

“The truth is like a lion let it loose and it will defend itself”

Anonymous



Reimagine. Redefine. Realize.

## “THE OPPORTUNITIES AND CHALLENGES WITHIN REFINING SECTOR OF PAKISTAN”

By: Shabbir Hussain/Rabia Ahmad Malik – Refinery Sales

The refining sector of Pakistan is dominated by five major players, which are Byco, Attock Refinery Limited, PARCO, National Refinery Limited and Pakistan Refinery Limited, they constitute a total domestic refining installed capacity on average of 19.36 million tons per annum. Cumulative refining utilization of the local refining sector has been recorded at 62.4% during 2014-2015. Their maximum capacities are mentioned below, as per barrels per day.

Refinery	Maximum Capacity (bpd) (approximate)	
ARL	40,000	
PRL	50,000	
NRL	65,000	
PARCO	100,000	
Byco	ORC I	ORC II
	30,000	120,000

It can be seen from the graph, domestic demand far exceed local supply due to which the industry heavily rely on imports to cater to the growing needs of the market.

### Challenges

#### Introduction of 92 RON Premium Motor Gasoline in Pakistan

The ECC has recently approved the introduction of 92 research octane number – 92 RON – Premium Motor Gasoline in Pakistan which serves as both a challenge and an opportunity for the refining sector of the country. At present, all refineries are producing and supplying 87 RON premium which has been almost discarded by the global market. 92 Ron is considered to be a cleaner and more efficient fuel which takes environmental impact into consideration due to lower carbon emissions. Keeping in view the lower prices in the international market, it is the high time for switching over from current 87 RON to 92RON.

The upgraded version will cause an increase in the price of petrol by

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## ED's NOTE

Refining sector in Pakistan embraces ample opportunities as well as significant challenges, Shabir Hussain and Rabia Ahmad in the lead article "The Opportunities and Challenges within the Refining Sector of Pakistan" eloquently elaborated the issues. The challenges highlighted are as the introduction of 92 RON premium motor gasoline, under utilization of refining capacity, obsolete infrastructure, law and order as well as government policies. Whereas the opportunities elaborated are as capacity utilization and expansion, government support to the sector and infrastructure development.

Article "Vespidation Pakistan" carried out in the last edition of the Blend was highly appreciated by the readers, as it was not only written well but was also full of useful and interesting information. Keeping in view the appreciation and the interest of the readers another article by Kashif Bashir has been included this edition titled "Vespidation Pakistan 2016". The article is informative and may help you plan your next visit to northern areas in future.

Blend is also carrying a writeup by Hassan Rizvi titled "Rust is not a Crime". Byco's marketing team has taken up an initiative to arrange training sessions on the fundamental concepts of lubricants, fuels and quality control, which covers petroleum product fundamentals, lubricant fundamentals, Byco lubricants portfolio, refine fuel fundamentals and environmental health safety at works and at retail outlets.

The article highlights the significance of lubrication and lubricity as well as the answer to the frequently asked questions. I am sure this information will be useful in handling your automobiles in future.

A pictorial story of the Independence Day celebration by team Byco's at the head office and the refining complex is the main feature of this edition. The affection, commitment and brotherhood are the essence of this feature as well as depicting the Quaid's vision of faith, unity and discipline.

We all know 14th August is a day of devotion, commitment and promise for the people breathing and praying independently all the way from Karachi to Khyber, Dadu to Gilgit, and Islamabad to Chaman, to thank Almighty Allah for this sacred home land and recall the heroes – men, women, young and old, for losing their today for our better tomorrow.

An article by Asif Khan on "The impact of Physical Surrounds on the Employees", briefly explains how important is the physical surrounds in order to increase the productive of the employees.

Informative piece on Congo Virus, interesting facts and the company announcement is also part of this issue.

Lastly on behalf of the team Blend, I would like to wish you all a very happy Eid ul Adha.

**Imran Ghaznavi**

### **"THE OPPORTUNITIES AND CHALLENGES WITHIN REFINING SECTOR OF PAKISTAN"**

approximately Rs. 2.75; however, this will be covered through better mileage. Currently, automobiles are designed to run at 92 RON or higher grade, which is why the refining sector has been presented with this opportunity to upgrade their infrastructure to move forward in the industry.

Domestic refineries are not capable of producing 92 RON petrol because of outdated technology and infrastructure, it requires substantial investments for upgradation; this poses a challenge for them to move towards the sale of a higher grade. PRL and ARL recently commissioned its new Modular Isomerization Plant which converts low value Naphtha into 87 RON, whereas Byco has already installed an Isomerization Plant, having a designed capacity of 12,500 barrels per day. This was to allow for increased petroleum production which would have resulted in import substitution for the grade which would have resulted in significant savings in the country's foreign exchange. However, due to certain government policies, which led to the change in policy for the production of 92 RON premiums, refineries are suffering from lack of infrastructure development and ability to effectively utilize their capacities for greater production.

