

METOD

HIAB

Metod No. 12

A magazine featuring the HIAB Method and its applications.

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Theory Is One Thing...

Hans Åkesson Reviews New Thinking On Roundwood Haulage

There's no longer any doubt about it. If you're going to move roundwood with optimum economy you should have a loader on your truck. The separate loader that can serve a number of outfits may look a better bet on paper, but practical experience points the other way. It demonstrates that personnel and trucks are best utilised if they can drive and load independently of each other. And that calls for a loader on every truck. The busier you are, the more clearly this comes out.

These views, which fly in the face of conventional thinking in the business, are those of Hans Åkesson. And he knows what he's talking about. His haulage firm is the biggest in Sweden when it comes to roundwood movements—right through the week.



Åkesson's trucks certainly get through an impressive volume of transportation. They deliver about 32 million cubic feet a year, or 100,000 every 24 hours, to Iggesunds Bruk's mills in Iggesund, Håstaholmen (Hudiksvall), Ströms Bruk and Stocka. That represents the bulk of the company's timber requirements. Åkesson is also responsible for some proportion of the off-road haulage. The firm has six Brunett cross-country tractors, but they operate single shifts only, and in comparison with highway haulage the cross-country movements account for only an insignificant proportion of Åkesson's business.

"It's a little over a year now since we took delivery of some outfits with truck-mounted HIAB loaders, with the idea of trying them out," says Åkesson. "Our preliminary calculations had already indicated that we stood to gain a good deal by this arrangement. What we were mainly hoping for was a more flexible organisation, less vulnerable to snags and hold-ups than our earlier set-up, which was wholly based on separate loaders. And now, on the strength of a year's experience of separate loading versus loading with a crane on the outfit, we can state our conclusion: the trucks that have their own loader and operate as independent units give the best economy."



Careful Continuous Costing

"I can say that with a fair degree of certainty," Åkesson goes on. "The statement is based on very thorough costing control applied to all outfits. We keep track of every single litre of fuel. Spare parts and so on are reported down to the last nut and booked against the truck concerned. And when we put the costs alongside the volume transported and the amounts earned, the trend is plain. Other things being

equal, the loader-equipped outfits return far and away the best results. We can even say that if we continued to load all our outfits with separate loaders our earnings would be so low that we shouldn't be able to stay in business without substantial increases in our charges. And these in turn would make the forestry industry's raw materials even dearer than they already are."

It's also easy to single out the prime factors behind the superiority of the loader-equipped outfits.



Flexibility

Full use is made of every outfit throughout the shift, since its driver is free to choose his point of loading. On the last round trip of the shift he makes for a landing which is so located that the time for loading, transport, unloading and then the return run to his relief point checks with the time remaining to the end of his shift.

This flexibility also entails another very real advantage for the customer, Iggesunds Bruk. Thanks to the fact that the trucks can load up at any time and at any point within a very large area the firm can manage with far smaller buffer stocks of timber at its mills and can quickly get in supplies of the particular kind of timber currently needed in its production. With outfits dependent on separate loaders this kind of rapid redeployment is impossible.

Independence

A hold-up, a mechanical snag or a delay suffered by one outfit or one loader doesn't affect the other units. One of the firm's thirteen trucks is always kept standing by ready to go into action when any of the others is withdrawn for servicing or repair.

Where separate loaders are used you need both a standby truck and a standby loader, and even so every upset has serious repercussions on three or more outfits.

Cheaper Landings

When the timber is loaded with a vehicle-mounted loader it can be dumped anywhere alongside the forest motor roads, and in practice there is hardly any lower limit to the size of the timber parcels. The costs of clearing and surfacing special landings are often saved in their entirety. Any old ditch will do. The cost of cross-country transport is also reduced, since each load can for the most part be taken straight to the nearest point on the motor road and discharged there.

By contrast, a separate loader requires sufficient elbow room on the road or on other surfaced ground at the landing for two vehicles to draw up side by side. Another point is that separate loading calls for big concentrations of timber so that a large number of parcels can be loaded from the same landing. The costs of moving the loader from landing to landing would otherwise be prohibitive. There is also the consideration that the piles should be of such height that an outfit can be loaded without the need to move either truck or loader.

