the operation.



THE NORBA ALLIGATOR

THE NORBA REFUSE C



HIPPO

CONSTRUCTOR

Weather Proofing

Not only has the safety aspect of control functions been considered carefully but complete weather proofing of control panels has been achieved. By complete insulation and the use of modern materials, the ingress of water and traffic grime has been eliminated with the obvious result of reliable performance and reduced downtime.

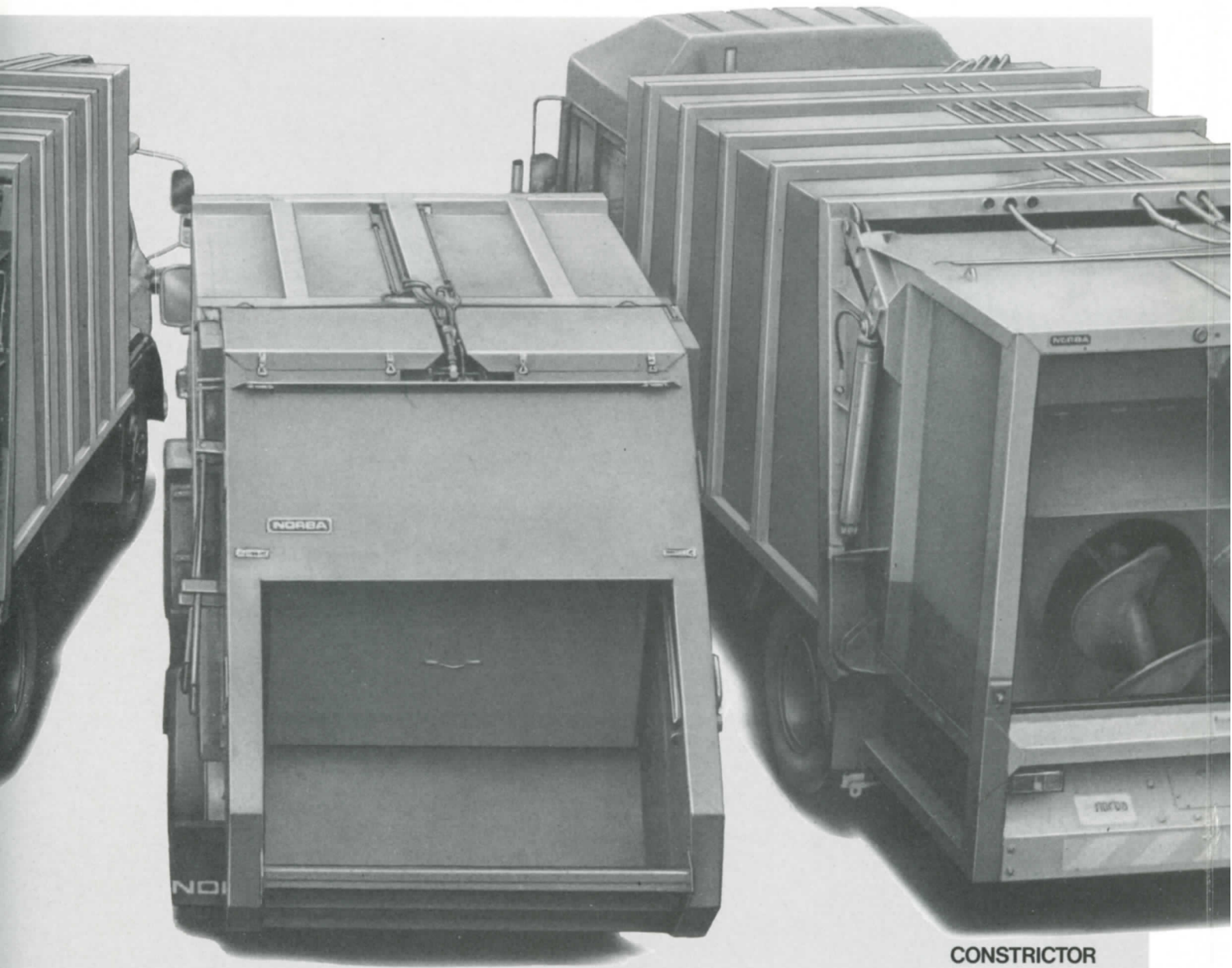
Likewise prevention of unsightly leakages usually experienced when compressing very wet refuse has been overcome by the inclusion of a water tight seal between the body and tailgate.

Load Ejection

In common with all Norba models is the load ejection arrangements. The tailgate is raised hydraulically and discharge is by means of an ejection panel, the entire operation is usually completed within the minute.

