



New Irrigation System

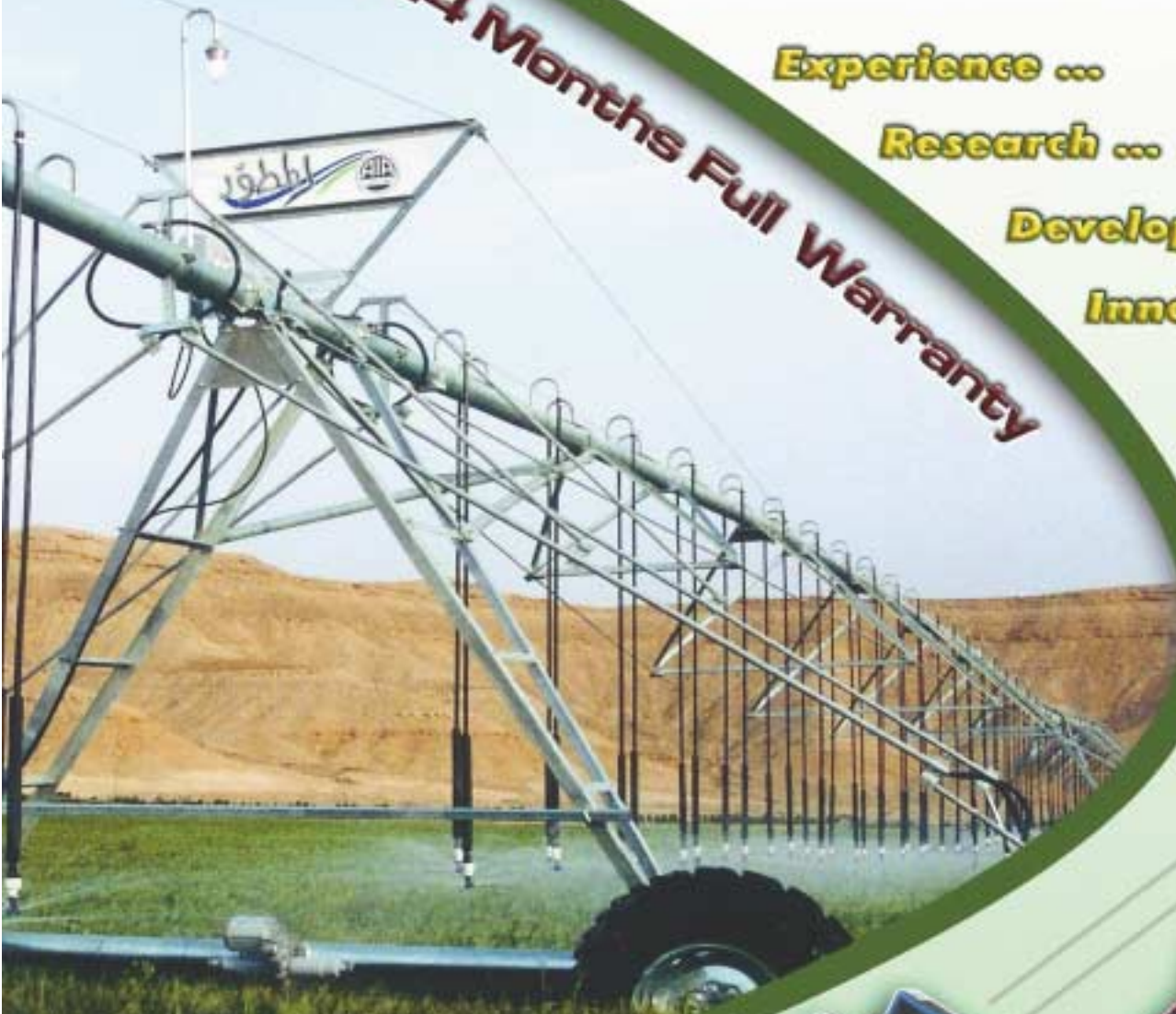
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A Name You Can Trust

One might ask, what is the story behind the new generation of Mechanized Irrigation systems recently introduced by AlKhorayef? And why did the company choose to use the Arabic Trade name "Almutawwar?"