Less personnel

Transport rigs with their own loader never need more than a one-man crew. The separate loader requires an extra operator to look after three or at the most four outfits. So separate loading pushes up labour requirements by 25-33 per cent.



More Responsibility

Every driver knows that the work he can get through per shift is up to him. Since he can tackle it without affecting his workmates or being affected by them, he is largely free to plan his shift according to circumstances and his own preferences. He can take a

break when he feels like it and can drive at the pace that suits him and the road conditions. With wage incentives into the bargain this gives good profitability both for the haulage firm and for its drivers. Incidentally, the wages paid by Akesson's are the highest in the business.

With a separate loader, every driver is heavily dependent on his fellow-workers in the organisation. He has to stick to a rigid timetable which in some situations may involve racing against the clock while.

Greater Contentment

The first men who drove loader-equipped rigs had to be ordered to it. Their scepticism was profound, but it quickly gave way to enthusiasm once they had given the new way of doing things a fair trial. Since then the drivers have stood in line to take out the loader-equipped trucks that have joined the fleet from time to time.



21-Day Cycle

In connection with its switch to transport rigs with their own loaders the Akesson trucking firm put through some other changes which were not tied up with the new loading method as such but which nevertheless had a powerful bearing on operational economy. The most important was the adoption of continuous working. All outfits, including the three that are still served by a separate loader, are now run in three shifts and are in action uninterruptedly from 5 p.m. Sunday to 5 p.m. Saturday. The pay-off is an increase in production which in practice is greater than the 50 per cent by which the utilisation time of the vehicles has been increased.

To achieve optimum efficiency in vehicle utilisation the shifts have been lengthened so that the drivers work 10½ hours at a stretch. To offset this, each driver works only 12 days in each three-week period, giving him nine days off.

Keeping vehicles running at this rate naturally involves more than ordinary service demands which cannot be met by regular workshops that operate from



7 a.m. to 5 p.m. and are closed from Friday evening to Monday morning. Whenever any of the vehicles requires service or repairs the job has to be done at once, whatever time of day or day of the week it is. To meet the need the firm has started its own service shop which is in business round the clock and only closes from Saturday afternoon to Sunday afternoon—just like the rest of the team. A service truck which can go anywhere to assist a truck in difficulties and the installation of two-way radio in all vehicles are further factors that help to keep all the wheels rolling without interruption.

Facts on the Organisation

13 outfits,

all of the same make and type, one of which is on standby. At the present time nine of them are equipped with a loader. The others are still served by a separate loader, but are to be replaced by rigs with their own loaders during the first half of 1969.

Annual transport volume
about 32 million cubic feet.

Haulage distance
averages about 45 miles, maximum about 185.

Annual running time
per vehicle about 6,000 hours.

Annual mileage
per vehicle about 112,500.

Personnel
truck drivers about 40, tractor drivers 6, servicemen 5, administrative staff 3.

