



Method

Method No. 32

A magazine featuring the HIAB Method and its applications.



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Cover Picture

A HIAB 1300, with a low-type grapple and top-seat controls, handling timber.

HIAB METHOD No. 32

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Publisher: Sture Larsson

Editors: A. Adlers
L. Rosengren

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A Lot More Than Just Loaders

In this issue of our magazine the editors of "Method" set out to convince readers that HIAB-FOCO doesn't occupy itself exclusively with hydraulic loaders. The firm's aim is to supply rational solutions to important loading problems, and it often happens that the loader is only one element in such solutions

Take the grapple loading of roundwood, for example. It's evident that the lifting capacity and movement pattern of the loader count for a great deal, but without a good rotator-equipped grapple the loader couldn't do its job, however impressive its performance data might be. Similarly, a well-matched loader-grapple combination would be little use on a forest landing without a good strong set of outrigger legs.

The same may be said in almost all the areas where the HIAB Method is today providing fast, rational and labour-saving handling. To make a good job of the task in hand the loader **must** be backed up by functional ancillaries. And they're available! Loads of them!

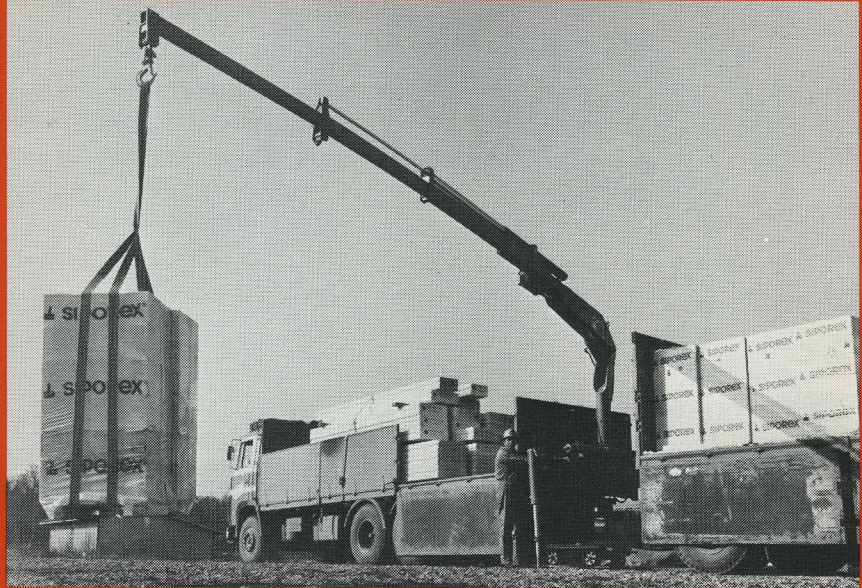
When it was decided, quite some time ago, that "Method" No. 32 would

be devoted to HIAB's range of attachments, accessories and ancillaries, we realised at once that we wouldn't be able to cover them all. Otherwise we'd turn out a bumper number that few readers would have time for. And as we began to comb through the available material we found that pretty strict limitations would be necessary if we were to stay within the usual format and still find space for a few other items.

In the end we confined ourselves to some of the most important accessories rounded out with a few "specials" to illustrate the breadth of the range. So if you don't find what you're looking for in this number, don't lose heart! Just have a word with a HIAB-FOCO man. He's got the answer to most things, and if there's no standard item that will do the job there's still a good chance that he can suggest a modification or adaptation that will fill the bill. That's what he and his colleagues are there for. Between them they have a formidable record of coming up with workable solutions to "impossible" handling tasks.

Elegant - Effective - Economical

Some of the simplest and cheapest accessories made for HIAB loaders are also among the most serviceable. Certain of them, such as slings of various kinds, have a timeless self-evidence. Besides their low price and their versatility, another thing these simple accessories have in common is that they weigh next to nothing. That makes them ideal for small loaders of low lifting capacity, since they make no appreciable inroads into performance.

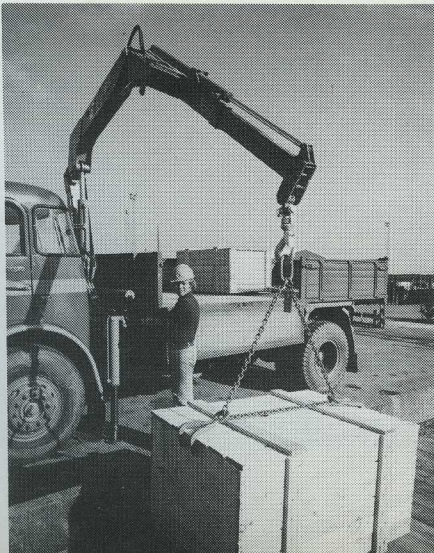


Slings

are available in several different sizes and materials — synthetic-fibre ropes and belts, steel wire ropes, light-weight chains and so on. Without at least two or three slings in your toolcase you needlessly restrict the serviceability of your loader — and thus of your whole rig.

Barrel Tongs and Box Claws

— simple tackle that makes it far easier to handle barrels and boxes of all kinds. Takes up no more room than a couple of slings, yet gives considerably faster handling.



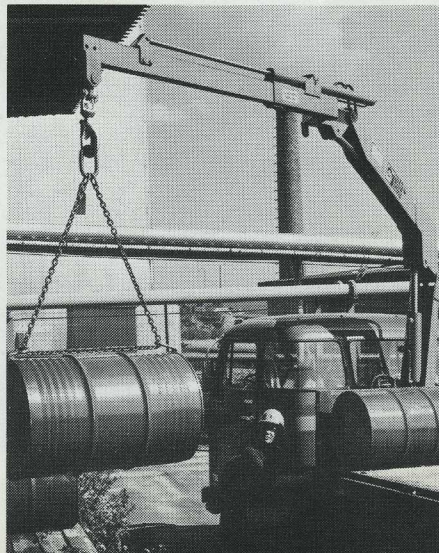
Pipe Hook

This item is likewise limited to a particular task, but yields very well worthwhile gains in speed and safety for a low outlay.



Stone Tongs

are still more specialised, but they give fast and safe handling of such things as kerbstones. There are similar tongs for the occasional handling of posts and logs.



Grapples for Forestry



The roundwood grapple has been of inestimable importance for the rapid breakthrough of the HIAB Method, which in many countries has been spearheaded by the forestry industry. Grapple loading by the HIAB Method has brought about a revolution in forest transportation — first in Sweden, and subsequently in pretty well every timber-growing area throughout the world. And in the application of this technique the grapple is just as indispensable as the loader.

