

METHOD

HIAB

Method No. 17

A magazine featuring the Hiab Method and its applications.



Planning - Productivity

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HIAB Method No. 17

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Cover

A HIAB 174, mounted on a Ford D 300, raising lighting standards in England.

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The rapid urbanisation that is in progress all over the world is bringing in its train a rising demand for municipal services. The municipalities themselves, along with the municipal utilities such as those supplying electricity and water, the sanitation departments, the roads and streets departments and the park and recreation departments, are finding themselves obliged to engage on a growing scale in ever larger and more diversified projects. This trend is unmistakably clear both in the industrialised countries and in the development countries — new installations and facilities that are produced, operated and maintained by public authority and for public money constitute an ever-growing proportion of economic activity as a whole.

However, the considerations applying to the projects that are run by public authority are markedly different from those that apply to private enterprise. For one thing, the profitability criteria that are so prominent in private enterprise cannot be permitted to play the same decisive role when it comes to public service works. A new road, a sewage works or a recreation ground can hardly be expected to yield any measurable economic returns — still less to provide a profit on the capital invested. It follows from this that municipal works and facilities are planned, produced and operated along lines that in some ways are peculiar to them.

Planning is Essential

Social progress has led not merely to an increase in the scope of public works but also to growing com-

plications and unwieldiness in public facilities. Accordingly, more effort will have to go into planning: short-term planning to ensure that the resources available to municipalities and contractors in the form of labour and machinery can be utilised to best effect, and more long-term planning to enable these resources to be expanded in the most appropriate and economical manner.

We called on *Kjell Engström*, a method engineer in the planning department of the roads and streets authority in Örebro, and asked him how he and his colleagues tackle the problems that arise in connection with the growing demands being made on municipal engineering and construction.

"When it comes to planning we have to recognise the fact that we municipalities are a long way behind the private contracting firms engaged in comparable activities," he says. "We've made fair progress with mechanisation, and our own resources and particularly those of our contractors are good. But there's a big demand for the best and most modern machines, and it requires careful planning to ensure that they're used in the right way.

Method Development

"With the high degree of mechanisation we already have there's not much to be gained by further mechanisation. At the present time, our costs break down on the average like this:

- 45% materials
- 20% machine expenses
- 20% transport costs
- 15% costs of manual labour.

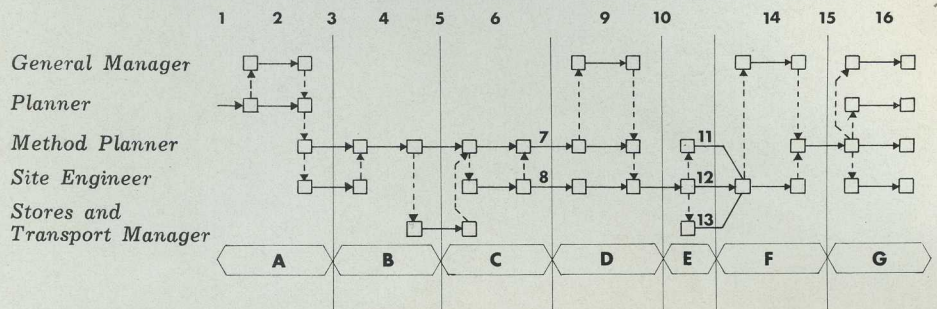


Diagram of project planning at the roads and streets authority in Örebro. The letters denote various stages of the work: A. Data gathering. B. Processing. C. Design. D. Decision and information. E. Implementation and running checks. F. Final check-up. G. Feedback.

The figures denote jobs and measures taken: 1. Preparation of planning overview. 2. Decision on planning go-ahead. 3. Visual inspection and perusal of documents. 4. Investigation into resources. 6. Choice of alternatives. 7. Final production plan. 8. Reservation of labour. 9. Decision, production plan, production budget. 10. Information to firm's own labour. 11. Method and capacity check-up, primary reporting on performances. 12. Implementation, production control, primary reporting on costs. 13. Primary reporting. 14. Inspection statement, final inspection. 15. Processing and systematisation of lessons learned. 16. Result evaluation.

-Profitability

"You'll notice that manual labour is the smallest item — besides which much of it is concerned with controlling the work of the machines. It would be hard to cut it down any further, and even if we could reduce it by a third the overall costs would fall by only 5%.

"Instead, we aim for efficiency in the use of the machines by developing new methods and improving existing ones. So there's a good deal more to our planning work than simply deciding in advance where and how our machines and labour are to be used. It also involves evaluating the performance and costs for various methods and items of mechanical equipment and recording the results so that they can be used in the planning of subsequent works. For the last year or so we've employed a planning routine comprising on the one hand programme planning, which is concerned with our operations as a whole, and on the other hand project planning, which is concerned with individual projects. The accompanying figure shows in diagram form the sequence of decision and working operations in the planning of a given project. It will be seen that the method planners are engaged at almost every stage and that the actual production is only one link in a long chain of decisions and actions."

Productivity Increase

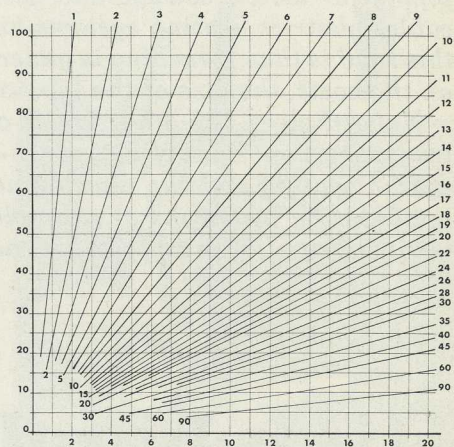
The systematised body of experience that the roads and streets authority in Örebro has built up by careful planning and reviewing of both costs and performance has given it the means for choosing with greater certainty from among different alternative methods. This in turn has enabled it to step up its production volume quite substantially — despite a reduction in its labour force. It estimates that this increase in productivity is at least as large and probably somewhat

larger than the average for Swedish industry.

The next step in development is the computer processing of the results that is now in course of preparation. Later on, the authority hopes to be able to use computers on a greater scale in its planning work as well. The Swedish communes are currently being merged into larger "blocks", and pools formed by several such blocks would be large enough to employ computer techniques for the purposes of efficient planning.

What is Profitable?