Replacement intervals
for transport rigs 3 years, i.e. about 330,000 miles. ■

New Loader In The Lightweight Class — HIAB 2451

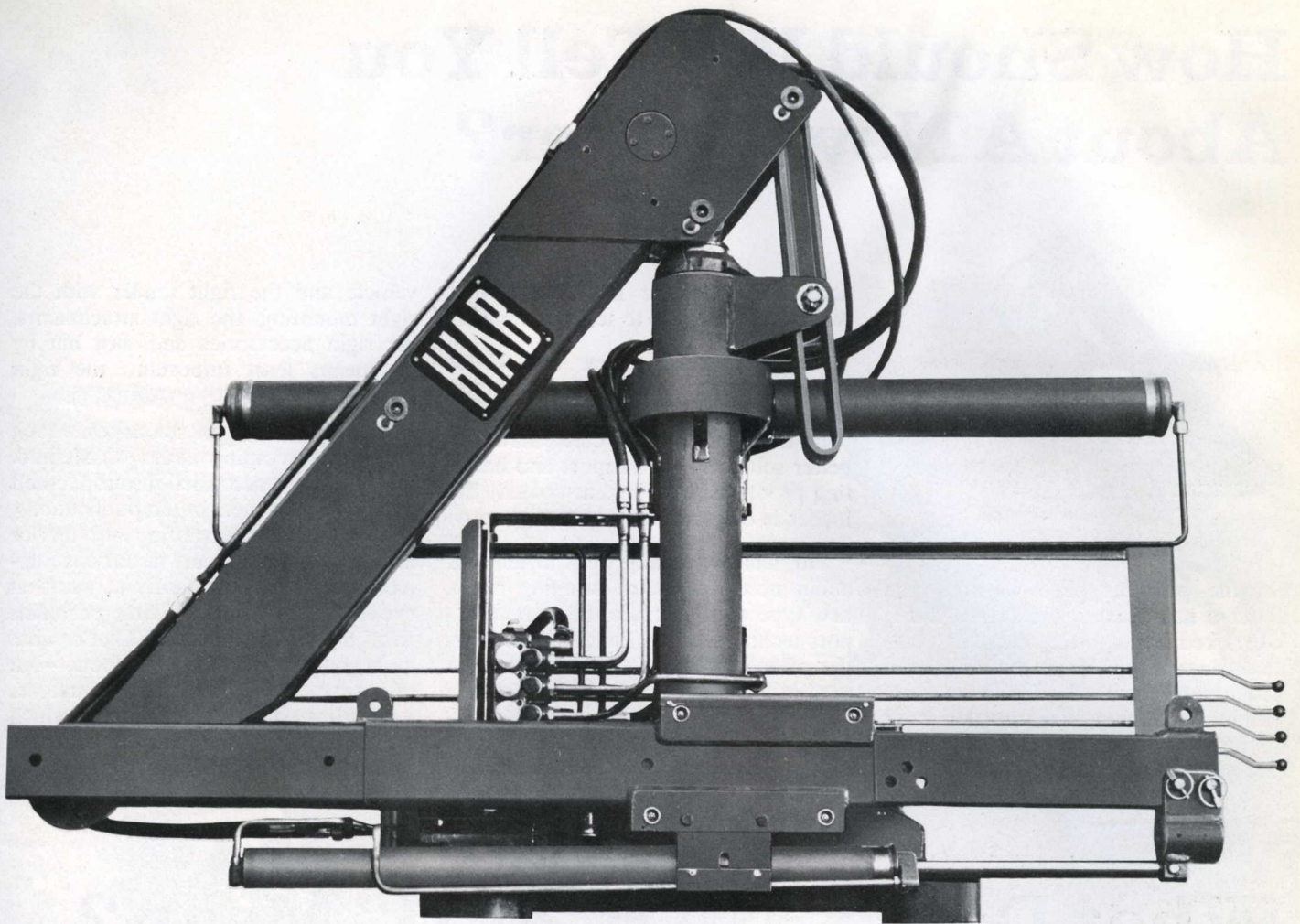
Once again HIAB is bringing out a new loader. This time it's a small one—but it has many of the advantages and refinements found on the big models. In other words the HIAB 2451 is the ideal loader for transport rigs which seldom if ever have to lift more than 1½ tons and which also need a handy and dependable loader taking a wide range of accessories and attachments.

The HIAB 2451 is unbeatable for lifts up to 1½ tons in such fields as general freight handling, road and street work, oil refineries, agriculture and concrete plants. It is fitted with a double-acting outer-boom cylinder, giving smooth operation under full control and making it easy to put goods down close to the loader body. The loader also has ready-prepared mounting points for such items as a winch or a hydraulic extension boom. The HIAB 2451 can be fitted with various types of grapples and lifting tackle such as barrel tongs, pipe hooks, timber tongs, automatic sling releases, tongs for precast concrete, hydraulic grapples and clam-shell buckets.

The HIAB 2451 has a very low parked height—only 5 ft. 3 in. above base level, which isn't much higher than the cab on most truck models. But when it's in action it will reach a good 17 ft. above the truck frame. In the standard version the greatest boom length is 14 ft. 9 in. and the lifting capacity at that radius is 1045 lb. The HIAB 2451 weighs 1380 lb. complete with pump, drive shaft and oil.