However, marketing companies, refineries and the government have agreed to introduce 92 RON as main grade fuel. This can be done by the production of 87 RON with side import of 97 RON which will be blended by refineries and oil marketing companies to produce 92 RON, in greater quantities, as compared to the production and import of the previous grade, which in turn presents an opportunity within the industry to increase its production volumes as a whole.

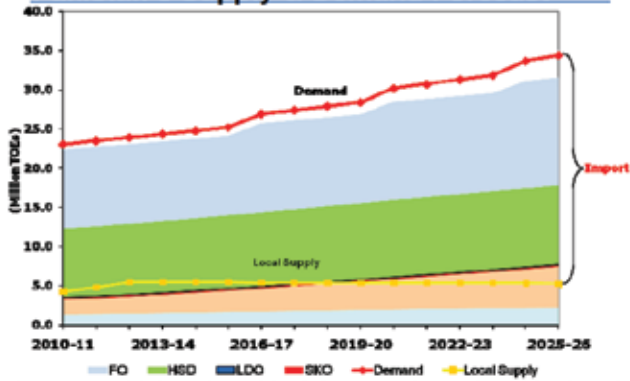
The decision and implementation of higher grade gasoline places Byco refinery with an

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## Pakistan's Supply & Demand Forecast



added advantage of having its own SPM. The same could be utilized for import of higher grade gasoline with the infrastructure already in place, investment would only be required for additional tankage to keep and blend gasoline.

### Underutilization of Refining Capacity

Refineries tend to underutilize their refining capacities due to which they operate at 71% of designed capacity, therefore increasing dependence on the imports of petroleum products, which affects the foreign earnings of the country negatively.

### Obsolete Infrastructure

At present, Pakistan relies on the imports of High Speed Diesel and Fuel Oil because of which, the high demand in the country causes a massive strain on the Foreign Exchange, hence the refining sector needs to work on upgrading its refining capabilities as well as capacities in order to cope with local demand and be able to save on the costs associated with importing petroleum products.

Lack of developed transportation and storage infrastructure also poses a challenge for refineries because of which they find it difficult to store large quantities of imported products at the port, which are at present, sparsely available. Government support is needed by refineries to aid towards a solution for this problem, as it would allow them to cut down on additional storage costs. Additional support and facilitation is also required by the refineries to tap into the maximum potential of renewable energy resource utilization.

At present, apart from PARCO, which operates as a hydro cracking refinery, all others are hydro skimming refineries, which means that they produce little value added products for sale in the market and hence rely heavily on their imports. The reason behind this is lack of capital for investment in upgraded infrastructure and refining capacity to produce environmental friendly and efficient fuels for domestic sale.

The Government of Pakistan planned to introduce Euro II compliant fuels in the country, which basically asks for the development of low sulfur fuels. Refineries struggle to do so primarily due to the lack of infrastructure and capital investment as well as the low margins. Due to the inconsistent government policies and frequent price changes, companies are unable to raise the relevant finances to make future investments for expansion and development.

### Inconsistent Government Policies

In 2002, the Government of Pakistan decided to deregulate the downstream petroleum sector for which it made clear that the 10-40% tariff formula has to be abandoned and in lieu of that, granted a 10% deemed duty on HSD and 5% + 1% for LDO, Kero and Jet Fuel.

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Then in 2007, the deemed duty on LDO, Kero and Jet Fuel was completely eliminated and that of HSD was reduced from 10% to 7.5% in August 2008. These sudden alterations in the pricing mechanism of refineries adversely affected their earnings.

Byco was heavily impacted by these changes because when the company first initiated its refinery in 2004, the deemed duty was still intact. In 2007 and 2008, the company not only suffered from the elimination and reduction of these duties from one refinery, but the second refinery which was implemented in 2008 did not receive any benefit due to which the cash flows and earnings of the company were greatly affected.

Product prices were initially catering to incidentals as well; so that additional costs can be passed onto consumer prices, however, even these were removed due to which refineries bear costs associated with crude imports without any recoveries.

### Law and Order

The political situation in the country also causes a major challenge for the refineries operating here because security concerns make it difficult for refineries to establish plants in areas near or at Gawadar, which is the biggest port of the country, so companies are unable to take advantage of its facilities as a result of this. The law and order as well as security situation in and around the fields of exploration areas and pipelines needs to be improved, so as to allow growth and effective development of this industry.