From a company in the U.S. we have received a specimen of a kind of "ready reckoner" used to work out whether an investment in a given item of labour-saving equipment would pay for itself or not. The calculations are based on the direct time savings which the equipment yields. Other, more indirect advantages, such as greater capacity, or the circumstance that the work can be handled by one man instead of two, are more difficult to put an exact price tag on, for which reason they have been left out of account. It is assumed that there are 2,000 working hours a



The vertical scale represents the annual cost of the labour used, the horizontal scale represents the purchase price of the equipment. The time saving that is required to make the purchase of the equipment profitable can be read off at the point in the diagram corresponding to the values under study. The time is indicated in minutes at the end-points of the oblique lines.

year, divided up among 250 eight-hour days, and that the equipment is written off at the rate of 10% a year. The labour cost comprises wages, employer's contributions and social-welfare expenses.

Simple calculations of this kind show that relatively costly equipment can also pay for itself, even if it only yields a time saving of the order of half an hour a day. An item that costs Skr 17,000 to buy is a good investment if it is able to save 27 minutes a day for an employee who costs his employer Skr 30,000 a year. In other words it's not difficult to arrive at more profitable methods by means of mechanisation. ■



In many districts, a very large proportion of the works carried out by public authorities are concerned with supply systems of various kinds — piping for water, sewage and gas, conduits for electricity and telephone cables, district heating systems and so on. A feature common to all work of this kind is that trenching is generally the factor that exerts the main influence on the costs, the size of the labour force, and the time required for the job.

Nevertheless, the other facets of the work — the pipelaying, material transportation, backfilling, etc. — offer plenty of scope for rationalisation by mechanisation and the development of appropriate methods. On this spread we describe by means of examples how the Hiab Method has enabled very substantial savings to be made in both money and labour.

Hiab handling saves nearly S kr 7.000 a month

The Harrison-Wright Co. Inc., a contracting firm in North Carolina, U. S. A., normally has several working crews engaged on putting down a special type of concrete conduit. These conduits, used to carry cables and piping, are built of sections about a yard long, which are joined together. In total length the conduits vary from about 150 metres up to 25 km or more. Many of these jobs, therefore, involve thousands

of sections — each of them weighing around 200 kg.

Until the firm began to use Hiab loaders, the only effective handling equipment was a rented crane. But most of the cranes that were available had an unnecessarily high capacity and carried a monthly rental of \$ 1,000—1,200. On top of that they needed a crew of two men.

The Hiab loaders that are now

in use are mounted on trucks, which are also used for transporting conduit sections and empty pallets. A further point is that the loaders are remotely controlled, enabling the operator to position himself so that he can also hook the conduit sections onto the special fork used for handling them.

Convincing Figures

In its calculations the firm assumes that a Hiab loader will be written off in seven years. This gives an annual cost, including interest charges and maintenance, of at the most \$ 1,900, i. e. less than 160 a month. Compared with a rented crane, that represents a saving of over \$ 800 a month, so that the Hiab equipment is a paying proposition even if it is not used for more than about 2½ months a year. The firm also saves the wages of the second crane operator who was needed when the rented crane was used, making another \$ 500 or more a month. Thus the aggregate saving works out at nearly \$ 1,400 a month.

Effective Service

During the peak season, when the weather is good and other conditions are favourable too, the loader equipment is in action uninterruptedly for 8—10 hours a day — which calls for a lot in the way of service and spare-part supplies. Thanks to Hiab's fast service and prompt availability of spare parts the firm has found that the down times for service and replacement of parts have been too short to make any difference to its preliminary costing figures. ■ 1



In the U.S. they put down sections of concrete conduits by the Hiab Method. The loader is remotely controlled, leaving the operator free both to hook on the conduit sections and then to walk over to the edge of the trench so as to get a good view as the section is lowered into place.

Tractor-borne Hiab replaces crane

In Turkey they use a form of irrigation system which consists of open channels of reinforced concrete, running just above the ground and carried by concrete footings. A mobile crane used to be used for the erection of the actual channel, which is prefabricated in long sections. The sections are taken out to the site by truck, and are then lifted with the aid of a special yoke from the truck deck to the footings. With this method, a crew comprising a crane operator and two helpers was able to average about 700 metres of channel per day.

The Turks have now switched over to the Hiab Method, using a

HIAB 173 mounted on an ordinary farm tractor to lift the concrete sections. The labour force and the daily production rate are the same as before, but in other ways the change has made a big difference.

A mobile crane costs a good Skr 200,000, whereas the complete Hiab outfit only costs about Skr 60,000.

The mobile-crane operator is a specialist whose services cost over Skr 200 a day. By contrast, the wages of a tractor driver in Turkey are no more than Skr 25—27 a day. Fuel costs also plunge — from about Skr 130 a day for the mobile crane to a mere Skr 35 or so for the tractor outfit. ■ 2



This is the way they install irrigation channels in Turkey nowadays. The Hiab Method has brought about substantial savings.

Long reach for long pipes

The Columbia Gas Company in the U. S. uses very long pipes in constructing its distribution lines. They are transported by a special outfit consisting of a short tractor truck and a two-wheeled trailer known as a "dolly", which is coupled to the truck by a long drawbar. The outfit is loaded and unloaded by a HIAB 950 mounted in the usual way behind the cab of the tractor. The great reach of the loader is a real advantage in this work. The loader lifts the pipe by means of an attachment that grasps it at the C. G., half way along the

pipe — then it deposits it on the vehicle so that the C. G. comes midway along the load space. ■ 3



Thanks to its great reach, the HIAB 950 can be sited behind the cab, where it's out of the way, and can still lift the long pipes by their C. G.

More gas in England

The discovery of natural gas beneath the bed of the North Sea touched off a giant-sized programme of pipelaying in England. Hiab loaders are playing an important part at a number of points in the operation. An earlier Method issue related how the Hiab Method was performing a vital function on the main grid that conveys the gas to various parts of the country. Hiab loaders mounted on tracked vehicles are used to hold and move the work tents that make it possible for the welders who make the joints in the heavy-gauge pipeline to press on with the job whatever the weather.

Hiab loaders are also playing a central part in the construction of

the more finely ramified local grids. The vehicles that transport the pipes out to the construction sites carry Hiab 950s, which they use both for loading up and for off-loading the pipes straight down into the trenches. With the pipe still hanging from the loader boom the workers in the trench ease it into position and join it to the foregoing pipe in the line. This kind of precision handling is made possible by the hydraulic extension and by the smooth action of the loader. The method represents a considerable simplification and saving of time compared with the job of fitting the heavy pipes together by manual effort. ■ 4

Precision handling with the HIAB 950 facilitates the positioning and assembly of the heavy gas pipes.