Here are some of the refinements and advantages of the HIAB 2451:

— all-hydraulic boom system with double-acting boom cylinder gives exact and responsive operation. Erection and parking are also easier and more convenient.



— low parking position behind the cab where the loader is securely parked and the boom system is completely relieved of load.

— the overall height is only 5 ft.3 in. above the frame—no risk of fouling low garage doors and so on.

— great outreach: boom lengths of 9 ft. 10 in., 11 ft. 6 in., 13 ft. 1 in. and 14 ft. 9 in. are available as standard. With a hydraulic extension boom, an item of extra equipment, the boom length can be continuously varied between 9 ft. 10 in. and 13 ft. 1 in. or between 11 ft. 6 in. and 14 ft. 9 in.

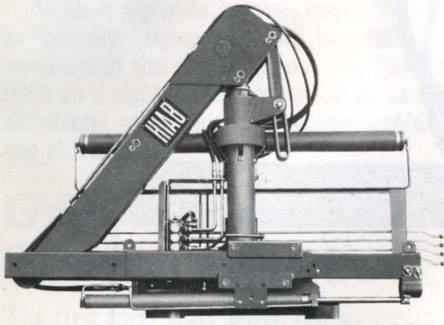
— the extension boom is rectangular in section and runs on four rollers, which for one thing reduces roller wear. The four rollers facilitate mounting and give a smooth action.

— hard-chromium-plating of the shafts and rollers of the slewing cylinders gives better rust resistance, less wear and a longer service life. Such items as a winch or a hydraulic extension boom can be fitted quickly without any structural modifications.

— ample extra equipment, such as a winch, a hydraulic extension boom, an electric pump, additional control valves and a separate oil tank for stationary mounting, a hose and pipe set for a rotator and grapples, outrigger legs, an extra 19-ft. 8-in. extension boom, and a long list of mechanical grapples and lifting attachments. ■

Outreach:	standard 14' 9"
Extension boom:	Setting positions for manually controlled extension boom: 9' 10", 11' 6", 13' 1", 14' 9"
	Travel of hydraulically controlled extension boom between 11' 6" and 14' 9" and between 9' 10" and 13' 1"
Lifting capacity:	at 5' 11" radius 3305 lb. » 6' 7" » 2480 » » 9' 10" » 1655 » » 11' 6" » 1435 » » 13' 1" » 1210 » » 14' 9" » 1045 »
Lifting speed:	about 20" per sec.
Slewing speed:	25° per sec. at an oil throughput of 6.6 gal. per min.
Slewing torque:	6500 lb.-ft.
Working pressure:	2135 psi
Recommended pump capacity:	about 11 gal. per min.
Oil tank:	capacity about 7.7 gal.
Slewing angle:	360°
Lifting height:	above base level approx. 17'
Height of loader:	in travelling position, above base level, 5' 3"
Weight:	incl. oil, mounting parts and pump with drive shaft approx. 1380 lb.

How Should We Tell You About A New Loader?



On the previous page we told you about a new loader, the HIAB 2451. We talked about lifting capacity, outreach, extension boom bearings and hose couplings—all significant and valuable advances, like the design of the loader as a whole. And you can be sure we enjoy putting these things

across. But they're not really what we're most anxious to tell you about.

You see, making new and better loaders isn't the sum total of what we do up at Hiab. Our ambitions go beyond that. We're out to create new and better solutions to transport and handling problems, and in that context the loader is only one factor among many.

No, what we really want to tell you about now that we're bringing out a new type of loader are the new transport techniques and handling methods that it will make possible. We want to present the Hiab Method in new and more efficient versions, and that involves a lot more than just a new loader. It's a combination of the right

vehicle and the right loader with the right mounting, the right attachments, the right accessories and, last but by no means least important, the right working method.