It comes as no surprise to any one that Alkhorayef Group, market leader in the Middle East and North Africa is the world-wide second largest center pivot manufacturer, and had produced more than 100,000 spans so far, and solely owns the unique technology of lining steel pipes with high density polyethylene branded as PERMAPIPE™ to conclude it's achievements with Almutawwar (translated as "The Ultimate").

This new generation was born, grown and matured in the hands of our valued customers, and hence they called it "The Ultimate". It is a name that speaks for itself after it was a dream, which become a reality.

Almutawwar new generation is a result of accumulated experience of more than twenty-five years in mechanized irrigation; it is the achievement of our dedicated and hard working teams who decided to accept the challenge of perfecting this product.

Almutawwar center pivot have eliminated past gaps, added a wealth experience of the present and looked forward to the future vision of tomorrow's technologies. Therefore it is a pride to our customers, our community and to our Group.

We cannot talk about this new generation of Almutawwar without praising those dedicated Marketers, Engineers and Technicians of Alkhorayef Group whose contribution made Almutawwar reaches its objectives and to reflect our motto "A Name You Can Trust".

I take this opportunity to thank our important strategic partners, our valued customers who made this mission successful.



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Alkhorayef's Mission

To strive for leadership in all its business activities by supplying quality products along with professional after-sales support through its carefully selected and highly professional employees and to play a vital role in technology transfer and environmental protection.

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Ibrahim Alkhorayef: Life Full of Achievements



It is difficult to write about the multi-faceted personality of the late Sheikh Ibrahim Alkhorayef. He was the embodiment of tolerance and simplicity. He had a generous heart and a kind disposition to the weak and the poor. He treated his employees, especially the expatriates, as brothers. This helped in raising the morale of the employees and encouraging them to exert their best efforts in serving the company.

Sheikh Ibrahim had sown this love seed, which was later nourished by his brothers. This fraternal behavior toward expa-

triate employees, of all nationalities, is rarely found in any establishment or company in the Kingdom.

Employees' welfare

Sheikh Ibrahim was keen on catering to the employees' needs and removing their obstacles, which were mostly financial, so that all employees could enter and leave their offices with broad smiles.

Sheikh Ibrahim used to work even on holidays. He loved farms and shouldered the task of the farm supervisor who solved all problems of the farmers. Another reason behind the success of the Alkho-

rayef Group was that all decisions were based on the shoura "consultation" principle in which his brother Sheikh Abdulrahman was closely involved.

Charitable activities

Works in this field were tremendous. Sheikh Ibrahim used to feed the poor, help the needy; and was usually delighted when he performed these charitable works. He continued these charitable deeds started by his late father Abdullah.

This is a short biography of a noble soul who during his lifetime enriched and brightened the lives of others to say the least.



Pump installation in the Custodian of the Two Holy Mosques' Drinking Water Project in Horaimla

At a grand ceremony held on the 18th of Dhul Quaidah, 1423 H, at Horaimla, HRH Prince Abdulaziz bin Fahd bin Abdulaziz Al Saud, State Minister, Cabinet Member and Chairman of the Cabinet Headquarters Bureau, inaugurated the Custodian of the Two Holy Mosques' Horaimla drinking water project. HRH executed the project at his own expense during the holy month of Ramadan .

The Alkhorayef Group of Companies (AGCs) imported and installed the submersible electric pump with all other equipment such as pipes, special control panel and electric transformer.

Agricultural Exhibition Opened at Alkharj

H.E. the undersecretary of Alkharj province opened the Alkharj agricultural exhibition on 1/3/2003.

Chairmen of the board of directors of Alkhorayef Commercial Co. (ACC) and Alkhorayef Industries Co. (AIC) accompanied the undersecretary as official sponsors of Mohammed Saad Al Rumaih Est. exhibition.

H.E. lauded the exhibition and the distinguished presence of Alkhorayef Group at such major events.



Alkhorayef Co. Participates in Khartoum International Fair

Alkhorayef Investment Company. (AICO) participated in Khartoum International Fair held in the Sudanese capital, Khartoum, in February this year.

AICO's stand was a star attraction during the ten-day fair. A Canadian delegation visited the headquarters of the Arabian Co. at Um Dom suburb, where it was briefed on the irrigation systems and plowing machinery.

Alkhorayef bulletin was distributed at the fair, where it won favorable attention.



