

# HIAB



# METHOD

No. 6





Felled lengths are pretty tough propositions for transport men, but it's no trouble to load them with the new HIAB Method. And the same outfit and crane can be used without conversion for loading and hauling pulpwood or timber.

## Felled Lengths, Timber and Pulpwood with the Same Loader

In the transportation sequence by which the forestry business moves its products from the stump to the mill there is a lot of highway haulage of full-length logs. This kind of work makes exceptional demands on vehicles, loading tackle, landings and roads. One way of loading trucks with these hard-to-handle trunks, which besides being heavy may be anything up to 65 feet long, is to use specially designed separate loaders. But such equipment is costly, calling for large volume and a

high degree of utilisation if it is to turn a profit. For fleet operator Ivar Kullerback, as for many others engaged in roundwood transport, the volume of felled lengths isn't sufficient for year-round operation. What he needs is an all-round rig which will serve for moving felled lengths when needed but which betwixt can be used for timber and pulpwood.

He found the solution in the HIAB Method, and developed his ideas in col-

laboration with HIAB's engineers. He now has two one-man-crewed outfits for loading and moving felled lengths.

Each outfit consists of a three-axled tractor with a trailer that also has three axles. The payload is 27 tons at a 16-ton bogie loading. The clever part about it is that the loader, a HIAB 177 Forest Speedloader, has been moved from its usual mounting at the front or rear and placed on a slewing platform pivoted in the middle of the semitrailer and 30 feet



Naturally, the loader doesn't go along on the 100-mile round trip to the pulp mill. The slight loss of



time involved in uncoupling the trailer and shucking off the loader is regained many times over in the form of greater payload. If the landing is a



big one the crane is left at the loading point, otherwise it's parked at the nearest suitable spot.



On the short timber hauls the loader rides along all the time, with the jib laid out along the top of the load like this.

Trucker Ake Sterner, based a short way south of Stockholm, has staked a lot of his chips on roundwood haulage. To put it more precisely, he has six trucks and ten drivers engaged in this line of work. All of these rigs, which consist of three-axled tractor trucks with two- or three-axled trailers, carry a one-man crew and have a detachable rear-mounted HIAB 177 Forest Speedloader. Four of them work two shifts a day.

With this organization, Sterner moves about 4,250,000 cu.ft. of pulpwood a year from the Stockholm region to pulp mills along the coast further north. He also trucks some 400,000 cu.ft. of timber from the same felling area to various sawmills.

The programme varies somewhat with the time of the year. In summer and autumn Sterner's trucks move pulpwood

only, and the mean haulage distance is then 105 miles. In winter and spring, two of the outfits are switched to timber haulage, and at the same time most of the pulpwood goes to a mill nearer at hand, so that the mean distance for pulpwood is then about 95 miles.

On these routes, operating double shifts, the trucks average 2½ hauls a day, which means two round trips and three loadings or three round trips and two loadings. Over the greater distances, road time is too long to permit three round trips and two loadings to be squeezed into two shifts, and a routine of one round trip and one loading per shift is substituted. The trucks on timber haulage work day shifts only, averaging five loads of 400 cu.ft. per shift, with or without trailers.

The table on the right shows the performance results in round figures.

## Volume and Performances

	Transport volume, cu.ft. piled measure	Performance, cu.ft. piled measure x miles
<b>PULPWOOD</b>		
<b>Summer-autumn season</b>		
Mean distance 105 miles		
Per outfit per day, single shift	2,120	224,000
Per outfit per day, double shift	5,300	560,000
Total per day	25,400	2,677,000
Total per season	2,540,000	26,770,000
<b>Winter-spring season</b>		
Per outfit per day, double shift	4,240	395,000
Total per day	17,000	1,580,000
Total per season	1,700,000	15,800,000
<b>TIMBER</b>		
<b>Winter-spring season</b>		
Mean distance 12.5 miles		
Per outfit per day, single shift	2,000	40,000
Total per day	4,000	80,000
Total per season	400,000	8,000,000
<b>ROUNDWOOD</b>		
Pulpwood per year	4,240,000	42,570,000
Timber per year	583,000	7,241,000
Total per year	4,823,000	49,811,000



The lumberjack fells the tree in the usual way but trims off only those branches he can conveniently reach. Those on the underside he leaves untouched.



The trunks are collected by a tractor which hauls them to the landing.

# Mechanisation the Easy Way

One way of achieving by simple means an efficient and workable simplification of operations in the forest, while retaining the ability to differentiate between various grades, has been successfully tried out by AB Ström-Ljusne in the north of Sweden. A bonus that comes with this method is that it remains fully serviceable even in difficult country.