### Opportunities

The economy of Pakistan is moving towards betterment, since it has the potential to become the corridor of Asia's trade, energy and transportation, which poses as an opportunity for newly emerging and present refineries to establish themselves in the market, allowing the industry to reduce the gap in demand and supply for POL products.

### Capacity Utilization and Refinery Expansion

Refineries must optimize their capacity utilization facilities and expand their infrastructure in order to increase production of POL products which would allow the country to focus less on imports and be able to meet local demand through locally produced products.

### Government Support

Government of Pakistan should provide incentives with respect to the refining pricing formula, under a defined timeline, which would allow refineries to make cash flow and future plans accordingly, to improve efficiency in terms of operations and production.

The prices of petroleum products must also be deregulated so that market forces allow for greater autonomy given to refineries leading to greater market efficiency.

### Updating Present Refining Infrastructure

Environmentally friendly projects such as Hydro Desulfurization projects must be supported by the government, so that the industry works towards cleaner fuel production. At present, PARCO is the only refinery which is working in compliance with the Euro II product specifications, as introduced by the government, through its establishment of a Diesel Hydro Desulphurization (DHDS) plant at their Mid-Country Refinery. Other refineries must work towards developing similar facilities in order to produce more environmentally efficient fuels.

Plants which convert export Naphtha into MS and different chemical components can also be developed, so that more value added products can be produced domestically.

# VESPIDITION

## PAKISTAN 2016

By Kashif Bashir-Consumer Sales

Hopes to dreams and dreams to reality; all this conversion needs is a catalyst strong enough to withstand the test of time and onslaught of unfavorable circumstances. Constant – every life has a definitive purpose. Variable – the manner in which it is accomplished. Some just live while others live forever.

'Human will' coupled persistent passion, is all that one requires for turning dreams into reality.

While we were on our way back from last year's Vespdition, we were very clear that this was once in a lifetime thing that we had accomplished and were very content with what we had achieved as regards to personal development. The Vespas that we had used for Vespdition got parked away with covers over them and for all practical purposes, for us, that was it. As days passed and we shared our story on social media and miscellaneous publications, we received such an appreciative and supportive response that it got us thinking... Why Stop?

We just needed a spark to rekindle our love of riding Vintage Vespas on the Karakorum Highway and Peter S. Cooper provided just that. A New Zealand national, Peter, a sixty three year young Vespa adventure riding enthusiast showed his keen intent to ride along side us as he was awed by the picturesque sceneries he had seen through our previous year's

**Lot of tourists were already present here and all of them were amazed to see such old machines making it this far via Babusar pass.**

photographs. This actually was the culmination of our effort as our main objective while we initially conceived this unique mode of travel to the north was to highlight a positive image of Pakistan, the real Pakistan - the beautiful sceneries and the warm and hospitable people. Hence, we took a plunge; yet again.

A team of three Vespditionists including myself, a friend from Lahore – Bilal another Vespa enthusiast and Peter S. Cooper was finalized for a gruesome tour to the Northern areas of Pakistan during this summer. Granite (Grey) 1975 150 CC Vespa Sprint, Olaf (Pearl White) 1975 150 CC Vespa Sprint and Mango (Yellow) 1962 VBB150 CC were to be our steeds for this trip.

Peter landed at the Lahore airport a day after Eid on 7th July. During the next couple of days, we showed him around Lahore and he got a taste of the pure Lahori cuisine including Halwapuri, Paye, Nihari, Haleem etc. I am sure he added some inches to his waistline during this time.

The morning of 12th July saw us leaving Lahore for Abbotabad with our three Vespas packed safely in the trolley behind our Cruiser. After reaching Abbotabad we checked in to the hotel, off loaded the Vespas, our luggage, tools and spare parts, parked the cruiser and the trolley at a friend's place, fueled up the Vespas and were in bed by 11pm as we had planned an early start the next morning.

All our planning and preparation of the last three months was going to be put to test. This was the day that we had all been anxiously waiting for, the day we were to set off on an incredible journey, a journey that would re-install our self belief, a journey that would re-ignite an endless persistent urge – to continue to showcase our beautiful country and hospitable people in a unique way.