The "Almutawar," the New Irrigation System, launched



An official ceremony for launching the new irrigation system, the Almutawar, was held on Thursday 13/3/2003. The Almutawar is the result of the long experience of Alk-

horayef Co. in different sectors of agriculture and irrigation systems.

H.E. Mr. Mohammed Abdullah Alkhorayef, President and CEO of Alkhorayef Industries Company (AIC) dwelt on the company's experience in developing the new product and the latest techniques. A team of experts explained the new features of the system as well as the reasons for selection and benefits accruing to the farmer, agriculturally and economically.

The participants toured the company's factories for a briefing on the new manufacturing equipment that effectively contributed to this development, technically and technologically, compared to similar equipment in the local and international markets.

The new irrigation system was celebrated at a function held at the company's farm. The Chairman of Board of Directors of Alkhorayef Group of Companies (AGC), Akhorayef Commercial Co. (ACC) and Alkhorayef Industries Company (AIC) witnessed the inauguration of the first center pivot irrigation system branded the Almutawar. This was followed by a dinner banquet at which the company's section and branch directors as well as other senior officials were present.

ISO International Certificate for Alkhorayef Industries Co.

Alkhorayef Industries Co. (AIC) has acquired the International Standards certificate ISO 2000:9001 (the latest standard) after succeeding in a test from 25th to 26th November 2002. The certificate issuing staff in the Quality Control Institute in Canada, conducted the test.

Alkhorayef Industries sees that the execution of quality management services (QMS) will lead to the continuous improvement of engine performance, which in turn will lead to enhancing customer satisfaction, both nationally and Internationally, and benefit workers.



Alkhorayef in the Saudi Printing Art Expo.



HH Prince Abdullah bin Faisal bin Turki after the inauguration of the Saudi Printing Art Expo.



Sheikh Bandar Ibrahim Alkhorayef and Mr. Mohammed Karam with customers and importers in the Exhibition.

HH Prince Abdullah bin Faisal bin Turki, governor of the Saudi Arabian General Investment Authority (SAGIA), inaugurated the Saudi Printing, Packaging, Plastics and Petrochemicals Exhibition, which was held from March 16 to 20, 2003 in Riyadh.

Al Nakhil Paper Co. and Trans Orient Modern Machinery Co. participated in a joint stand to beef up the presence of these two strategic manufacturing companies in this field and boost customers' confidence. The two companies demonstrated their ability in meeting the customers' needs in terms of the supply of machinery, printing materials, spare parts and paper.

The customers responded to this gesture with great satisfaction. Al Nakhil Paper Co. seized this opportunity to display its new pre-collected paper product, which helps save time and effort by making the process of paper collection hassle-free. The product was widely appreciated by customers who rushed for sample trials.

The product was recently developed in cooperation with the General Security printing press that approved its technical specifications.

Stations Team Wins Alkhorayef Tournament Trophy

The Stations Team won the friendship trophy of the football tournament organized by Alkhorayef Operation & Maintenance Co. (AOMC) in Dammam after defeating the Garage Team 5-3 in a penalty shootout.

The tournament, held between 27/2/2003 and 7/3/2003, was attended by a large number of fans of both teams which competed in the finals. Eng. Sabah Al Raheem, health-engineering manager, and Eng. Mohammed Abdulraziq, Dammam project manager, were among those present.

A ceremony was held after the final match, followed by the distribution of trophy and medals to



the winning team by the project manager and the tournament organizing committee.

Al Riyadh newspaper received the Sports Shield in appreciation of its coverage. Sheikh Faisal Al Suhail, Al Riyadh newspaper's Chairman of the Board of Directors and General Supervisor, received the Sports Shield on behalf of the newspaper.

Appreciation Certificate for ACC's Manager in Hail

Mr. Bassam Ahid Twofiq Abu Ghazali, branch manager of Alkhorayef Commercial Co. (ACC) in Hail, has obtained an appreciation certificate from the manager of the Technical Training Center in Hail for the successful participation of the ACC branch in the cooperative training program from 11/9/1423H to 19/11/1423H of the academic year 1423H-1424H.