Post-raising is a job that occurs in every town, and one for which the Hiab Method is being adopted increasingly widely. As always in such contexts, drastic improvements in performance are not unusual. Street-lighting standards and telegraph poles are relatively heavy items, difficult to handle without proper aids. But with their reach, lifting capacity and flexibility of movement, Hiab loaders make it a simple matter for one or two

men to load and unload and then to raise and emplace even very tall posts. In putting up fittings for street and highway lighting and overhead cable lines, and in maintenance jobs, many local authorities are likewise cutting costs and achieving faster and easier work with the Hiab Method.

Cheaper post-holes for electrical contractors

Numerous electrical contractors in the U. S. have realised worthwhile savings in both labour and money by using the Hiab Method for such jobs as digging post-holes to take lighting standards and traffic signals. Before they had Hiab loaders they usually employed sub-contractors to transport and raise posts. Now they can manage these jobs themselves at only half the former cost — and at the same time they've trebled their capacity.

The trucks used to carry a small excavator for use in digging post-holes. With a Hiab loader and an earth auger driven by a hydraulic

motor the holes are now produced twice as fast even though the work requires a smaller labour crew than before. The holes are dug by one man who operates the loader-borne auger. The auger equipment requires a hydraulic system of its own, with a separate pump and with correctly dimensioned pressure tubes and hoses to handle the necessary oil throughput. The auger not only digs the hole but also raises the dislodged earth onto the truck deck. For this purpose the periphery of the auger helix is furnished with a flange, which retains the earth while it is being lifted up onto the

deck.

Another advantage of this drilling equipment is that it produces round holes, while the implements formerly used made pits that were square in section. As a result, it now takes 25% less concrete to embed the posts in the holes.

The Hiab 950, which is the loader normally used with auger equipment, moreover has such a long reach that it can cope with holes quite a distance from the edge of the road. At one time, contractors had to hire extra excavating equipment for holes in such positions. ■ 5

The earth auger on the Hiab loader cuts costs — both in digging the hole and through the smaller amount of concrete required to embed the posts.



Sevenfold speed-up

In England, various national and local authorities are among Hiab's biggest customers. Using the Hiab Method, one English town has succeeded in reducing the time consumed by post-raising to less than one-seventh. The posts in question are a very common type of lighting standard, 10—12 metres in height. A standard of this kind weighs between 200 and 250 kg.

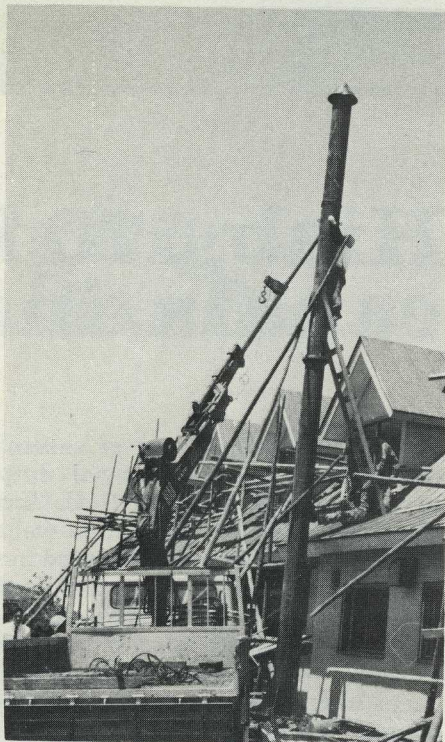
The town in question puts up about 700 such standards a year. The job used to be done by eight-man crews, which, using block and tackle, were able to raise two or three standards a day. It worked out at something over 2,200 man-days a year.

Nowadays they use a HIAB 293 mounted on a Ford D 300, and served by a crew of four men. They put up eight or ten standards a day. So the year's quota of 700 absorbs only about 310 man-days. Thus the time spent on this class of work has been cut to less than a seventh — thanks to the Hiab Method.

The amount of digging has also been substantially reduced, since the Hiab loader can emplace the standards in holes a good deal smaller. Also, of course, this cuts down the amount of backfilling work once the standard is in place. ■ 6



In this way, four men can raise 8—10 standards a day. The old method required an eight-man crew, who could only manage 2—3 standards a day.



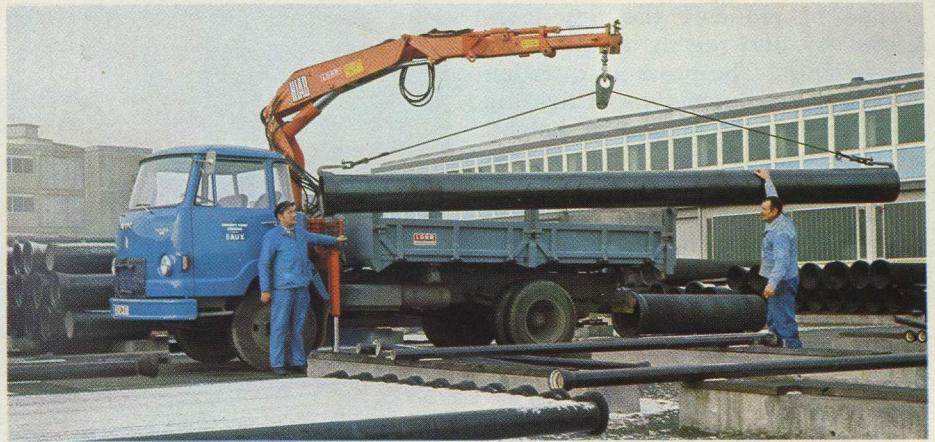
When standards are to be raised in built-up areas, as in this picture from Japan, the precision and safety of Hiab handling is a major advantage.



A Hiab loader with a personnel basket is a very common and very serviceable piece of equipment, saving a great deal of time in maintenance work on street lighting and overhead power lines.