We'll be telling you about some such methods in coming issues of Method. Still more are described in our Method Service Sheets and other publications, and by the people staffing our service facilities. The engineers at our development centre are constantly at work on even more ways of solving problems with the Hiab Method. That's what we're bursting to tell you about—but this time we've contented ourselves with a few data on a new loader which we think is a good one. We expect a great deal of the HIAB 2451. ■

What Does "HIAB 2451" Mean?

Capacity class
in ton-metres

Max. standard boom length
in decimetres

Model
reference

The new Hiab loader that is presented here has a type reference that differs from those of earlier Hiabs. The new numerical combination contains some of the main data on the crane in potted form. 1. The first figure indicates the capacity class of the loader in ton-metres. 2. The next two figures are the maximum standard outreach expressed in decimetres. 3. The last figure shows that this is the first model of this particular type. If modified models come along later their references will end with 2, 3 and so on. ■

2451



HIAB On The High Seas

The herring fisheries on the banks off the Norwegian coast have developed step by step into a major industry with a heavy stake in rationalisation and up-to-date working methods. Big, ultra-modern fishing vessels seek out the shoals with echo-sounding devices, catch them with giant tackle and bring the fish aboard using the Hiab Method as described in the following news story. In coming issues of Method we hope to publish further reports of how the Hiab Method is employed in the fishery trade.

Efficient HIAB Goes A-fishing

It happened at last!

We got a chance to experience the Herring Adventure at close quarters. Far out at sea, where ocean and sky meet and the wanly gleaming March sun retires early to bed, the fishing fleet goes hunting—indifferent to time, cruising restlessly like the sea eagle in quest of its prey.

We find it easier to understand now why casual visitors to the great banks say that the large-scale herring fish-

eries along Norway's weather-beaten coast from the North Cape to the North Sea have the spice of adventure about them. The fascinating drama of man's struggle to wrest the biggest possible tonnage of the ocean's silver from its grasp is so full of excitement and tension that the audience is swept into the spirit of it all right from the first act. Not even Ingmar Bergman or Alfred Hitchcock could dream up and film a story more vibrant with sus-

pense than this real-life drama that is played out on the fishing grounds.

The actors themselves see it in a rather different light. For them, this is the daily grind, a round of hard work, shortage of sleep, and hurried, irregular meals.

First there's the waiting. Hour after hour, often day after day, with impatience gnawing at every fibre.

Suspense . . . the conflict of doubt and belief. However bleak things may look, there's always an undertone of optimism among fishermen. Hope is hope, however feebly it may sometimes flicker.

And indeed, you have to be an optimist to go in for a calling like this. So much is at stake. Ships and tackle are worth millions. Loans have to be



The ship's Hiab is used to manipulate the fish pump, and we saw for ourselves how smartly and effectively it carried out its important task during the hectic hours when the catch was coming aboard out on Haltenbanken.

paid off and made to yield a return. The good seasons have to provide the foundations of next year's economy for the fleet owners and their men.

The same thought consumes everyone on board. There *must* be herring around. And when contact is at last made the "director" of the drama goes into action. The actors take their places, well drilled in all their parts. With pent-up enthusiasm they throw themselves into their work. No effort will be spared now until the catch is secured and is safely on board. Few other casts of performers take their cues from each other so smoothly.

Our visit to the herring grounds on Haltenbanken took place in March. We went out with a Norwegian trawler,

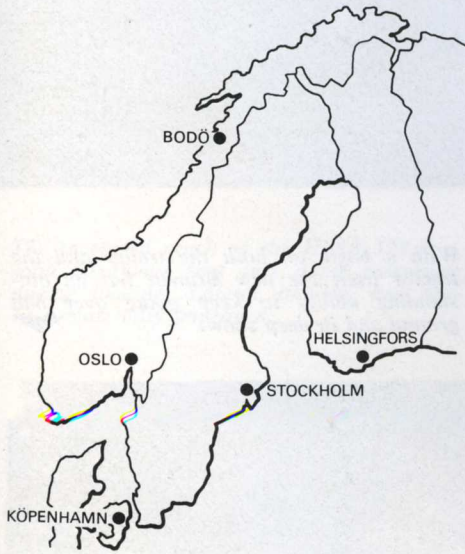
the "Hugo Trygvason" of Finnmark. She was a big, modern vessel with the very best of comfort for her crew, and—what was perhaps still more important—with the most advanced and up-to-date mechanical and electrical equipment to be had.