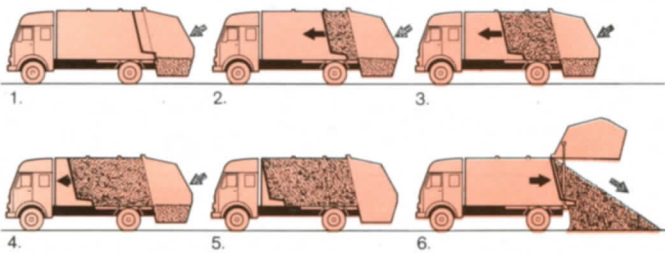
When compared with a conventional tipping system, discharge by ejection panel reduces the weight to rear axle ratio and requires less ceiling height when discharging into an incineration or pulverisation plant. In fact, due to the high compression achieved on Norba vehicles, the overall dimensions are very compact and often the Norba can negotiate those awkward turns and low bridges that send other refuse collectors on a long detour.

COLLECTION VEHICLES

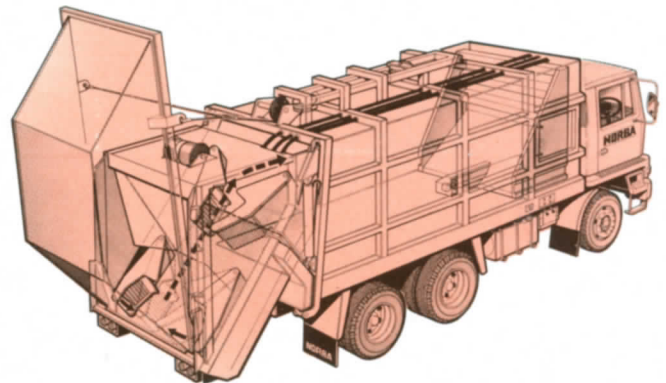


FERRET

CONSTRUCTOR



1. All Norba vehicles are fitted with ejection discharge.
2. As loading commences the ejection panel is positioned at the rear of the body.
3. The refuse is then compressed against the ejection panel.
4. A pressure relief valve allows the ejection panel to move slowly towards the front of the body.
5. When loading is complete all areas of the body are full with compacted refuse.
6. The tailgate can be raised and the load ejected in under one minute.



Binlifts and Skip Handling

Not only does the Norba range provide the choice between intermittent and continuous loading facilities, wide options of payload and body suitability for all popular makes of chassis but also caters for the operator whose requirements include the need for both bin and skip handling.

The Binlift facility handles all British Standard 1¼ cu. yd. cylindrical containers and when not in use folds neatly away leaving an unobstructed hopper for standard loading. Skip handling is achieved with the Alligator, the latest model in the Norba range, and as the illustration shows the skip is lifted into an upright position and the load discharged, without spillage, into the unique jaw mechanism of the hopper. These packer plates or 'jaws' can operate on an intermittent or continuous cycle, crushing and precompacting the refuse before it is pressed into the body. This method not only achieves compression ratios of 3-5:1 but also eliminates jamming so often experienced with other vehicles designed for similar operations. The Alligator is also suitable for standard loading and is also, when required, fitted with binlifting equipment.



THE NORBA ALLIGATOR



THE MULTILIFT ML 20

Bulk Waste Handling

Norba is a division of Multilift and together they offer today's widest choice of chassis mounted equipment in the field of waste transportation and handling.

The Multilift Company manufactures an extensive range of demountable body systems and plays a major role within the industry handling bulk collection and disposal of both dry and liquid materials.

Within the scope of the two companies many complete systems have been undertaken that involve the collection, compaction, containerisation and disposal of municipal refuse.

The body swap facility of the Multilift system applies itself well to the many differing applications necessary to service each operator within this growing industry. Many users find major capital saving is made possible by the adoption of many specialised bodies as opposed to specialised vehicles.

Individual case studies are available should you wish to explore the possibilities open to your particular handling requirements.

Service and Maintenance

Whenever possible within the design and engineering of your Norba body long life and maintenance free components have been used. Apart from regular routine service checks downtime will be substantially less than you have probably come to expect. However, the most exacting specification can't allow for damage caused either by mishap or serious abuse, and in the event of this happening, we, in conjunction with our parent company, have Service Centres throughout the U.K., where spares and specialist repair work is readily available. Your Norba vehicle has been designed to give years of service and we aim to see that it does just that.