Assortment Grapple

The commonest grapple used in roundwood handling is the assortment grapple, which is employed both for sawlogs and for pulpwood, and both for loading forwarders out in the forest and subsequently for cross-loading to trucks for the run to the mill. The latter job may be done with the truck loader or with a "mobile loader". The assortment grapple comes in various sizes with throat areas from 0.4 up to 0.7 m². It may be fitted with a vertical or horizontal hydraulic cylinder, resulting in "high-type" and "low-type" grapples respectively.

Claw Grapple

Some forestry operations call for the movement of whole trees or whole stems, which are loaded one at a time by a HIAB equipped with a claw grapple.

Rotator/Swing-damper

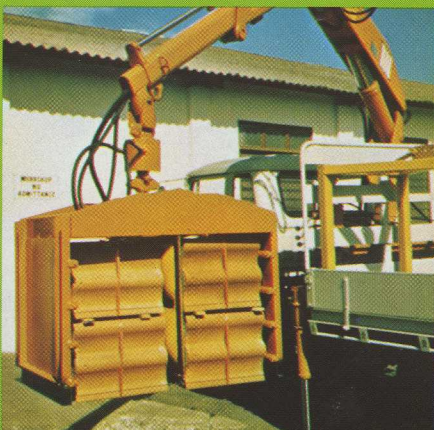
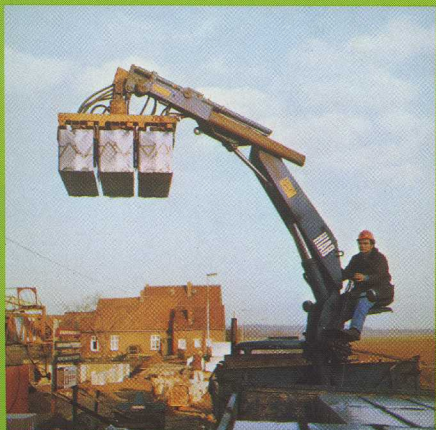
In roundwood handling it is important to be able to turn the grapple to the right position so that it can get a grip square across the timber. This facility is provided by a hydraulic rotator, of which there are several types in HIAB's range, some with a limited rotation angle and some able to rotate continuously as many turns as you like! Both types find wide use with other HIAB attachments as well as roundwood grapples.

Another important aid in this work is the swing-damper. It reduces grapple swinging, which can be a nuisance, especially in high-speed loading.



and all and sundry

Over the years, numerous grab attachments with more or less specialised applications have been developed. This multiplicity of special grapples gives a good idea of the versatility of the HIAB Method. There are hydraulic grapples for concrete blocks and sugar-cane, for railway sleepers and rails, for roofing tiles and line pipes, for peat and tractor tyres. There's no space here to list them, much less to illustrate them. Many are of very advanced design. Common to them all is that in their field they open the way to easier, faster and safer handling by the HIAB Method.



Forks



An effective means of achieving faster and easier goods handling is to put the goods on pallets, and a popular way of carrying this rationalisation a step further is to handle the pallets by the HIAB Method, using a HIAB loader equipped with a HIAB pallet fork, of which numerous sizes and patterns are available.

Balancing the Fork

An important feature of HIAB's pallet fork is that the point of suspension can be moved. As the fork is being slipped in under the pallet the fingers are held horizontal by lifting the fork at a point close to the upright. When the pallet is to be lifted the point of suspension is shifted in over the load, so that the pallet rests evenly on the fingers. When the pallet is put down, the point of suspension is shifted again so that the fingers can be withdrawn easily.

This variation of the point of suspension can be achieved mechanically by putting the fork down and moving the loader boom so that the lift hook slides along a rail on the upper horizontal member of the fork. On other models the lift hook is secured to a yoke which is free to slide along the horizontal member.

A more advanced way of shifting the point of suspension is to slide the lift-

ing yoke along the beam by means of a hydraulic cylinder. This enables the point of suspension to be shifted even while the fork is under load, which makes for faster handling. Hydraulically operated pallet forks are therefore the usual choice for rigs that have been specially built for pallet handling.

Flexibility

In order to handle different types of pallets and goods the pallet fork is made so that both the headroom — the vertical distance from the fingers to the upper horizontal member — and the finger spread can be varied within wide limits.

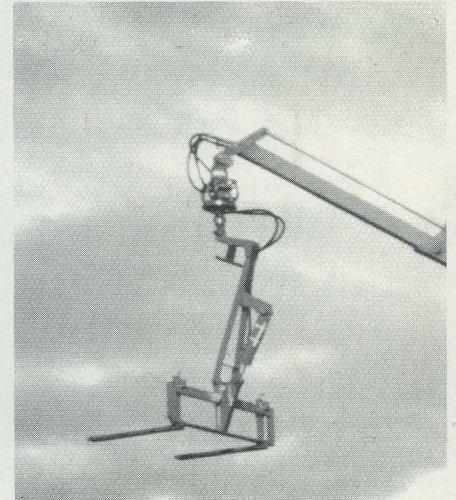
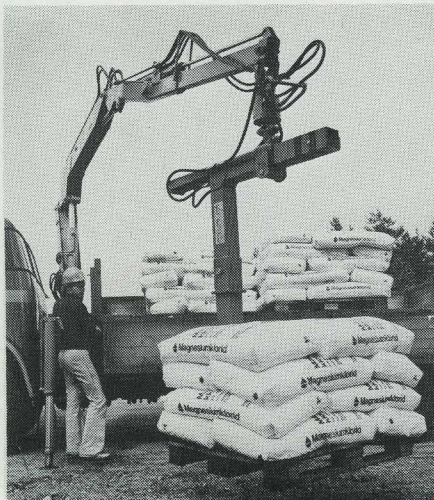
Pipe Fork

A special fork that has come into wide use at precast-concrete works and in transportation to pipeline projects is the pipe fork. It can be fitted with a

varying number of fingers spaced to suit different pipe sizes. Each finger is slid into a pipe, and usually one or more layers of pipes are stacked on top of the "pronged" pipes, after which the fork lifts the lot. The method yields many of the advantages of pallet handling without needing pallets.

Hi-Tilt

is another special fork, used for handling building boards. The lower part comprising the fingers can be tilted up hydraulically so that the parcel or bundle of building boards is raised on edge and held firmly during the actual lift. With a big loader having a long boom and a hydraulic extension the boards can be passed straight up to a window or a balcony on the third or fourth floor of a building.



Buckets and Grabs

The HIAB Method does not stop short at loose materials such as sand, gravel, soil, clay, wood-chips or swarf — they can be handled using one of the many types of hydraulic buckets and grabs in the HIAB range of attachments.