No fishing skipper of today can disregard the importance of utilising the latest and best aids the market can offer. In today's fisheries the electronic equipment that will help to locate the herring and the mechanical gear that will bring them on board with all possible dispatch are every bit as indispensable as the boat itself. Not least among the reasons for this is that in recent years the pursuit of herring has increasingly become a matter of deep-sea fishing, which means that it is

often carried on in very nasty weather conditions.

The HIAB 174 has moved into this market in connection with one of the latest technical advances adopted by the herring fleet—the "fish pump", the use of which is spreading rapidly. The Hiab is responsible for manipulating the fish pump, and we saw for ourselves how smartly and effectively it did its important task aboard the "Hugo Trygvason" during those action-packed hours out on Haltenbanken.

It's gratifying to be able to say that the Hiab, after taking over increasing numbers of jobs on dry land, has now achieved its breakthrough as an effective helpmate in the work of seafaring men as well. ■



It's gratifying to be able to say that the Hiab has now achieved its breakthrough as an effective helpmate in the work of seafaring men as well.

The 178 Goes To Work

Some of the first specimens of the new HIAB 178 forestry loader to be delivered were mounted on Kockum's big—and likewise new—Brunett forestry machines. Two of them have now been on trial for nearly six months in the West Swedish forests.

"The increased reach of the new loader is an obvious advantage," says Gösta Brun, a man with long experience of cross-country haulage in various parts of Sweden. "It means a lot in point of capacity. It's also a plus to have the hoses tucked inside out of harm's way. This arrangement gives a constant hose length in the loops out at the rotator, and the frequently bulky and vulnerable festoons of hose under the extension boom have been eliminated. The result is substantially less risk of hose damage and breakage.

"The new version of the loader also appears to be more stable and torsionally rigid. You can tell this by the smoother loader movements, and it seems likely to make the loader better able to withstand the fatigue stresses to which an off-the-road loader is always exposed.

"The first advantage that comes to mind is the increased reach. It means that the machines don't have to be moved so far or so often. Add this fact to the increased payload of the new Brunetts and you get an outfit that should have a very high capacity.

140 ft.³ A Minute

"As yet, of course, it's too early to say for certain what the new combination will be capable of, but we've known it to load up 125–140 cubic feet of pulpwood a minute. Even if this was under favourable conditions it's still a very impressive figure.

"Ground conditions in the areas where the machines work are very varied. There's easy country where you can run up very high production figures. At the same time there are very difficult parts with gradients of up to 50 per cent (!) where both the machine and its loader have a very tough time of it. But so far everything has functioned even better than we'd hoped."



With a bogie on both the trailer and the tractor itself the new Brunett has an outstanding ability to keep going over bad ground and in deep snow.





The increased reach of the HIAB 178 is a solid advantage that cuts down tramping during loading. Lateral stability has also been materially improved.

The sheltered disposition of the hydraulic lines inside the extension boom eliminates bulky loops of hose and reduces the risk of hose damage!

The Brunett with a HIAB 178—an impressive rig with an impressive capacity.



HIAB 177 As Dockside Crane

When the tanker "British Loyalty" docked in the port of Kalmar in early January there was a two-way sensation. The people on the wharf goggled at the tanker, which at 24,000 tons was one of the largest they'd ever played host to. Water depths in the Kalmar approach channel being what they are, the larger tankers usually prefer other routes. But this time the "British Loyalty" had only half its cargo left, and with the aid of two tugs it was no trouble to bring the big fellow alongside.

What made the people on board look twice was the sight of a Hiab on

the wharf. Hiabs aren't commonly seen around oil ports—yet. Oil ports don't normally have any cranes at all. All they need for loading and discharging is pumps and hoses. But those hoses have to be lifted on board and back ashore again, and when a 24,000-tonner is lightly loaded it towers above the quay like a two-storey house. And a heavy-gauge discharge hose can't be passed up two storeys just like that. Either you have to wait until the ship has got its own crane equipment ready—and then hope that it will reach the hose, or you can be like Kalmar and use the Hiab Method. Waiting times are best avoided. Time spent in port

is costly. So the Hiab Method in the shape of a 177 is given preference.