Loading, hauling, discharging, spotting

The waterworks at Strasbourg, France, handles considerable volumes of water-main pipes. They have to be loaded up at the waterworks supply depot, moved out to the construction sites in Strasbourg and its suburbs, and there discharged and put into position in the pipe trenches. The job is dealt with from start to finish by a UNIC truck mounting a HIAB 550. ■ 7



The Hiab 950 as a builder's crane

Västanfors Industrier is in the business of supplying prefabricated industrial buildings, storage sheds, rows of offices and other large buildings to all parts of Sweden. Nowadays, the on-site erection is done with the HIAB 950. The company currently has three of them, mounted on cut-down truck chassis. With their reach and their high lifting moment they're an

excellent aid in handling the bulky, unwieldy building units. Besides being cheaper than conventional building cranes they also have the advantage that they can be quickly and easily shifted around the site from point to point. And the Hiab boom can handle the units with greater precision than a conventional crane that hoists them by a wire rope. ■ 8



Hiab 570 dredges canals in Thailand

This Hiab loader is one of several engaged on a rather special duty in which the Hiab Method has stepped up performance in a well-nigh fantastic degree. Mounted on small barges, the loaders are used for dredging canals around Bangkok in Thailand. The canals are too small to admit an ordinary dredger, and their banks are not strong enough to carry an excavator.

Mud and vegetation are hoisted from the canal bed and dumped in the barge by the bucket, which has

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Rescue service with the Hiab 550

The multiplicity of equipment carried by the rescue truck of the Nacka Fire Brigade includes a Hiab 550. Mounted at the rear, the loader has a winch capable of a 1000-kg lift or pull. The loader support legs are mounted immediately ahead of the rear wheels, and in addition the truck has two stout legs at the rear to give it a firm ground purchase when the big rescue winch, which can exert a 9-ton pull, is to be used. A further refinement is that the loader control panels are illuminated. So far the loader has found its main use on the scene of road accidents, lifting vehicles out of the way so that the rescue crew can reach the injured. ■ 9



One man beats the big drum

Fox Transport System is a firm in Philadelphia, U. S. A. One of its staple jobs is hauling cable drums. Its heavy trucks move anything up to 75 drums a day for various customers. It used to have problems loading and unloading them, particularly some of the outsize drums used for power or telephone cables or steel wire rope. By means of a powerful winch mounted behind the truck cab the drums were hauled up a ramp at the tail end of the deck. It was completely impossible to load or unload alongside the truck. Handling the drums called for a crew of two men — one operated the winch and the other guided the drum up the ramp, be-

sides doing such jobs as laying out boards on uneven ground.

Now the firm has switched to the Hiab Method — and made big gains. The main advantage is that the truck driver can manage the loading and unloading unaided and still gets through as much work as he used to with a helper. So Fox needs one man less, and can chalk up savings in wages, personnel costs and benefits. And yet it can handle drums far more flexibly than before, since the Hiab can load and unload on both sides of the truck. Fox Transport System regards the cost of the loader equipment as trifling when set against the substantial savings it has realised. ■ 11



Dredging hailand

forated sides to let the water
out.

The Hiab Method is so superior
earlier methods of tackling this
gment that a comparison be-
comes almost pointless. Mr. Toy,
o is in charge of the operations,
s worked out that he used to
ed 80 men labouring for a year
th shovels to dredge a canal to
depth of three metres over a dis-
nce of five km. Using a Hiab
ader, a three-man crew does the
ne job in 2½ months. ■ 10



Overhead linesmen and underground lines

The electricity works in Lier, a Norwegian town some 40 km south-west of Oslo, has a Hiab 550 which it puts to many and varied uses. There's a lot of building going on over wide areas in and around Lier, so that the lighting of roads and streets is an ever-growing task for the electricity works.

The linesmen of Lier find their Hiab especially useful on maintenance jobs. For this purpose the loader is fitted with a personnel basket, which greatly speeds up the changing of fittings or other service work on the 8-metre lighting standards. At some points there are lighting fittings mounted directly on the walls of buildings. They used to be reached by ladder. Nowadays, a man is simply hoisted aloft in the basket, and the tools and equipment he needs go along with him. This takes far less time than raising a ladder and climbing up and down it — often several times over — before the job is done.

Miscellaneous foreign objects that had got caught on overhead lines and carrier cables used to pose

a tricky problem that absorbed a great deal of working time. Now, with the Hiab loader and the personnel basket, a wayward kite can be retrieved in a minute or so.

A great advantage with this equipment is that the basket can be detached quickly and easily, leaving the loader free for other purposes. An important duty for the Hiab is assisting in the installation or replacement of transformers atop the pylons. A 150-kVA transformer of this type weighs about 1000 kg, and getting it into its place high above the ground would be a tough assignment to lick without the Hiab loader.

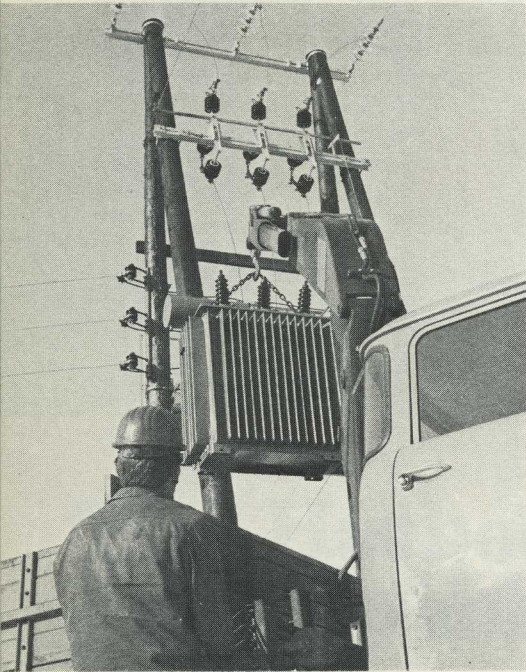
Needless to say, the Hiab also spends much of its time loading and unloading a variety of heavy equipment, cable drums and so on that have to be transported from the depot out to the working sites.