Sand Buckets

are available in various sizes. There are also buckets with toothed jaws which are better able to bite into coarse gravel and macadam.

Special Grabs

can be had for numerous different purposes, handling such things as sugar-beet, manure, peat, slag and so on.

The Polygrip Grab

— also known as the cactus grab — is an attachment that has found wide use in many different fields, though perhaps its real forte is scrap-handling. It comes in two basic versions having four or five tines. The tines can be fitted with stave-plates which come together to form a completely tight container when the grab is closed.



Many

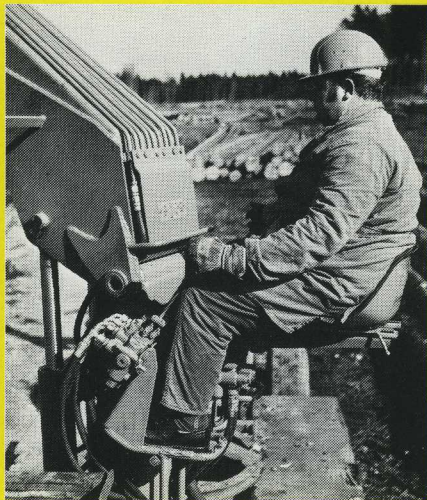
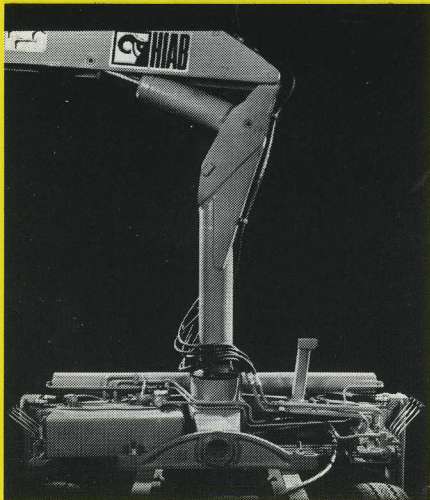
Remote Control Sets the Driver Free



Rol-loader Commands More Load Space



Control Alternatives



Besides the many different attachments described on the foregoing pages, HIAB-FOCO also makes a wide range of control equipment which still further increases the scope of HIAB loaders.

The remote control, a proportional electro-mechanical control system, gives the driver freedom of movement over a wide area around the loader, which he operates from a small control

box carried on a neck-strap. That enables him to stand where he's got the best view, or to move with the boom tip so as to guide the load if necessary.

Cross-mounted controls permit the driver to operate the loader from either side of the vehicle.

Top-seat and top-platform controls are used particularly on rigs adapted for system transportation and on

stationary loaders. The latter often have separate control valves, enabling the loader control levers to be sited at the most convenient point.

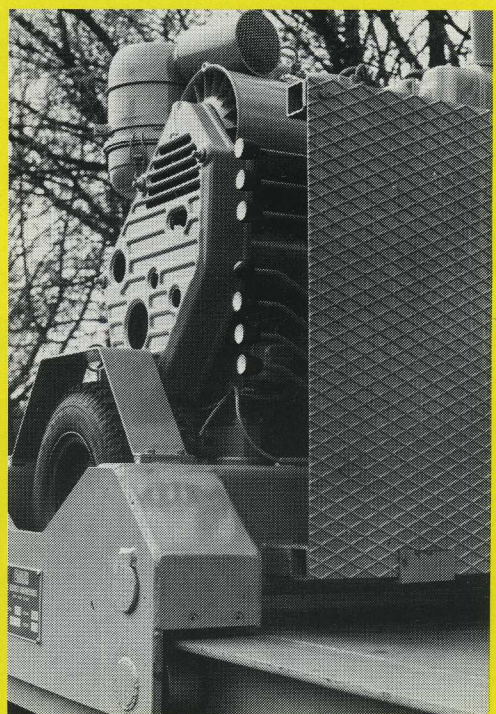
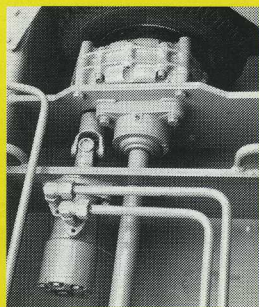
The Rol-loader is an arrangement that makes the loader mobile, e.g. from end to end of a long truck platform. Among the gains is that a small light

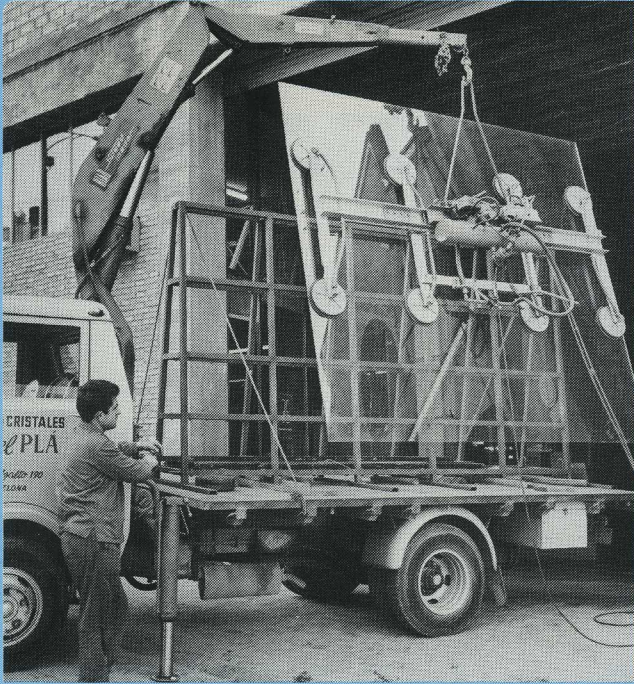
loader with a short boom can still command the whole platform — which would otherwise have required a big heavy loader with a long boom.

In the same category is console mounting, which enables a tail-end loader to be dropped off so as to increase the payload of the truck.



(Left:) A HIAB 650 as a Rol-loader, with top-seat controls and a brick clamp. (Below:) The drive mechanism, with the hydraulic motor and the transmission. (Right:) The controls, the diesel engine that powers the unit, and the stout support- and drive-wheels.