"The reason why we took this method up," says a company spokesman, "is that we're running some of our harvesting operations in really difficult country where we'd find it very hard to get at the timber by ordinary means. The method originated from Canada, but we got the idea from HIAB, whose roundwood experts had studied it on its home grounds. Perhaps we don't do it quite the same way as they do in Canada, but the principle's the same."

The woodsmen fell the trees in the ordinary way, making them fall with the tops towards the point where they're to be hauled out. The cutter then uses his chain saw to trim off all the branches he can conveniently reach without turning the tree over. Next, the trunks are dragged away by tractor to a landing alongside a motor road or, as in these pictures,

in tolerably open terrain. During this trip most of the remaining branches and twigs get left behind.

At the landing the tractor pauses while a man with a chain saw cuts off the timber lengths of the trunk. Then it drives on a bit farther and uncouples the tops. The chain sawyer cuts them into pulpwood lengths and turns them through a right angle so as to leave them lying across the wheel tracks. He also trims off any remaining twigs and bucks the timber logs into suitable lengths. When the tractor comes along with the next clutch of felled trees it follows its old tracks and drags the trunks up onto the timber bucked earlier. The timber portions are

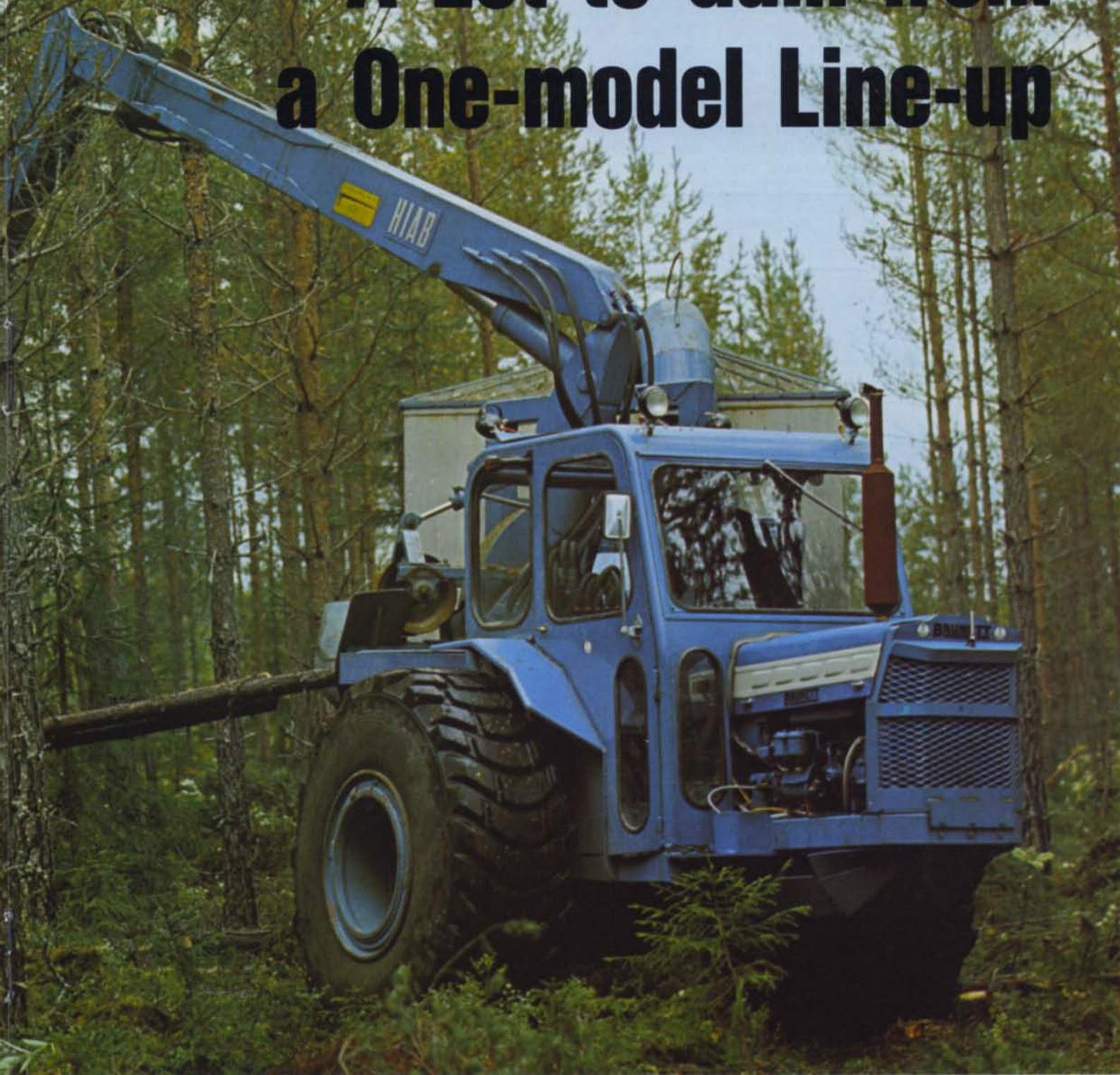
cut off as before and the tractor drives on over the pulpwood and releases the tops there. The timber is left lying where it falls after bucking, gradually building up to a somewhat ragged pile. The pulpwood is stacked step by step into two piles standing close together. In dragging up pulpwood the tractor drives with each fore-and-aft pair of wheels on one of the piles.