A Day's Work per Hour

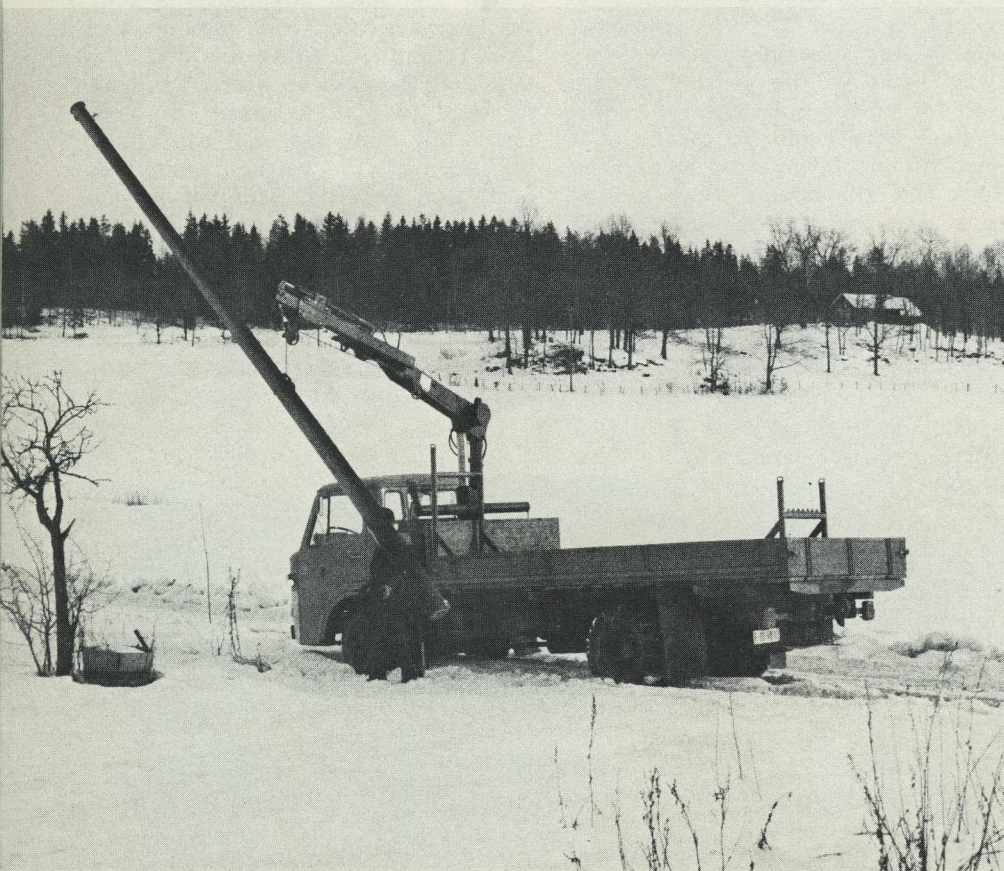
Next door to Lier is the town of Drammen, whose telecommunications department has a big district stretching along the western shore of Oslo Fiord. It too has found many ways of exploiting the Hiab Method. Among other things it has a HIAB 245 with a winch, mounted on a 7½-ton Ford. A lightweight vehicle was chosen to enable it to negotiate the many narrow byways in the district. The outfit is kept very busy by the change-over from overhead lines to buried cables which is currently in progress in the district. In this context the loader has two main duties: it handles the cable drums, weighing around 700 kg, and it uproots the poles that up to now have carried the overhead lines.

Before the department got its Hiab the poles were lifted out of the ground with a kind of jack, a heavy and unwieldy piece of equipment. The method required a big labour force, and when the poles were awkwardly placed — which they often were — the crew couldn't deal with more than eight of them in a day's work.

With the Hiab Method, only two men are needed. One disconnects the lines from the pole, and the other fixes a wire rope round the pole and lifts it straight up with the Hiab. With this technique it's no trouble to polish off eight poles in an hour. ■ 12



Transformers are heavy and fragile, and getting them into position atop the pylons would be a very troublesome and risky business without the Hiab loader.



A Hiab loader cannot only raise poles faster. It can take them down fast too, as this one is doing now that the telecommunications department in Drammen is switching from overhead lines to buried cables.

Drawing a bead on faster road-marking

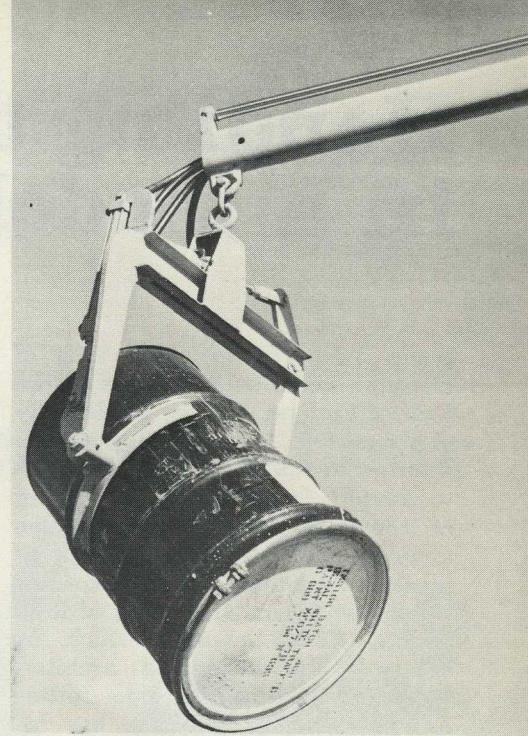
The highway administration in the state of Delaware, U. S. A., recently turned to Hiab with a handling problem. The working crews assigned to paint markings on the motorways were spending several hours a day charging small reflecting glass beads into the paint tank of the marking machine. The beads are supplied in 200-kg drums that are heavy and awkward to handle.

The salesmen at Hiab Hydraulics Inc. in Wilmington, Delaware, soon came up with the answer: a HIAB 550 was equipped with a drum clamp giving full hydraulic control

of the drums.

With the help of this loader, but without other assistance, the driver of the supply truck can now pick a drum of beads off the truck deck, swing it out over the marking machine, and dump the beads into the paint tank — all by hydraulic means. Thanks to the big reach of the Hiab loader the job can be done without having to take the marking machine off the road,

With all the time the Hiab Method has saved them, a marking crew can now get a lot more mileage out of a day's work. ■ 13