Al Zagarty Receives Appreciation Letter



The Human Resources Department (HRD) represented by Mr. Saud Abdulaziz Alswailem, HR General Manager, presented an appreciation letter to Mr. Hussein Abdulrahman Al Zagarty, Alkhorayef Operation & Maintenance Company's HRD Supervisor, Dammam Branch for the evaluation he made for the staff status in Dammam project. His report included propositions and ideas. Mr. Alswailem thanked Mr. Al Zagarty for the efforts exerted in performing the tasks assigned to him.

Congratulations

* Mr. Mahmoud Abdulsalam Taha, employee of Alkhorayed Co., was blessed with a beautiful baby girl, "Rana". Congratulations



* Mr. Iyad Thabit Al Any was also blessed with a beautiful baby girl who brought happiness to his family. Congratulations.



* Mr. Saad Ahmed Awad has obtained the Master's Degree in Business Administration. Mr. Saad expresses his thanks and deep gratitude to Mr. Saud Al Swailem, Alkhorayef Co.'s Human Resources Department General Manager, for his encouragement.



* Mr. Imam Ghory, from Alkhorayef Co., was blessed with a baby boy. He named him Mohammed Aman who spread happiness in his family. Congratulations.



Almutawwar



the Latest Irrigation System for the Expansion of Agricultural Area



“The Ultimate(or Almutawwar in Arabic)” is the inspired name for the new generation of automatic irrigation systems. It is highly efficient as the agricultural development has entailed certain type of modern devices that help expand the agricultural area, support and increase its productivity.

‘Almutawwar’ boasts the following aspects, which make it a leader in this field:

It has the highest possible efficiency in irrigation distribution, implementation and harmony through the controlling rate of sprinkling along the pipeline by choosing sprinklers’ gauges, in-between spaces and suitable operating pressure to

reach a level of interference not less than 200%. The need for close distances between sprinklers is increased in the outer towers of the center pivot irrigation system, where these towers represent the maximum area of the irrigation system. Therefore, it is the area that should be cared for and it has to be ensured that suitable amounts of water and fertilizers are obtained. And, as most fertilizers are added through injection in the center pivot irrigation system, sprinklers should be chosen and arranged to obtain a regular rate of irrigation along the irrigation system.

The latest and specialized programs from established American companies are used in irrigation pro-

gramming and sprinkler production, where there are nozzles of 0.086 - 0.41 inches (2.18 - 10.41 mm). Special programming can also be made for the addition of fertilizers and chemical substances at low rates, so as to keep the concentration of these substances and guarantee the distribution consistency of irrigation water loaded with chemicals, if any, along the irrigation system and reach the required designed pressure at the end of the system to guarantee the delivery of required amount of water. Hence, it would seem pertinent to add a pressure meter for the measurement of pressure at the end of the irrigation system, in order to ensure that the required pressure is reached.



- * **Characterized with high efficiency for irrigation distribution, application and consistency.**
- * **Pressure on sprinklers is equal throughout the system.**
- * **Pipes are lined with polyethylene to resist hot and corrosive water.**

Almutawwar is equipped with pressure regulators for equal pressure on sprinklers along the irrigation system and for better performance. Almutawwar is especially used in "up and down" fields and in systems longer than 250m, where differences in pressure are big at the beginning and end of irrigation system.

Keeping a constant pressure on sprinklers can maintain a wet diameter, size of drops and fixed irrigation consistency along the system. Pressure regulator can also deal with water coming out of sprinklers, where the rate of addition will be very accurate compared to when the irrigation system is operated without pressure regulators. Thus, the quantity of water wasted can be reduced in the first towers, where pressure is high and the amount of water to be delivered to the crop is maintained for the purpose of equal and highest productivity at the beginning and end of the system and minimizing cost.

Almutawwar is unique worldwide for the polyethylene-lined pipes option, for giving a special protection against hot and corrosive water and maintaining fixed water flow for years. It has a ten-year warranty for the pipes, which are exported, to all parts of the world, including the US. It is available in a diameter of 5/8-6 and 5/8-8 inches.

Almutawwar has many choices for sprinklers suitable for all types of soils, different crops, strong wind and hot climates to reduce evaporation and erosion. There are various types of sprinklers:

- Fixed pad sprinklers: Recommended for good-drainage, high temperature and strong wind agricultural lands, where a strong resistance to evaporation and wind erosion characterizes them.