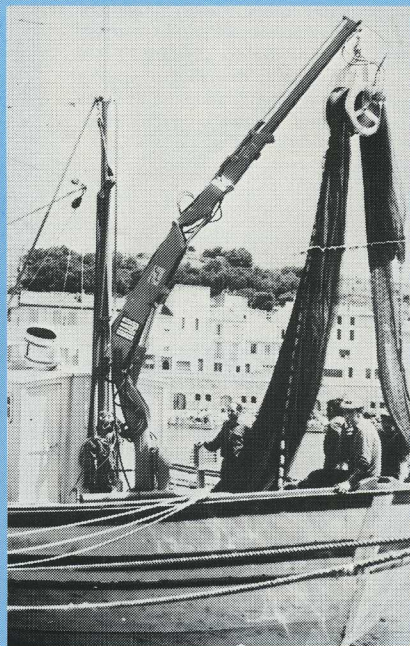
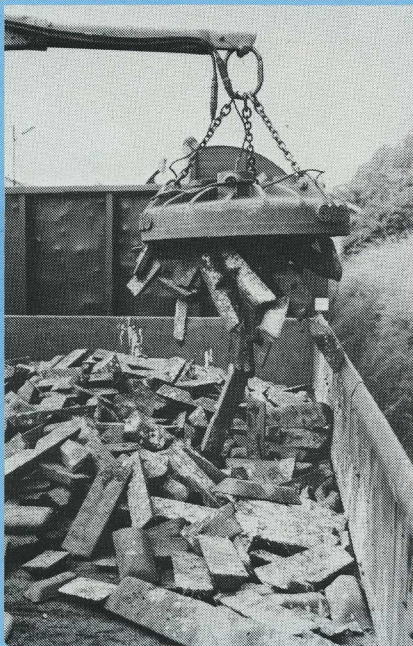
Special Accessories

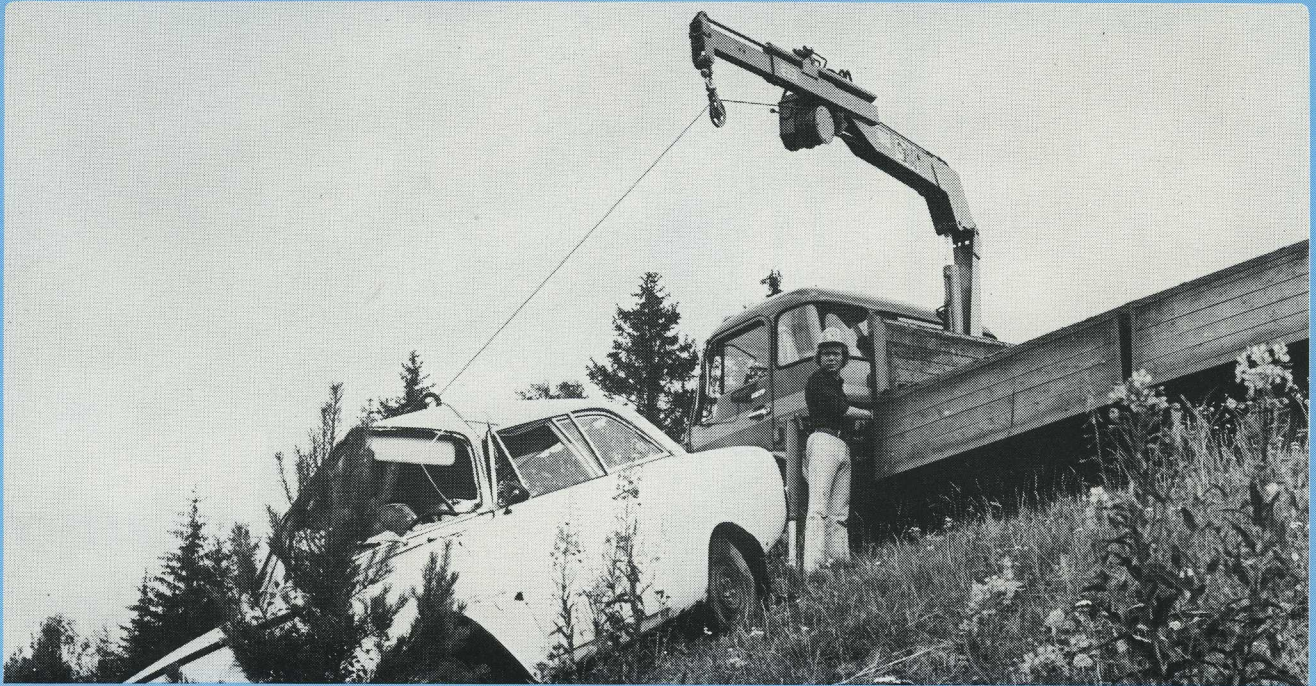
In some arrangements it's the attachment or accessory that does most of the work; the loader's job is merely to position the accessory where it's wanted. An example of this is the glass lift in the pictures above. The accessory shown is used for installing large panes of plate glass, display windows, etc., which are very heavy and unwieldy. The glass lift is available in several different versions with various numbers

of suction cups to hold the sheet glass.

Other attachments in the same category are the block for handling fishing-nets (below centre) and the earth auger (below right). The latter is available in several sizes and is coming into increasingly wide use. It turns up twice in this one issue of "Method". Where soil conditions are suitable it's a highly rational and time-saving means of making post-holes.

At bottom left is a magnetic lift attachment — also available in various types and sizes.





Ancillaries

Winches

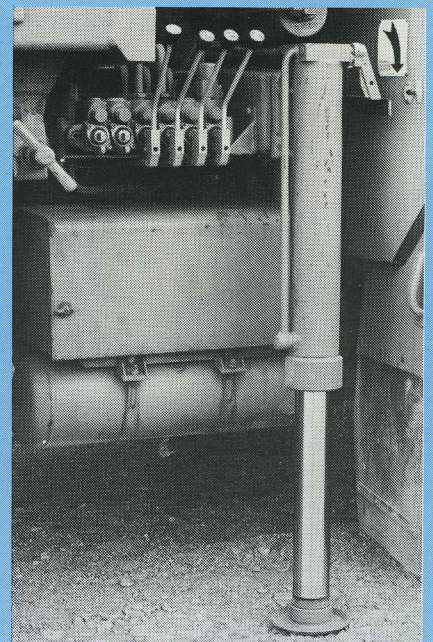
A common ancillary on HIAB loaders is a hydraulic winch, which in most instances adds several strings to the loader's bow. A range of winches with various specifications are available for mounting on HIAB loaders.

Pumps

Hydraulic pumps are of enormous importance to loader performance, and the HIAB range comprises a whole series of them. That means that for every loader, with any source of power, it's always possible to fit a pump that will give the right oil throughput and pressure.