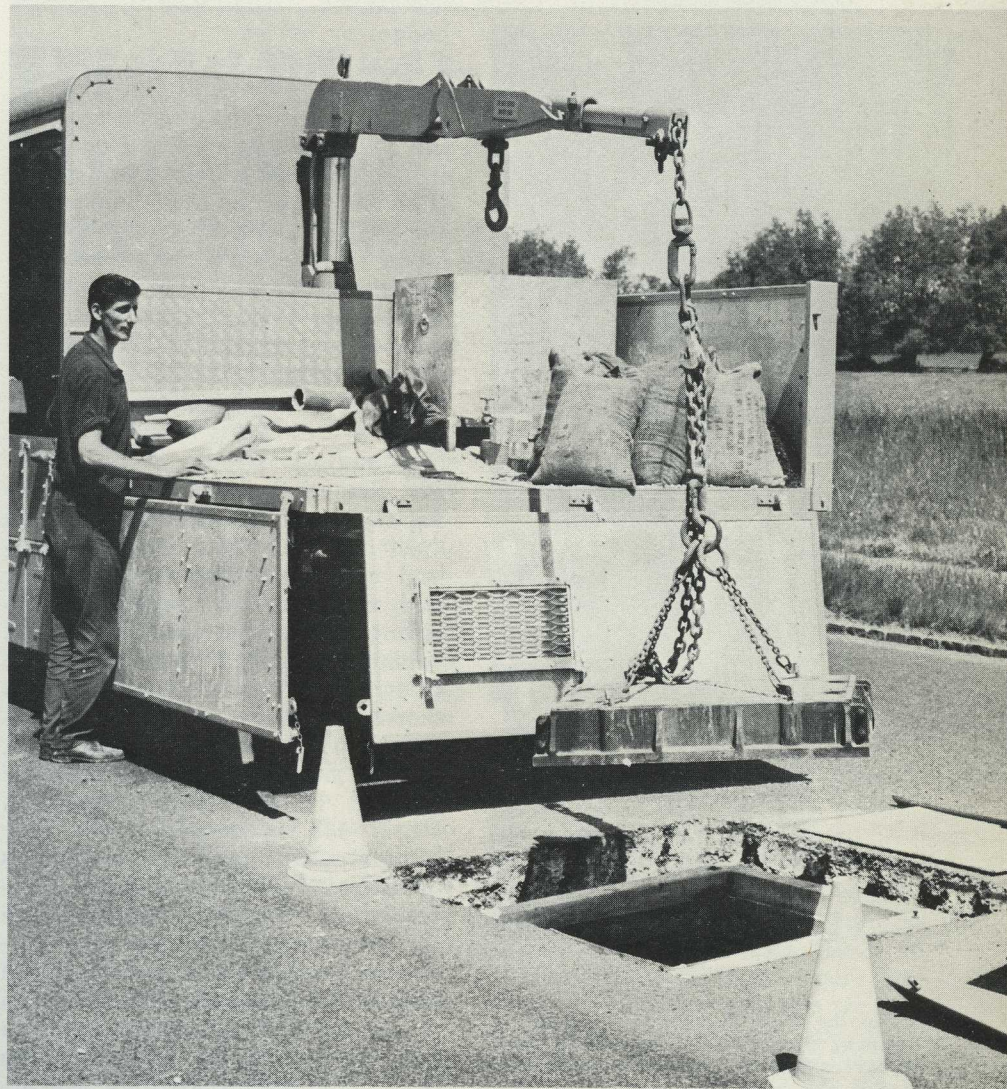
This is a special attachment for the hydraulic handling of drums with a Hiab loader. The drum is seized, raised and emptied hydraulically.

Cover story on the G.P.O.

The General Post Office in the U. K. has more than 40 Hiab-equipped outfits, and uses them for a variety of purposes, from the handling of cable drums and complex telecommunications equipment to such prosaic tasks as opening manholes. In fact, the handling of manhole covers, in all its simplicity, is an excellent illustration of how the Hiab Method can make all sorts of jobs a lot easier.

Now and then, the G.P.O. men have to get at the telephone cables running in a complicated network of conduits beneath the main thoroughfares. Lifting away and replacing the heavy iron covers over the manholes leading to the conduits used to be a heavy, time-consuming job — and one which seriously obstructed traffic.

A Hiab loader requires only a minute or so to lift one of these covers clear or to put it back again. The actual lift has been timed and found to occupy only 70 seconds. And the operation causes no obstruction to traffic even for that short period. ■ 14



It doesn't look very exciting, and yet it means a great deal. With the Hiab loader the heavy cover can be raised in 70 seconds, thus avoiding traffic hold-ups.

Handling the refuse in a model town

Some twenty kilometres west of Helsinki, right on the shore of the Gulf of Finland, lies the garden city of Hagalund. Construction began there in the 1950s, and the idea was to create a "model area". A number of front-rank architects were given virtually free hands to contrive an ideal environment, each according to his own ideas. The result of their efforts was a township which, by reason of its variegated architecture, its beautiful seaside setting and its spacious gardens, has become something of a high spot in every tour through the environs of the Finnish capital. Hagalund has won the approval of technicians and tourists alike — and by the people lucky enough to live there.



Using the Hiab Method the service company in Hagalund can handle the refuse containers with no trouble, even though the many architects who've made their mark on the area have each solved the problem of refuse storage in their own particular way.

But behind the fair façade, the place is not without its problems. Since many architects and building contractors each constructed their allotted share quite independently of each other, Hagalund was deprived of the standardisation in the planning and design of certain details that is a prerequisite for the efficient functioning of the service facilities. In the matter of collecting and disposing of refuse, for example, every architect was left to his own devices. This hasn't made life easy for the local sanitation department. The refuse containers vary over a wide range in shape and size — and in siting. At some houses they're recessed into the ground, while at others they're on the surface, concealed by bushes, hedges or fences.

Right back in the early 1960s the department solved the problem of collecting the refuse generated by the 24,000 inhabitants of Hagalund. It adopted the Hiab Method. A Hiab 292 was mounted behind the cab of an open-deck truck. The loader handled the refuse containers with ease, whatever their shape and siting. Once the container had been swung up above the deck the bottom cover opened to discharge the contents.

New method

But the volume of refuse is growing rapidly in Hagalund, just as in most other towns of the industrialised countries. This fact, together with new sanitary regulations insisting on transportation in covered vehicles, impelled the department to switch to refuse packers. It has thereby gained a substantial increase in transport capacity and, just as before, the containers are handled by the Hiab Method. A HIAB 173 mounted at the rear of the outfit hoists the containers over the intake opening of the packer, where the contents discharge through the bottom cover. The system is functioning admirably, and despite the altered circumstances it has not been necessary to make any changes in the refuse storage as originally conceived by the architects. Which is a tribute to the versatility of the Hiab Method. ■ 15

One man wit

The Swedish firm of Bilfragmentering AB, located in Halmstad, has developed a system for converting junk cars into valuable scrap. An essential element in the system is the Hiab Method.