- Rotating pad sprinklers: Recommended for high-price crops e.g. potatoes, onion and peanuts and in semi-porous agricultural lands. There is also a special sprinkler for the irrigation of sorghum and high-price crops. Half circular sprinklers for tree irrigation in the dry wheel track are also available.

Furthermore, Almutawwar is also equipped with heavy-duty gears with a special type of leakage proof, solar spiral engines of low fuel consumption, and an aluminum outer cover to overcome erosion and increase the speed of heat exchange. It is completely separated from the ambient temperature and has a high speed that is suitable for field requirements. Almutawwar is able to overcome sticking into mud due to the presence of an irrigation system behind the wheels or a dry wheel track system. It ends up with a semi-circular sprinkler that separates the sprinkled area from the wheels' track. It is also equipped with down going metal or rubber lines of various lengths, as per the need and type of crop.

The system's components are especially manufactured to suit the operational conditions inside and outside the Kingdom. They are available in many after-sale centers and warranted for two year. You only need to visit the nearest branch of Alkhorayef Commercial Company (ACC) or an authorized distributor to get the details.

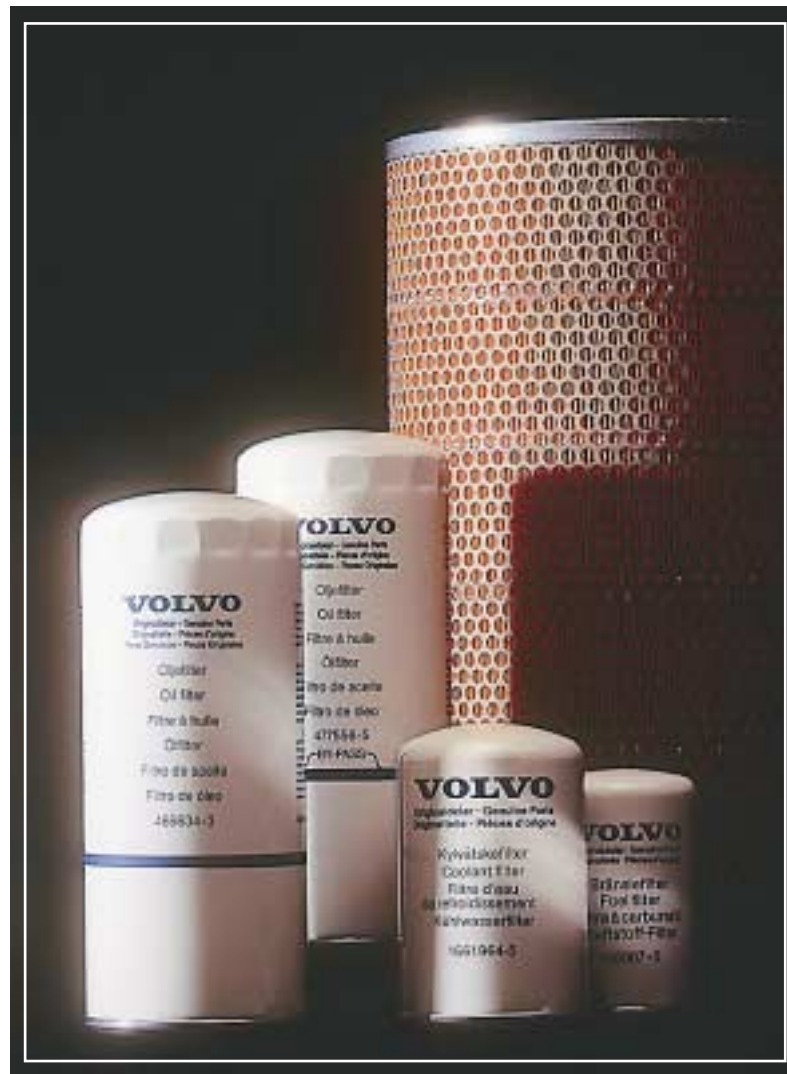
Opt for Volvo Penta Genuine Parts

By: Eng. Khalid Bayoumi

Dear farmer, the money you have invested in your farm and the efforts you have exerted are invaluable. Undoubtedly, you are looking for success in your farming. All these efforts are for the sake of reaping the fruits at the end of every season and to seeing your life's dream come true.