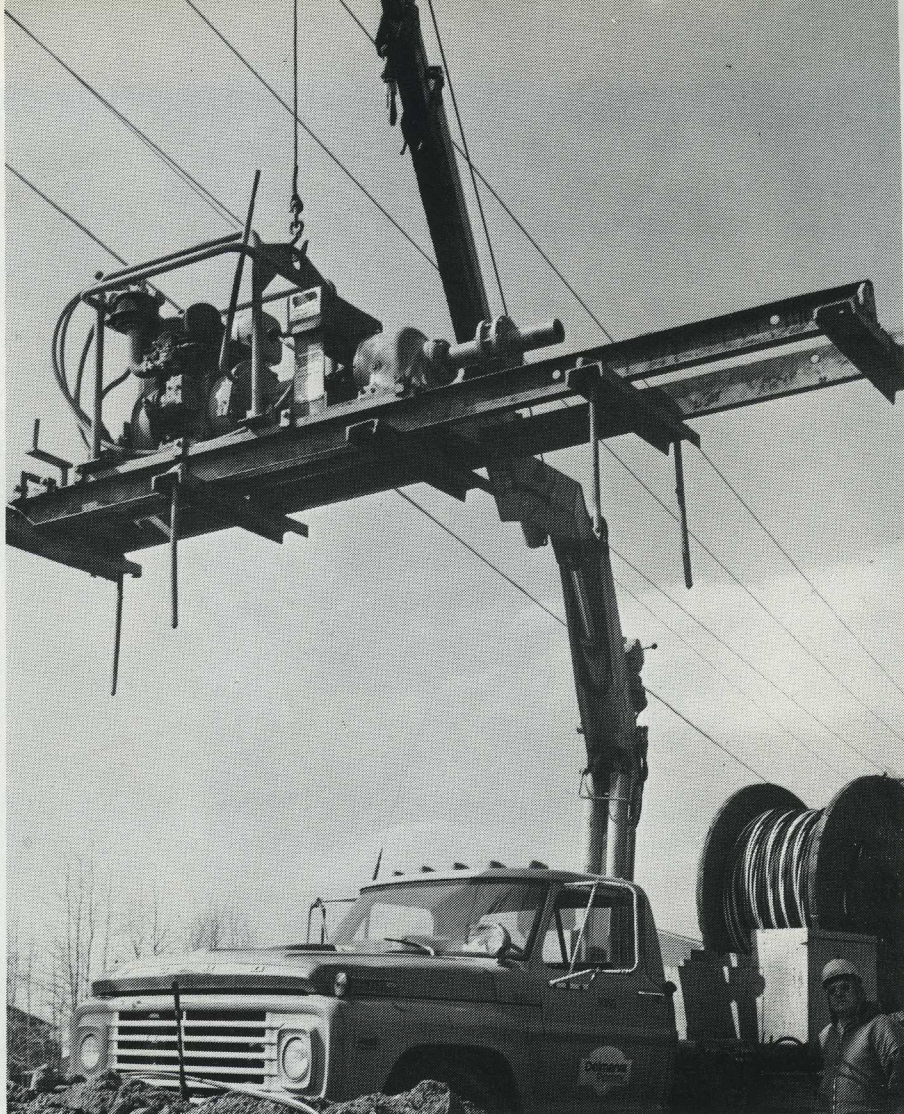
Support Legs

No crane, and certainly not the powerful HIABs, can do a good job unless it is firmly supported. That's one reason why support legs must be used to take the strain off the suspension of the vehicle carrying the loader. HIAB makes a range of different support-leg arrangements — some fixed, some manually or hydraulically extensible, some of flap-down type — which all provide sufficient stability for HIAB cranes even under maximum loading.



HIAB Power & Light Work

The Delmarva Power & Light utility in the U.S. has two HIAB 950s and four HIAB 174s which are kept very busy handling heavy equipment in field-work on the distribution system. The cable-laying is done by the HIAB Method; so is the post-raising. And when work is over for the day the cable trench often has to be covered over with heavy iron plates — which of course is another job for the HIAB. These pictures show an engine-driven pump unit being lowered down a hole. ■ 1





Popular Combination

A HIAB on a Unimog is a very popular combination which has found widespread use, above all on the Unimog's home ground in Western Germany, from which "Method" received these pictures showing two new HIABs on the new generation of Unimogs, U 452.

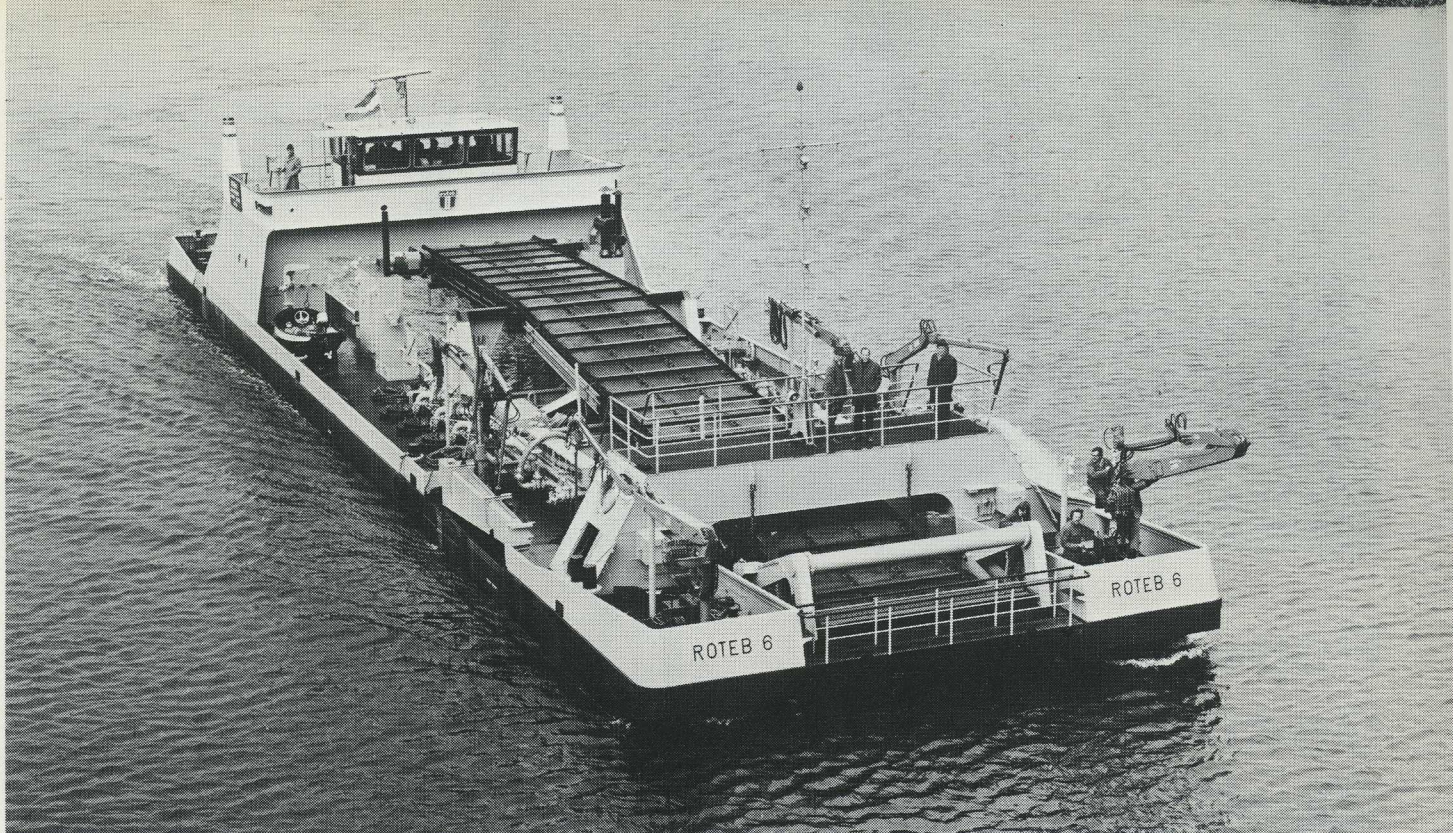
Rhein Hessen AG has a HIAB 850 mounted behind the cab on a U 452 which is equipped with four extensible support legs. The loader is used for raising or replacing heavy concrete columns. Before the HIAB came into service it used to take a whole gang of men to raise one of these columns. With the HIAB Method two men can handle the job