The actual fragmentation is a means of large-scale car scrapping developed in the U.S. Without any burning or stripping, whole cars are fed into a hammer mill and reduced to fist-size pieces. These fragments then go to the steelworks as scrap for producing such articles as reinforcing bars.

Large volume is a prerequisite for the system. The Halmstad plant expects to be able to deal with at least 50,000 cars a year, and two or three similar plants could handle virtually all the derelicts in Sweden. But this presupposes an economic means of collecting junk cars from over a very wide area and moving them to the plant.

From 4 to 15 junk cars a day

A firm of scrap merchants in England, dealing with about 15,000 junk cars a year, uses a HIAB 550. It used to have a winch on the five-ton trucks that collected the derelict cars, and each truck was able to pick up and bring in four cars a day to the scrapyards.

With the Hiab loaders the trucks can easily manage an average of 15 wrecks a day. Each truck can do three daily collection rounds without rushing within a 20-km radius of the scrapyards. ■ 16

The growing numbers of scrap cars piling up in junkyards and along the roadsides almost all over the world are facing society with an environmental problem, besides being a handling headache for the people whose job it is to deal with them. But the difficulties have been overcome at many places by using the Hiab Method, both for collecting the wrecks and for processing them into scrap.

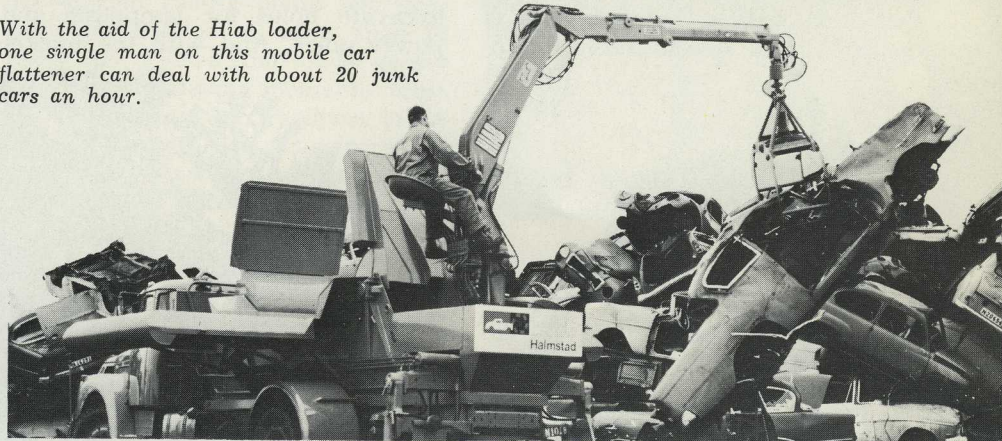
h a Hiab gets through 20 cars an hour

For this purpose the firm has developed a mobile "flattener". Mounted on a truck chassis, it has two powerful jaws which squash the car body to about a fifth of its original height.

In connection with the flattening operation the cars are handled by a HIAB 550, enabling the whole job to be done by one man. A mobile flattener can be expected to deal with about twenty wrecks an hour.

Before the car is flattened it must be stripped of its engine, gearbox, tyres, fuel tank and seats. So the outfit will mostly make the rounds of small local scrapyards and car-dismantling firms. Flattening the wrecks increases the effective storage space, both at local dumps and at the central fragmentation plant, and also reduces transportation costs. ■ 17

With the aid of the Hiab loader, one single man on this mobile car flattener can deal with about 20 junk cars an hour.



Hiab Method saves time and stretches storage

Village Motors, a car-dismantling firm in Fleetwood, Pennsylvania, can get much more into its storage area now that it handles its junk cars with a Hiab loader. Formerly, the firm had a truck with a winch, which lifted the wrecks by means of a rear-mounted A-frame. This equipment required broad, unobstructed lanes between the stockpiles in the scrapyards,

Now, Village Motors has a Hiab loader mounted on a cut-down Ford chassis. Capable of lifting on all sides of the vehicle, this equipment has enabled the access lanes to be reduced by 50% — sometimes more. Even so, handling has become faster and simpler. Engines and other components that are to be recovered are lifted smoothly and without suffering harm by the Hiab loader, they can be moved quickly and conveniently on the short deck of the truck, and for steam-scrubbing they are held clear of the truck at the end of the loader boom.

The firm also finds that much less servicing is required since it switched to the Hiab Method.

PATSA DIGEST

Published by the Pennsylvania Auto & Truck Salvage Association

FEBRUARY, 1971



The car wreckers in Pennsylvania have their own journal, the PATSA Digest. Here is its story on the success of Village Motors with the Hiab Method.

"It seemed like we were always repairing something on the old equipment," says Robert Hoch, of Village Motors. "If it wasn't the winch that was wrong, then we had to change a rope, or deal with trouble in some other item. In the four years we've had the Hiab equipment it's hardly needed any maintenance at all." ■ 18



An English scrap merchant collects about 15,000 derelict cars a year by this means.

All-round aids for municipal services

In two of the towns of France, the fire brigade and the other municipal service agencies have improved their chances of doing a swift and efficient job by adopting the Hiab Method.

In Chelles, a town of 30,000 in the Marne valley, the equipment of the roads and streets authority in-

cludes a HIAB 245 with a clamshell bucket, which does yeoman service. It is used for loading earth, sand and gravel on roadworks and in the parks, it picks up twigs and branches when the trees are pruned, it clears ditches, and it helps to excavate holes for lampposts and power poles. And with the bucket

detached the loader serves to uproot the stumps of bushes and small trees, and for all the various lifting jobs that occur in road and street maintenance.

Drive-in River

The authorities of Lagny, which stands on the Marne just outside Paris, have likewise got themselves a Hiab. This one is a 550 with a winch, for which they've found all sorts of uses. Since the town lies on both sides of the river many roads run right along the banks, and it's not unusual for cars to go "into the drink". At least once a month the Hiab loader is called out to fish a car out of the river. Another of its frequent duties is clearing away wrecked cars after collisions on the very busy national highway No. 34, which runs close by.

Sometimes the Hiab also helps to keep the barge traffic running smoothly on the river. Now and then a barge turns broadside across the river and blocks the channel. At such times the winch on the Hiab loader is just what's needed to intervene promptly and pull the barge straight again. Similarly, the loader is used to launch and recover the boat which the fire brigade uses for rescue and diving operations in the river. Even a horse which had got stuck in a ditch received prompt assistance from the town's all-round rescue appliance.