Using the original Volvo spare parts is the only way to extend the engine life expectancy and the safest and optimum guarantee for the continuity of engine operation. Counterfeit spare parts do not guarantee continuity of engine operation. Using them in order to save some money does a great deal of harm to the engine, which could break down in critical situations.

Volvo Penta has conducted several tests on the parts that are installed in its engines to ascertain the conformity of each component with the highest quality standards. These components are provided by the after-



sale service sections as non-sanctioned parts. In the Kingdom, ACC is regarded as the leading company in the field of managing the center pivot irrigation systems, pumps, diesel engines and their uses. ACC has also been the agent and the main distributor of Volvo Penta engines for decades. Its sales amounted to 50,000 engines in the different regions, 17,000 of which are still operating trouble-free, thanks to after-sale service section. The huge stock of the genuine spare parts, their regular availability in the different regions of the Kingdom, together with the sources of the maintenance teams have led to

the continued success of Volvo Penta operations and its agent ACC.

The constant support provided by the Saudi government that raised the Kingdom to the level of the advanced countries in agriculture, geographical location of the Kingdom, prevailing climatic conditions, operation of these engines for long hours on an almost daily basis, their exposure to high temperature, dust and sands have continuously increased the demand for these agricultural engines. Though Volvo Penta has considered the climatic conditions of the Kingdom in the manufacture of these engines, the

periodic maintenance of these engines has become crucial for their efficient performance. There are many farmers who followed the instructions given by ACC experts. The non-stop performance of their engines tells its own tale.

An adage goes: "one weak link in a long chain damages the whole chain." This proverb applies to Volvo Penta engines as well. For example, when you buy an imitation air filter in order to save a little money, this will definitely threaten the safety of the whole engine. Also, using spare parts that are not genuine such as oil, fuel and air filters, pistons or cylinders of different trademarks other than the genuine Volvo products will definitely reduce the engine efficiency and shorten its life expectancy. This is aside from the life span of its components, which is half that of the genuine products bearing the Volvo Penta trademark.



Volvo Penta is keen on retaining the good image of its diesel engines and other products especially as the spread of counterfeit spare parts in the Saudi market bearing the same brand name and saying "can be installed on Volvo engines". Accordingly, it conducted lab tests on air filters and based its tests on ISO 5011, the international standard. The result was astonishing. It showed how risky it was to use these spurious filters because they have only one eighth of the quality found in a genuine filter. This means you have to change eight forged filters for one genuine filter.

The cost of spare parts that require to be changed regularly represents 4% of the total engine cost. This, dear farmer, also means that using imitation spare parts will save you 0.5% of the engine cost: a small percentage compared to the risk to the engine fitted with imitation spare parts. This may also leads to damaging your agricultural crop and hence risking the loss of your investments.

These facts show that Volvo's rival companies that sell these imitation filters are looking for profit only. Volvo Penta is looking for maintaining its established good reputation in terms of quality, safety, preserving the environment, and gaining the customer's satisfaction. This reputed company looks at the diesel engine industry as the source for acquiring engines that are reliable in the

long run. Thus, it has to use the genuine spare parts that comply with the international standards and with the Kingdom's climatic conditions.

Specifications of Volvo Penta genuine spare parts are well known to all as:

- Components that are manufactured according to Volvo Penta specifications.
- The company observes quality control.
- Products or packages that bear Volvo Penta's trademark.
- Distributed by the company.
- Guaranteed according to Volvo Penta's conditions.

In comparing the genuine spare parts with counterfeit products, the genuine filter welding is characterizes by its ability to contain a lot of dust and soil, effective materials in absorbing things, which hang on them and careful and accurate manufacturing.

The imitation air filters are characterized by:

- Improvised manufacturing.
- Introduction of cheap material in manufacturing.
- Inaccuracy in manufacturing.

The paper element of the filter is packed through gum lines, while the imitation filter is spot-welded. The gum lines that leak the gum and the easy air-flow are indications of the bad quality. The nuts of the imitation cylinders are always sold as relatively cheap alternatives compared to the genuine products. Volvo Penta's genuine oil filters have a wide range of specifications that make the genuine filters the natural choice, if compared with the counterfeit products. The paper element used in the spurious filter is very coarse. As a result, it has less ability to deposit impurities and leaves no ring to seal the leakage.