"We think this method has turned out pretty well," says the Ström-Ljusne forester. "We've tried it out in a number of different places and at present we're bringing out about 12% of our timber harvest in this way. The figures from this felling area, where the ground is both stony and treacherous, shed a fair light on the economics of the method. For the tractor driver and the buckler at the landing we've worked out group piece-rates of one Swedish crown a trunk plus an allowance for their equipment. The trunks have averaged 8.7 cu.ft., and a team of driver and buckler have averaged 183 trunks a day."



Bucking, along with any remaining trimming, is done quickly and efficiently at the landing.

# A Lot to Gain from a One-model Line-up



organisation and for the performance results they have turned in. The mechanisation of these operations, which began in earnest in 1962, is based on concentration to one single make of forest tractor, of which the company now has around 75—all of them equipped with HIAB 177s. Most of them are engaged on straightforward cross-country transport, hauling out various classes of timber, while a few have been set to special tasks such as barking, scarification and so on.

"Standardising on a single make of machine has a lot of really worthwhile advantages to offer," says the man in charge of Iggesund's machinery department, Gösta Bruun. "It does a great deal to make planning, organisation, training and service simpler and more efficient. The centralisation of our transport organisation which we put into effect when mechanisation started has also given us big

gains in rationalisation. Our various departments used to be responsible for their own transport planning. But as you increase mechanisation you also increase the need to make effective use of your equipment, and that in turn calls for overall control and co-ordination of planning."

All the Iggesund tractors are equipped with a HIAB 177 Speedloader having a



## Unit H. Q. for the Swedish Foresters

A very large proportion of the round-wood haulage units now travelling the roads of Central Sweden have been fitted out by HIAB-Service in Borlänge. And about 90% of all the units fitted out in the firm's workshop are for forestry duties. That makes the Borlänge establishment the No. 1 forestry workshop both for HIAB and for the whole of Central Sweden. Its fitters are specialists on various types of loader mounting, such as rear-mounted detachable Forest Speed-loaders with a control seat or platform, and also timber and pulpwood bolsters and other tailor-made equipment. They instal bogie lifts and arrangements for providing a bogie drive. The new and revolutionary equipment for loading felled lengths which we described on page 3 was also developed by HIAB in Borlänge.

Indeed, the success of the HIAB Method in forestry is reflected in the growth of the Borlänge shop. It was built as recently as 1964, but only a year later it was already too small. A major enlargement project which boosted the capacity from four workshop bays to nine besides adding space for supplies and a well-equipped spare-part department was completed last year, but the Borlänge boss, Bertil Hinz, is already hatching plans for further extensions.



The exuberant growth of HIAB's business in the forestry sector is illustrated by the fact that the Borlänge shop, which was built as late as 1964, was already too small only a year later. The new extension was finished in the autumn of 1966.

Besides parts for HIAB products the spare-part store holds certain common components and items of special equipment needed on forestry outfits.

Standing on this swivelling platform, which is mounted on the loader, you can control all its functions with four levers. The equipment is manufactured at the HIAB establishment in Borlänge.



out and not too flimsy, would have done just as well. Then the outboard motor was tipped up—this method can't be used if there's a propeller, rudder or other fixed equipment on the bottom of the boat—and we dragged the craft as far up onto the duckboards as we could. Then the slings were joined end to end and looped round the transom, and the free ends were attached to the towing hook of the hydraulic winch on the HIAB loader. The truck was standing on firm ground about 20 yards from the shore. The boat was winched gingerly up onto dry land, and then the truck moved alongside and the boat was hoisted onto the truck deck in the same way as before. To avoid scratching the bottom we laid out boards at stony patches for the boat to slide over. Once the boat was on the truck deck it was propped up enough to hold it for the short trip to the owner's garden nearby, where it was to be laid up.

There it only took a few moments to deposit the craft onto its trestles, and not until it was firmly chocked up was it unhooked from the loader.

#### Quick and Cheap

By the beaching method, the whole job of winching, transporting and laying up the boat was polished off in less than 1½ hours. By the over-quayside method—if it had been carried to completion—the whole operation would probably have been over in less than an hour, even though the transport run would have been longer. With both alternatives, every stage of the job was managed without difficulty by the truck driver and the boat-owner.

The experiment also shows that there are no snags about launching a boat over quayside.