Boats High and Dry

The river is an essential element in Lagny's charm, and one on which the inhabitants of the place set a high value. But sometimes they have to pay the price in the form of serious flooding. At such times they use boats to get about in many parts of the district, and when the water subsides it leaves stranded boats dotted about the town. And once again the Hiab loader goes into action, collecting the boats and returning them to their proper element.

Just like the loader in Chelles, Lagny's Hiab is used for numerous jobs in the maintenance of roads and streets. And on occasion, both loaders are borrowed by small industrial undertakings and other local firms who need a helping hand with a special lift. ■ 19



There's no mistaking how pleased the municipal workmen are with their Hiab Loader. Without it they'd have had a lot of spadework to sweat through here.

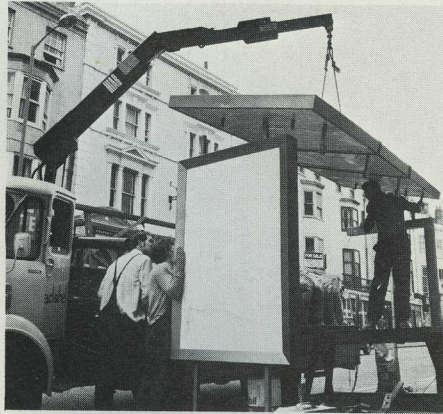
Quite a few motorists in Lagny also have good reason to applaud the local authorities for getting a Hiab loader. Thanks to the Hiab, the cars that occasionally plunge into the River Marne are quickly returned to dry land again.



Lift with Method

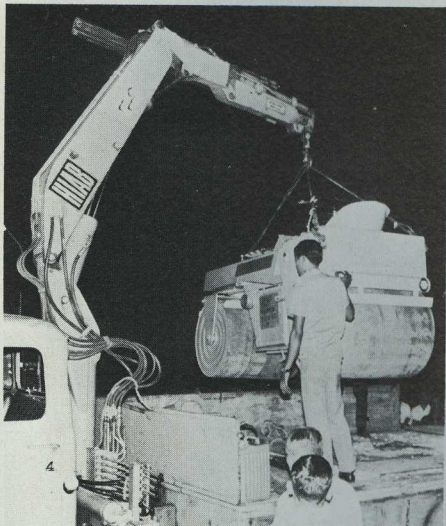
The last bomb in Honkong?

The English climate hasn't got a very good name, and waiting for buses can be tough when it's in its worst humour. But help is at hand. Not that the Hiab Method can do much about the weather, but it's being used all over London and South-east England to erect shelters at the bus-stops. ■ 20



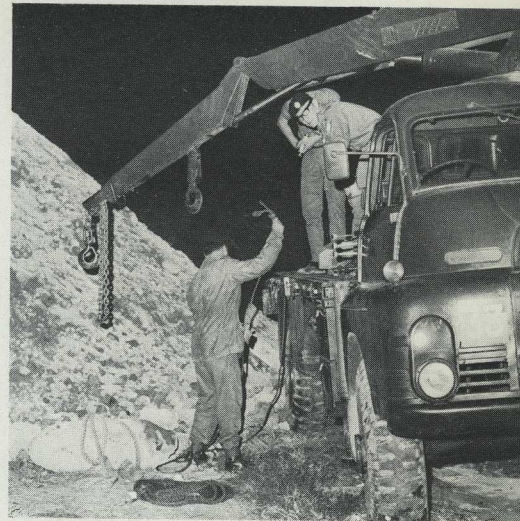
Conference in Khon Kaen

Every year, the chief officials of all the towns and communes of Thailand gather for a week-long conference. This year it was held in Khon Kaen, on the plains about 500 km northeast of Bangkok on the road to the Laotian capital Vientiane. Just as at last year's conference in Haadyai, way down south on the Malayan border, an evening demonstration of Hiab equipment and the Hiab Method was a popular item on the programme. ■ 21



Hiab bows to the weather gods

An unpleasant reminder of the Second World War was recently removed from a residential area in Hongkong. After hundreds of people had been evacuated from their homes a bomb-disposal squad went gingerly into action to defuse an unexploded 250-kg bomb left over from the battles of more than 25 years ago. Then a Hiab loader gently raised the menacing memento from its resting place for transport to the docks, where it was transferred to a boat waiting to take it out to sea for dumping. ■ 22



Hiab sends a man down

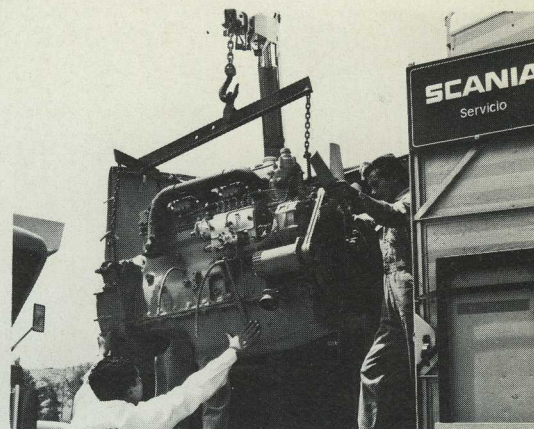
This Swiss rig, equipped with a HIAB 550 and a personnel basket, enables the maintenance man to

work in comfort beneath the bridge. ■ 23



Up-Country service with Hiab and oxygen

How do you solve the servicing problems for a fleet of trucks performing severe duties 500 km or more from the nearest service shop? At Scania in Peru they solved it with a mobile service workshop constructed on an L50 chassis. And for handling engines and other heavy items the workshop is equipped with a HIAB 293. Another important item on the equipment list is oxygen masks — which are needed when the workshop calls on workplaces five or six thousand metres above sea level in the thinly populated but mineral-rich highlands of Peru. ■ 24



Four machines in one

Most of the larger makes of tractor can be fitted with extra equipment which enables them to perform the same tasks as a small loader. At the same time the tractor can also be equipped with a hydraulic excavating attachment. In collaboration with AB Hymas of Hudiksvall, Hiab has now evolved a mounting for the HIAB 550 that fits onto the point of attachment of the excavating unit. Conversion from excavator to loader takes about an hour, and the loader uses the same hydraulic-pump equipment as the excavating attachment. The loader substantially increases the utility of the tractor: in one and the same machine you have a tractor, front-loader, excavator and mobile crane.