"It isn't often we have to lift as high as we did on this occasion," say the Kalmar dockers. "But the Hiab comes in useful every time a ship is loading or discharging in the oil port. Small coastal tankers often call several times a week, and hoses have to be lifted for them as well. And before each ship gets in we have to connect up a suitable length of hose from several shorter hoses. There again the Hiab comes in useful. These hoses are long and often very awkward to handle, and the HIAB 177 makes it a much easier job than before." ■



The rail of a lightly loaded 24,000-tonner is way above the wharf, but the long chain by which the hose is hanging shows that the HIAB 177 can manage the lift with plenty to spare.

Finland

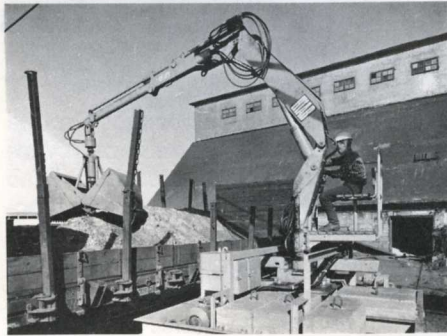


HIAB 177s, one belonging to the firm of Mahogny AB of Helsinki and the other to trucker K. Ikonen of Kesälahti.

Mahogny AB, which imports and sells hardwoods, also uses Finnish birch, which is moved to the factory by truck. The trucks are unloaded in part by their own loaders and in part by Mahogny's own HIAB 177, which is mounted on the chassis of a site tractor. This machine, in its turn, also carries out various storage jobs on the site.



A HIAB 177 handling general cargo. Owner: Transportfirma A. Stenholm, Helsinki, which in all has eight different loaders. They work mostly with general freight, serving Helsinki industries and building firms.



This picture shows iron pyrites being unloaded by a HIAB 174 at Veitsiluoto AB's plants in Veitsiluoto. The shot could equally well have been taken at A. Ahlström's plants in Varkaus, which have also found that the Hiab Method offers a fine way of cutting down costs at this stage of operations.



Trucker Urho Luostarinen of Varkaus has a HIAB 174 equipped with a 1000-kg hydraulic winch plus a clamshell bucket with a rotator. The outfit is employed on municipal works, excavating trenches, laying water mains and sewers, and transporting gravel.

Trucker Urho Luostarinen has a vast assortment of ancillary tackle. He has himself developed some of it specifically for his own working conditions, which now helps him to get the day's work done quickly with his Hiab loader.



The limeworks at Lojo has a HIAB 293 equipped with a hydraulic winch.

The Lojo limeworks company undertakes most of the electrical work needed in Västra Nyland, renewing old lines and setting up new ones and transporting transformers and weighty cable drums across rugged country.



This picture shows a HIAB 174, rear-mounted on a Ford Country tractor. Owner: the Helsinki depot of the Finnish State Railways. The outfit works around the depot area, uncoupling freight cars, changing axles, carrying out service, and lending a hand wherever there's a heavy lift to be done.

Method Hoists



Up, Guards!

A.F.V. power units are weighty affairs. If a tank needs to have its engine changed in the middle of nowhere, the troops have a hoisting problem on their hands. But the Hiab Method is one solution, as this picture from England shows. The Army has mounted a Hiab on a cross-country service vehicle, making it a simple matter to carry out engine changes and repairs where and when needed.