— and do it a good deal faster. The same equipment is used for transporting and raising latticework masts. The HIAB/Unimog combination does such a smooth job of handling that the Rhein Hessen people wouldn't think of tackling their tasks in any other way.

The second outfit has a HIAB 1165 mounted in the same way and with the same support-leg arrangement. It's in service on a bridgebuilding job in Karlsruhe, whisking concrete hoppers aloft and handling the shuttering panels used for in situ concreting. ■ 2

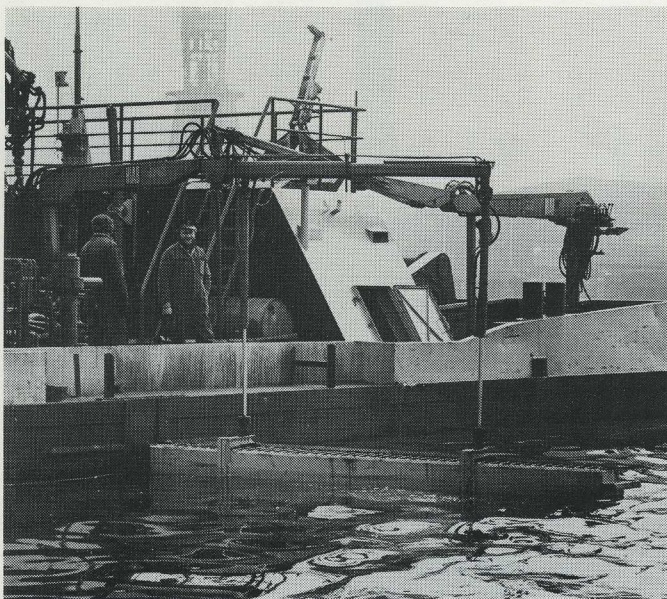




Six Loaders on a Catamaran in Rotterdam

The Port of Rotterdam is often described as the world's largest, which automatically makes it an interesting object of study for delegations from port authorities elsewhere round the globe. But in recent years many of these delegations have had a very particular reason to come calling, in the shape of a catamaran of no very impressive dimensions and with the uninspiring designation "Roteb 6" painted on its bows. But there's one original thing about it: it has no less than six HIABs mounted on board, and something that really impresses the experts is what it can achieve with this equipment.

The job of "Roteb 6" is to keep the harbour free from contaminants of various kinds, and so far it's given a





Glass from Glaverbel

very fine account of itself. During 1976 it removed from the surface of the harbour no less than 1,875,000 litres of spilt oil and 4,000 m³ of solid trash, mostly wood, paper and so on. The area which the vessel patrols and cleans consists of dock basins and waterways with a combined length of 40 km.

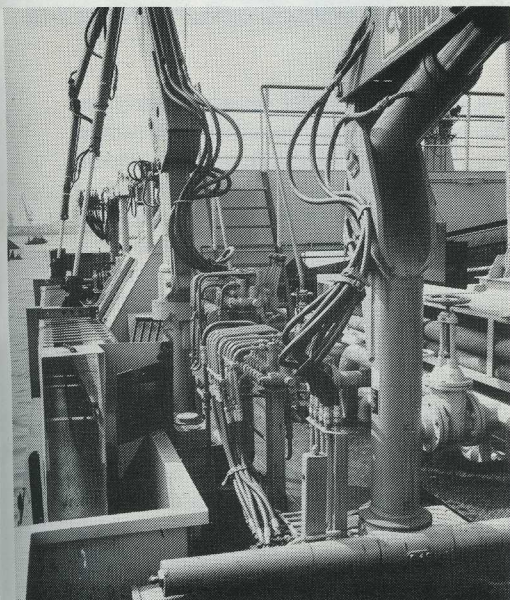
The responsible authorities consider that the results have been astonishingly good, and it is unquestioned that much of this success is due to the effective utilisation of the HIAB Method. Two HIAB 560s are used to handle large rakes which gather in floating solids and feed them onto a conveyor which automatically passes them over into a dump barge. Two HIAB 245/1s each handle a unit which skims spilt oil from the water, and two HIAB 550s are used for raising heavy objects. ■ 3

Glass is fragile, and heavy into the bargain, and it has to be handled with particular care and attention if it is not to be damaged in loading, transportation and unloading. Glaverbel, one of Canada's biggest glass businesses, with glassworks and distribution depots at numerous points throughout the country, is consequently a long-time user of the HIAB Method.