Bad Maintenance Results in High Expenses and Loss!

By: David Forshaw,

Director of National and International Maintenance

You don't need an accountant to tell you that the periodical costs of irrigation engines (fuel, oils and spare parts) will increase your expenditure and reduce your profits. If you are suffering from a lack of engine maintenance, this would usually lead to the possible increase in expenses or worst, may result in the loss of your crop.

Alkhorayef Commercial Company (ACC) in Riyadh, Saudi Arabia, has been providing Saudi farmers with Volvo Penta engines for more than 35 years, during which it has sold about 50,000 such engines. ACC's relationship with Volvo Penta is very strong and, today, it's stronger than ever, especially considering the large number of staff operating in the Kingdom. Every customer who has bought an engine from ACC expects a high standard of service from the sales department, regardless of the area he bought it from. This standard of service is the cause for the strong relationship between ACC and Volvo Penta.

ACC managed to help reduce periodical costs and services of engines used in the agricultural field. These 35 years have allowed us to acquire valuable experience and vision to recognize the problems that a farmer might encounter while operating engines in the climatic conditions of the Kingdom and the changing sites. We must not forget that during the agricultural season, engines work day and night and in some places they are operated under temperatures that exceed 50 degrees celcius. Such conditions, of course, require the provision of routine and continuous periodical services against the specifications of the manufacturing company. If you leave your engine, whatever it might be, operating in the desert without the proper service, undoubtedly it will fail. This will certainly lead to the damage in crop and financial losses.

Farmers always struggle to reduce their expenses but ultimately they will end up increasing them with additional services of their equipment. I think, as a part of ACC's responsibilities as an importer of Volvo Penta engines, the Company must help the customer reduce his expenses through periodical maintenance, as per Volvo Penta's regulations and its position in the market, which would not have been achieved except by good service. If the customer wants to get services properly, this will cost him about 4% only of his total cost. I strongly believe that problems of the increased costs of maintenance and repairs of a faulty engine are the results of a misunderstanding of the required service standards of the customer's engine. Many farmers employ unskilled laborers with a minimum standard or those lacking knowledge of the equipment they are expected to provide service to. In fact, most faults were the result of personal



judgments, including the use of inappropriate oils and spare parts.

During the last 12 months, we were looking at several projects to find solutions through the service contract system. Alkhorayef family, which runs about 6,000 hectares, has also participated in developing this system. Service contract simply means that Alkhorayef will bear all the engines' routine service requirements to meet the recommendations of the manufacturing company.

The contract cost include all service parts such as oil, diesel and air filters as well as the water separation filter (if installed), and the cost of high quality oil complying with the recommendations of the manufacturing company. Alkhorayef is the exclusive Castrol oil distributor in the Kingdom.

Furthermore, and as a part of the contract, we will bear the periodical



*** Heat conditions require continuous and routine services.**

*** Personal judgments are the cause of most engine faults.**

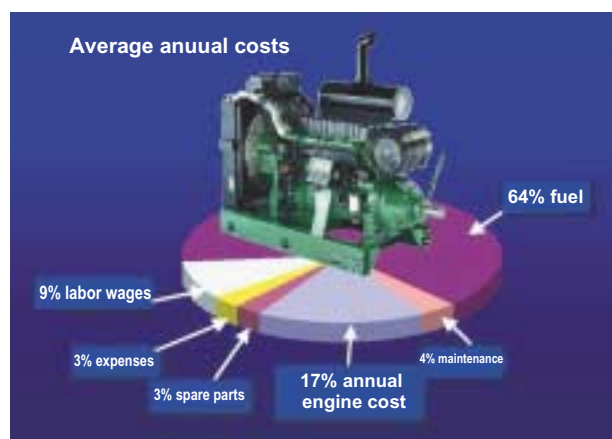
inspection costs, and here I am not emphasizing the cost of the parts that should be changed but electric parts, such as batteries, added oil (if necessary) and clutch balance, which includes taking oil samples for analysis and delivering results to the farmer. This will help in the early recognition of problems before they occur, especially in old engines, in addition to a full report about every increase. The cost differs according to the engine's model. As a good example, the contract of the new generation of Volvo 12 liters engines will cost SR 3,941.