Re-Bodying

The combined cost of a prime mover fitted with a Norba collector represents substantial capital investment in anybody's books. Many local authorities have taken advantage of re-bodying existing chassis and in doing so have maintained the efficiency of their cleansing service whilst showing major savings in capital.

Many operators have been introduced to the Norba product through this very service and have experienced first hand the proof of our engineering and design skills. Talk to us we will be pleased to advise.

Specification

| Norba Model | Loading Potential Cu. Yd. (Cu. M.) | | Air Volume Cu. Yd. (Cu. M.) | | Body Length Ins. (mm) | |
|-------------|---------------------------------------|------|--------------------------------|--------|---------------------------------|--------|
| Ferret | 30 | (23) | 10.5 | (8.0) | 127 | (3230) |
| Constrictor | 40 | (31) | 15.2 | (11.6) | 132 | (3350) |
| Constrictor | 50 | (38) | 16.4 | (12.5) | 140 ³ / ₄ | (3575) |
| Constrictor | 60 | (46) | 18.3 | (14.0) | 156 ¹ / ₂ | (3975) |
| Constrictor | 70 | (54) | 18.8 | (14.4) | 163 ¹ / ₂ | (4150) |
| Constrictor | 100 | (77) | 24.3 | (18.6) | 206 ¹ / ₂ | (5250) |
| Hippo | 40 | (31) | 16.0 | (12.2) | 132 | (3350) |
| Hippo | 50 | (38) | 17.4 | (13.3) | 140 ³ / ₄ | (3575) |
| Hippo | 60 | (46) | 19.4 | (14.8) | 156 ¹ / ₂ | (3975) |
| Hippo | 70 | (54) | 19.9 | (15.2) | 163 ¹ / ₂ | (4150) |
| Hippo | 100 | (77) | 25.4 | (19.4) | 206 ¹ / ₂ | (5250) |
| Alligator | 60 | (46) | 18.9 | (14.4) | 156 ¹ / ₂ | (3975) |
| Alligator | 70 | (54) | 19.4 | (14.8) | 163 ¹ / ₂ | (4150) |
| Alligator | 100 | (77) | 24.9 | (19.0) | 206 | (5250) |

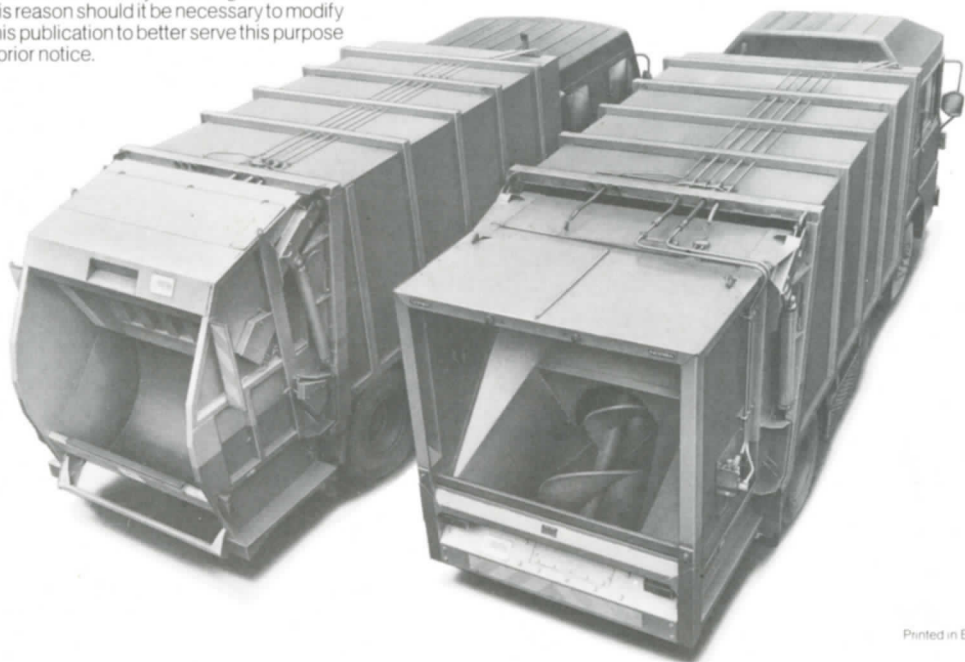
It has always been and will continue to be the policy of the Norba company to supply vehicles of quality to perform the continuously widening and diverse activities of the waste industry. For this reason should it be necessary to modify the specifications contained within this publication to better serve this purpose we reserve the right to do so without prior notice.



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