Flat glass, packed in cases weighing up to 3,000 kg, is delivered to dealers by long semitrailer outfits in which the tractor truck is equipped with a HIAB 950. One of the firm's most popular products is the "Sealite" insulating pane, which consists of double glazing with a layer of moistureless air in between. These panes call for special precautions in handling. They are secured to steel racks which each take 15-30 panes. The racks are loaded up

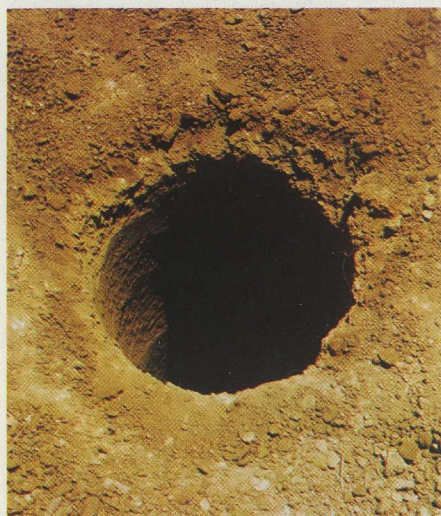
and trucked to a dealer or straight to a building site and there unloaded as a unit. The panes are then taken from the rack one by one as they are installed. Glaverbel's trucks fetch the empty racks back to the works. All handling of racks, full or empty, is done by the HIAB Method.

"Stopray" reflecting glass is another of Glaverbel's big products. 28,000 panes were recently delivered to the Royal Bank Plaza, a big building project in Toronto. Also on the production programme are glass doors, bullet-proof glass and non-shattering glass, and everything is handled by the HIAB Method when it's time for shipment. Glaverbel has 12 HIABs of the 550 and 950 types in its transport organisation, and they will soon be joined by HIAB 1165s. ■ 4





HIAB Method Rationalises Power



In the desert outside Bagdad, Iraq, they're drilling by the HIAB Method. But there's little chance they'll find any oil in the holes. The work is part of a comprehensive electrification programme, and the HIAB Method is being employed in building the power lines.

In six different regions, stretching 200 km out from the centre of Bagdad, power lines are being built by the Arab Association of Contracting and Trading, an undertaking which specialises on this class of work. It has a contract to drill holes for the concrete power poles, to raise the poles, and to instal cables and transformers on them. The HIAB 950 is playing a prominent role in all these operations.

A number of work crews are handling the job. Each of them has a Unimog mounting a HIAB 950 and equipped with an earth auger and a hydraulic-oil cooler to cope with the high temperatures. This rig is served by a driver and two helpers. Also in action are a semi-trailer outfit, likewise with a HIAB and a three-man crew, and a cross-country Land Rover with a driver. The supervisory staff comprises a foreman and his assistant.

The post-holes, 45 cm in diameter and 2 m deep, are drilled at 100-m intervals with a HIAB earth auger manoeuvred by a Unimog-mounted HIAB loader. While the drilling is in progress the poles are brought to the



-line Construction in Iraqi Desert

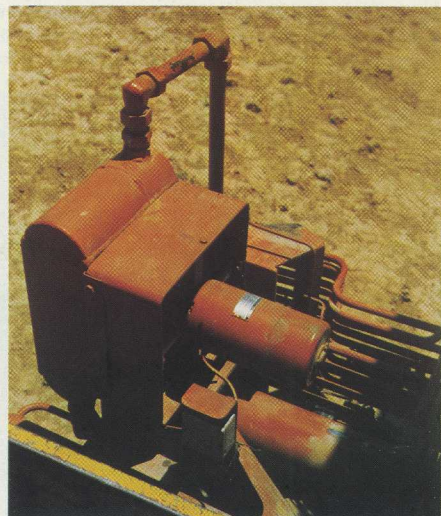
site from a depot. When the holes are ready the 1 ½-ton poles are gently inserted — by a HIAB of course.

Given normal soil conditions, one work crew can raise ten poles in an eight-hour day. This means that under normal temperature conditions (when “Method” visited the site the temperature was between 50 and 55 degrees — Celsius, not Fahrenheit!) and over a 25-day period the crew can raise between 250 and 300 poles and instal the cables and transformers on them.

In the days before the firm fielded these eight-man crews with their Unimogs and HIABs, the holes were dug and the poles raised by hand. At that time each labour force numbered 17

men, with a Land Rover to transport the poles. Even with all that manpower they only put up half as many poles in 25 days. The HIAB Method has thus enabled the firm to raise twice as many poles with half as much labour.

The HIABs also perform other handling work in connection with the power-line project, e.g. loading and unloading poles, lifting equipment and supplies, and so on. When “Method” came calling, the Arab Association of Contracting and Trading had six HIAB 950s, all mounted on Unimogs, with another Unimog and a HIAB 850 on order. ■ 5



Method Hoists

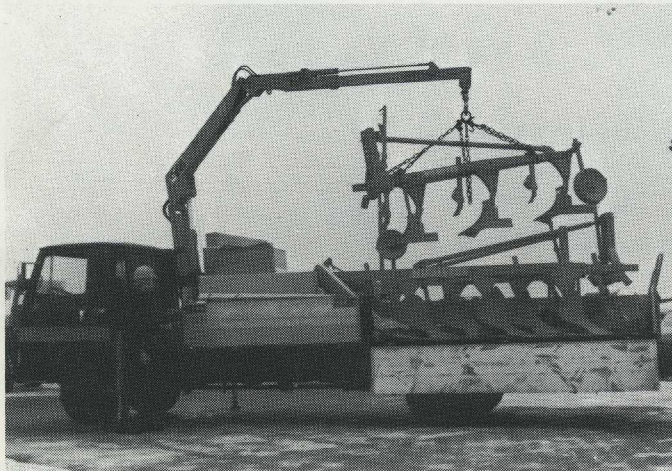


Policeman Positioned in Philadelphia

When the Philadelphia police were about to adorn their new administration building with a work of art before the entrance they resorted to the HIAB Method to put sculptor Charles Parks's three-metre "policeman with child" onto his pedestal.

Remarkable?

Installing wall units with a HIAB is common practice in many parts of the world, so this picture is not remarkable in that respect. But we haven't seen such a stylishly dressed loader operator in "Method" before.



Speeding the Plough

The firm of Marciniak, near Hanover, deals in farm machinery. To deliver harrows and ploughs to its customers it runs a medium truck equipped with a HIAB 345. Thanks to his loader, the driver alone can

quickly and safely discharge the weighty, bulky and unwieldy implements. In pre-HIAB days the unloading job often kept a whole team of men busy for a considerable time.

Début for Guatemala?

We can't recall having a picture of a HIAB in Guatemala in "Method" for a long time — if ever. But

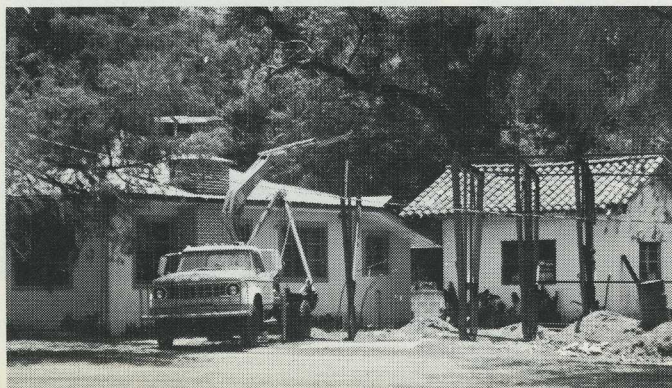
here's one. A HIAB 550 is setting up supports for a shelter roof in Panajachel, beside Lake Atitlán.