The contract is valid for 2,000 hours of operation, which is the time the farmer requires to cultivate wheat in an area of 50 hectares. I would like to add here that this cost is 1% less than the cost a farmer can bear for the same area.

The real benefit is in fact the cost reduction. Customers, for instance,

will not be able to buy oils, filters and spare parts with the prices included in the contract. In addition to this, the labor costs are also added to the contract. The extra benefit is the increase in engine life expectancy, cost reduction of main engine maintenance, reduction of fault time, cost reduction of keeping spare parts stock, acquiring an accurate project cost accounts, and the customer satisfaction that the service is provided according to the manufacturer's recommendations, which will protect the farmer's investments and crops.

The farmer can only ask when buying a new engine, and the sales engineer will provide him with the necessary services. In fact, we are happy to announce that we have signed maintenance contracts with a number of our prominent customers, for their projects in Basita region in the Kingdom.



Necessary Conditions for Good Agriculture



Agriculture is the civilization of nations and provides national food security. Here, we have to note some useful points in the fields of agricultural and irrigation.

The vast regions of the Kingdom differ according to the type of climate, soil, water sources and water-containing underground strata. Some regions are regarded as the Kingdom's breadbasket, for instance Basita and Bereen. Basita region is good for all agricultural crops and fruit-bearing trees. Cereal production, especially wheat, is regarded economically suitable when production elements are available, e.g. water, soil and climate. Fodder cultivation is successful at Bereen, whilst equatorial fruits and other cereal crops such as sorghum and millet in the southwestern region. Al Ahsa is regarded as an excellent region for the production of dates.

The Kingdom was a witness to a tremendous development in irrigation and agricultural techniques. Old and traditional methods of submersion, troughs and waterwheels have been abandoned for modern irrigation with center pivot irrigation systems, so as to increase irrigation efficiency from 5% to more than 80%. In addition to production increase and the improvement of crop type, the best results in irrigation efficiency and coordination are achieved by the developed irrigation system. Different pipe diameters, which help reduce pressure, power consumed, load on engine and outlets and close down-going pipes, pressure regulators, different speeds of electric engines installed on push cars for complete control in speed system, sprinklers that suit all crops, wind speed and soil type, are observed. A polyethylene-lined pipe system is available, which will help solve hot and corrosive water problem and ensure the flow of water through pipes over years. But before going for agriculture, I think it would be good to take note of the following steps:

- Well drilling: It is pertinent to note that random well drilling has a negative effect on well production. From my own personal experience, I see that Basita region has not experienced a reduction or decrease in water level for the third year consecutively. But the bad execution of wells has rendered their production bad. For instance, the incomplete enveloping of wells or enveloping for a

depth of 60 to 70 meters has partially led, after operation, to the filling up of the well and the lower feeding region with earth, which shortened the actual length of well. This is the reason behind the weak production of water even if additional pipes are lowered into the well. Therefore, wells should be re-excavated.

- Analysis of soil and water: In order to determine the necessary nutrient elements, fertilizers, and crop type to be cultivated - a problem encountered by most farmers as a result of not contacting specialized bodies e.g. companies, establishments and experts, for instructions.
 - To prepare soil by plowing, overturning and exposing it to the sun.
- Stone collection: This helps minimize equipment maintenance used in sowing, agriculture, harvest and easy service.
- Seed selection from trusted sources. They must be free of impurities, bizarre seeds and plants and the selection of a suitable rate of sowing.
- Cultivation in the exact time.
- Control and fertilization operations during cultivation periods.
- Harvesting - here I would emphasize the necessity of washing and sterilizing harvesters to limit the spread of epidemics and bizarre weed seeds from one site to another.
- Storing crops in the model silos that allow ventilation and protect against rains and insects.
- Necessity of forming cooperative societies to help solve marketing, transporting, cooling and storing problems.
- Diversification of agriculture according to the market needs and benefits of the agricultural land.

Here, I would like to stress the importance of maintenance of agricultural equipment, according to the manufacturing company's instructions. Every farmer can acquire them from the importing company to guarantee a longer life for the equipment, reduce maintenance costs and expenditure on spare parts.