Detachable HIAB 174 Loads Gas In Austria

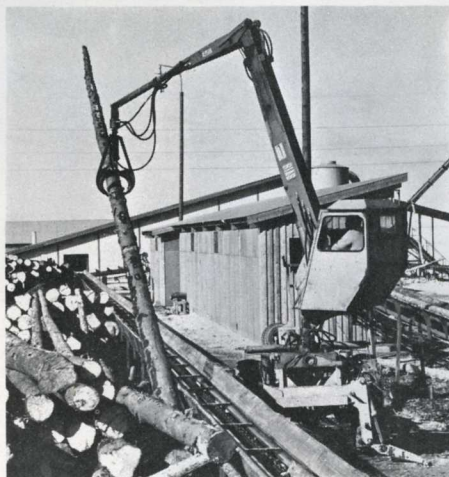
When BP of Austria bought itself a new outfit for transporting gas cylinders the company approached Hiab in quest of an up-to-date and functional solution of the loading problem. In the stores depot the cylinders are handled on specially designed pallets,

and a HIAB 174 proved to be the appropriate loading equipment. Its mounting at the rear of the tractor enables it to load both the tractor and the trailer. So as not to eat into payload on long hauls the loader is detachably mounted on a bracket.



Tractor Mountings

Denmark is another country where the Hiab Method has scored a breakthrough in roundwood handling. This tractor-mounted HIAB 177 with a rotator and tree grapple is used at a sawmill in Næstved to lift felled lengths over from their piles to a conveyor belt. The second picture shows another Danish tractor mounting. It's a HIAB 174 mounted on a Buck tractor and used for handling earthboring equipment. Its job is to bring up soil samples, and it's one of three identical outfits supplied to the Geotechnical Institute in Copenhagen.

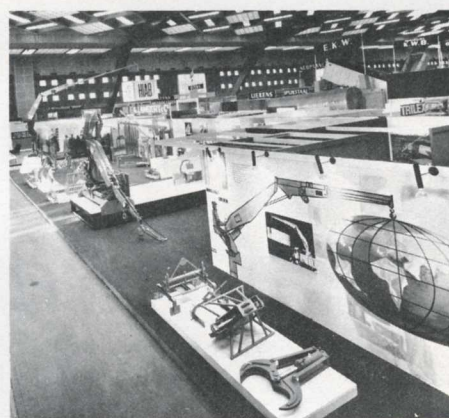


80% Savings In Time At French Stoneworks

A stoneworks in Lyons, France, had a problem handling its blocks of stone, weighing anything from 400 lb. up to a ton, as long as it only had a fork lift truck to work with. Since it needed plenty of elbow room to get at a block and lift it the truck was often little use to the masons, either in their own storeroom or when they were setting up finished blocks. Frequently, the only solution was to lift the blocks by hand, which was risky both for the workmen and for the blocks, which often represented a lot of money. The answer to the problem was the Hiab Method. They adapted it by mounting a HIAB 174 on the fork lift truck they already had. The result was an outfit which saved a lot of space in the stores and a handling method which yielded time economies of at least 30 per cent and in some instances as much as 80 per cent in the stoneworks. Moreover, the Hiab Method completely eliminated the heavy losses the masons used to suffer from breakages, and lowered accident hazards to a minimum.



Italian Forestry Outfit



HIAB's distributors in Belgium, Ets. G. Lambert, took part in the Brussels Exhibition of January 15-27. Their stand attracted a constant stream of interested visitors.

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Cover

The colour picture on the cover shows one of the modern Norwegian trawlers that use the Hiab Method. See story on pp. 8-9.

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Metod No. 13

The next issue of Metod will be international, featuring news from various countries. The spotlight will be on forestry.

P.S.

A valuable aid.

An operator's manual is supplied with every HIAB loader. It isn't supplied just to go straight into the glove compartment or some other hiding-place where it can be forgotten. It was written to be read. And there's quite a lot in it. For instance, it tells you how to use a HIAB loader. How you work with it and how it functions. How you lubricate it. And keep it clean. How you avoid trouble and unnecessary wear. There's a troubleshooting guide too—just in case. You can deal with a lot of it yourself, using the manual and simple tools. A Hiab service shop will do the rest. If you need a spare part, look it up in the manual and then ring the nearest Hiab service shop. With the manual in front of you, you can order the right part. And if it's time for an oil change the manual will tell you what kind to use.

P.P.S.

If you **can't** find the manual in your glove compartment or anywhere else the nearest Hiab service shop will let you have a new one.