Compounding Serviceability

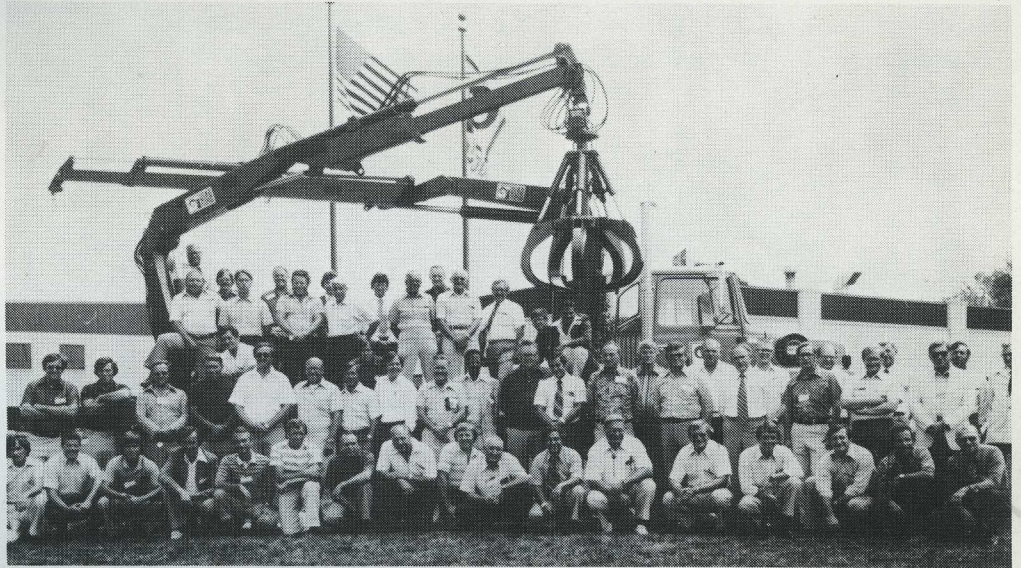
Municipal agencies and authorities have long been alive to the advantages of the HIAB Method. With its lift hook alone a HIAB loader can perform a lot of valuable services, and it becomes still

more useful when it's equipped with a hydraulic clamshell bucket. As an illustration, the Office of Works at Nienburg in Western Germany uses a HIAB 345 to load and unload asphalt compound.



Sales Conference in Newark

HIAB men from all over the U.S. recently gathered for a sales conference at HIAB-FOCO's subsidiary company, HIAB Cranes and Loaders, in their new premises at Newark, Delaware. This picture shows the 55 participants drawn up for the photographer, together with some of the loaders on the agenda.



Subsidiary in Spain



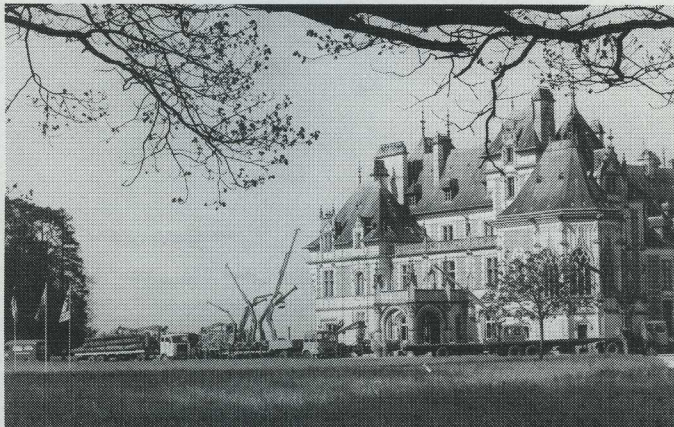
The reason why HIAB-FOCO's Managing Director Bengt Hökby and the two gentlemen flanking him look so happy is that the Spanish firm of Talleres Valman SA in Zaragoza has just been taken over by HIAB-FOCO. It will join the Group as a subsidiary,

and will mainly concern itself with manufacturing. The other happy men are the brothers Pedro Manero, left, and José Luis Manero, one the Board Chairman and the other the Managing Director of Talleres Valman SA.

HIAB-FOCO Days in France

The pictures below are from the HIAB-FOCO Days in France, 1977. On the left is the loader range, on display in front of the Chateau de

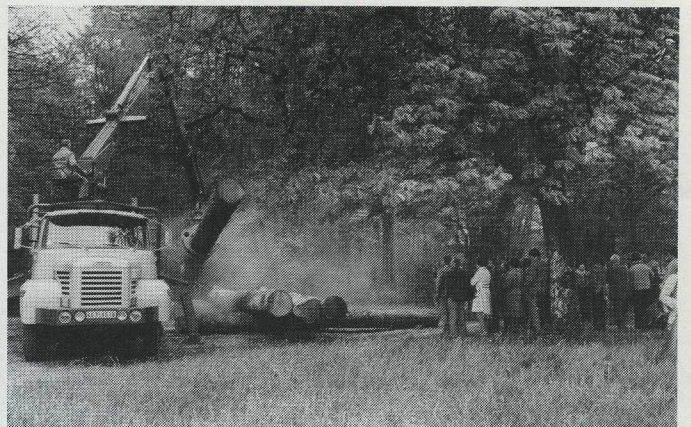
Menetou, while on the right a HIAB 1300 is being demonstrated in a forest glade.



New Trees in Manila

Manila, in the Philippines, has recently launched a project to restore the devastated greenery around the city. The scheme has the patronage of the President's wife, Madame Imelda R. Marcos, who was of course present (under the parasol at centre) when the hole to take the first tree was

drilled by a HIAB earth auger and a HIAB 550 at Philsite, on the outskirts of Manila. The ceremony was also attended by the Mayor of Manila, Ramon Bagatsing, and Bo Ekander from Ekman & Co, which represents HIAB-FOCO in the Philippines.



“1165” Wins Another Styling Prize for HIAB at Hanover Fair

For the second time in two years a HIAB loader has carried off the prize for industrial styling at the Hanover Fair. This time it was a HIAB 1165 that won the year's award, “Die gute Industrieform 77”. The winner on the previous occasion, in 1975, was a HIAB 765.