These simple trials demonstrate the many advantages the HIAB Method has to offer in the handling of small boats. The saving in labour is striking. Two men and a HIAB loader will do the job comfortably in an hour or so. And the loader will put the boat exactly where it's wanted, even if the laying-up site is cramped and hard to get at.

All right, then, but what does it cost? Well, the trucker we worked with is prepared to land a boat for 50 Swedish crowns—around ten dollars—if it's a straightforward job. Of course, that's more than it usually costs the members of a boat club to use the club's slipway, but the costs aren't really comparable. To land a boat by the slipway you need a large party of helpers—and you've still got the headache of moving your craft from the slipway to its winter quarters. The HIAB Method has the great merit of offering a complete package solution to the problem.



The HIAB outfit performed an important role in the building operations that were hastily started to house the victims of the disaster.

## Speed-loader to the Rescue

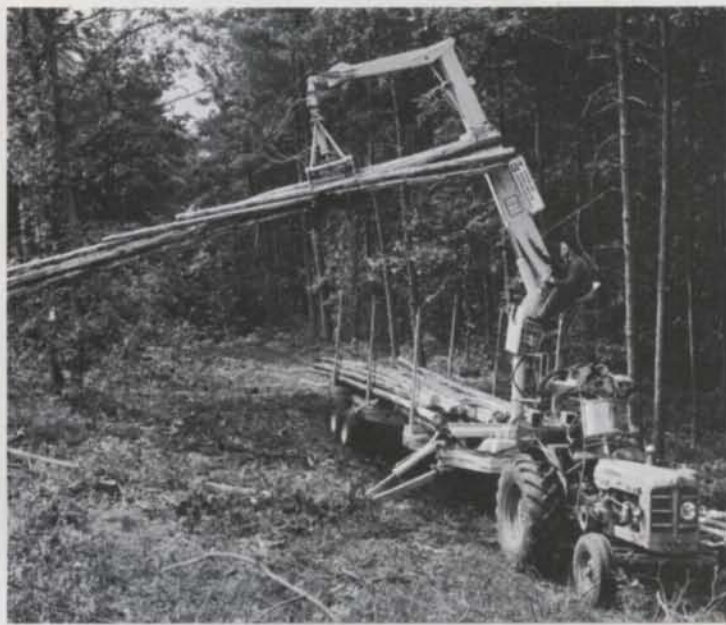
For the second time in one year the southern and eastern parts of Austria were hit by severe flooding in the autumn of 1966. Landslides devastated whole villages and many people lost their lives. One of Austria's biggest daily papers, the "Kurier", organised a voluntary rescue operation to relieve the disaster-struck areas, and among those who made a valuable contribution was HIAB's Austrian general distributor F.M. Tarbuk & Co., who placed at the disposal of the rescue workers a truck equipped with a HIAB-Schnell-Lader 174 (as the 174 Speedloader is called in Austria). The truck was chiefly used for clearance and recovery work, as these pictures show, but it also did a useful job of raising roof trusses for the houses that were quickly put up to give the population of the disaster zones somewhere to live during the winter.

One of the first tasks assigned to the HIAB outfit was to clear away soil and mud swept down by the floodwaters.



# Close Quarters

The lanes and alleys of the Old City of Stockholm weren't built for modern traffic, and the men working on redevelopment and the restoration of the centuries-old tenement houses haven't much chance of calling in any of the more bulky machinery. But this street, where the roadway threatened to collapse into the basements of the houses, was sufficiently wide to admit a truck, enabling a HIAB loader to help in the work of foundation reinforcement. It provided a shuttle service between truck deck and working site for gravel, stone and mortar by the barrowload.



## RADIO-EQUIPPED TRACTOR

Modern forestry employs costly machines. Making efficient use of them calls for instantaneous communications. Radio-equipped tractors are therefore becoming common on the lumbering scene, even for small contractors. A useful extra feature of this installation is a powerful loudspeaker which alerts the driver to an incoming call if he happens to be working outside his cab.



## DUTCH ROUNDWOOD TRAILER

This Dutch roundwood trailer, towed by an ordinary agricultural tractor, sports a HIAB 177 Forest Speedloader. The outfit can carry ten tons and will take logs up to a maximum length of 40 feet. It is operated by Koninklijke Nederlandsche Heidemaatschappij in Arnhem.

## PIPE DREAM

Large-diameter concrete pipes are heavy, vulnerable and awkward to handle, but with a HIAB 174 Speedloader and a special pipe-lifting hook it's no trouble for Lennart Hägglund to load his truck with these sections, each of which weighs 3,200 lb.





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Landing and launching pleasure craft is simple and safe with the HIAB Method. This boat, an 18 ft. 4 in. Coronet which with its outboard motor weighs just over a ton, can be whisked from the water to its winter quarters in the owner's garden in about an hour. You'll find more details on page 12.