### First leg – Abbotabad to Naran

Woke up at around 5 am, it had been raining since the past night. Amidst the rain, we loaded our luggage, whilst water proofing it, on the Vespas and kicked started them to begin the first leg at around 6 am. Target was

to cover about 144 kilometers during the day and make it to Naran for night stay. Early start of the day meant low traffic and we thoroughly enjoyed the ride in light drizzle. At around 8 am after covering about 60 kilometers, we stopped for a breakfast and had a tummy full of omelets and prathas with some tea. Proceeding further towards Naran, we made quite a few stops to just enjoy the sceneries and take some snaps. We encountered many water crossing on the way and just to clarify, a vintage Vespa is a very docile machine with a mere 8 to 10 inches of ground clearance and the rear brakes hate water. So basically as soon as crossed a water crossing the rear brakes stopped working temporarily as they got wet and we had to dry them while continuing to ride. It was one awesome experience – going downhill with practically no braking power – well it's sort of fun in a demented way. Since we had heard a lot of tourists vehicles sliding and skidding of the road and falling down into the river Kunhar, we were very cautious and maintaining a leisurely pace especially as we had made it so far in good time and we were hardly 20 kilometers short of Naran. Your's truly was leading the pack, followed by Peter with Bilal holding the last post. I saw quite a gathering of people on the road all looking down towards the river Kunhar, so I just had to stop. Upon inquiry we were told that a car had skidded of the road and fallen down to river Kunhar. Indeed a jittering moment for us and called for even being more cautious. Proceeding further, the last water crossing enroute Naran was by far the deadliest, as the water flow was tremendous and it was almost a foot deep. I and Peter crossed it successfully and continued to ride on. After about 5 minutes or so when I casually looked back to check if everything was alright with Peter and Bilal, I couldn't spot Bilal, so I reduced my speed so that Bilal might catch up but it wasn't meant to be. So we pulled off and started waiting for Bilal. All the nasty thoughts came flying in, and I couldn't wait anymore. I sped back to the last water crossing and as soon as I laid my eyes on Bilal standing on the side of the road with his Mango's engine cover open, a big relief adorned me. Mango's front tyre had hit a pot hole while trying to pass the water crossing and some water had found way on to the spark plug and that was about it. After a few minutes, we tried kick starting it and that was it. Mango's engine had never sounded that sweet. We made it to main Bazaar of Naran at around 1 pm, which was pretty good timing considering we had made quite a few stops. Our hotel was situated at Lake Road, which is quite a steep patch with many a pot holes. As soon as we started moving towards it there was a huge rush of local 4x4s taking tourists for sight seeing at the Saif-ul-Malook Lake. Whilst stuck in the traffic, Granite stalled as it had drank up all the fuel and Olaf's gear cable started troubling Peter. We were carrying extra fuel, tools and spares. Bilal fueled up my Granite. We were





hardly a kilometer short of our Hotel but Olaf was in no mood to go anywhere before we fixed the gear cable. So we found a good open space and Peter started working his magic as he was the only designated mechanic in the team. A kind elderly gentleman, watching that we were about to do some repairs came to lend a hand. It took not more than 20 minutes before Olaf was back in form so we continued towards our hotel. All this process, starting from entering Naran and reaching our Hotel had eaten up two hours and quite a bit of our energy. We unpacked Vespas, had lunch and just sat in the Hotel garden which was just right by the river side and enjoyed the views. We had a great chit chat session with the hotel owners and soon it was time for dinner for which we went to the main bazaar. The Hotel staff was kind enough to arrange a drop off for us to the restaurant. Fresh trout was thoroughly enjoyed and on our way back we engaged a local 4x4 to drop us off at our Hotel which too was a unique experience especially for Peter. Meanwhile, the Hotel staff has arranged 20 liters fuel for us as per our request as owing to unprecedented in flow of tourists in this season, fuel was short. We just filled up our Vespas and called it a night as the next day was expected to be much more challenging.

#### Second leg –Naran to Chillas

We had all been looking forward to this part of the journey as it required us to pass over a high mountainous pass called Babusar pass which peaks at 13,691 feet while starting from Naran which is at a height of about 8,202 feet. Started our ride at around 6 am and we had to cover 113 kilometers. The weather was on side as although there was decent cloud cover it was dry. From Naran till Gittidas, which is a small village just before Babusar

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pass, the scenery was just spectacular. Road was in pretty good condition too. We made a few stops for taking pictures. The Vespas took us effortlessly to a small restaurant with open sitting area near Gittidas, where we had our breakfast at around 9 am. The place was decently crowded and hence fan fare followed. Quite a few people got their pictures taken with us and the Vespas which actually was a quite humbling experience. We sat there for quite some time as the views were simply breath taking – long lush green valley at the foot hill of mighty mountains. From Gittidas till peak of Babusar pass, it was a very steep incline but luckily the road was in perfect condition except for a patch of about a kilometer or so. Hence, we made it quite comfortably to the top. This was the first time we had taken our Vespas to Babusar pass and the feeling of making up there with these old machines was nothing short of ecstasy. The views from the top were absolutely incredible. After a hot cup of tea each and a million photographs, including quite a few with the tourists that had gathered around our Vespas, we re-started our journey. The descent from top was even steeper but the road was in pristine condition. Slowly and cautiously we descended. Took a few water breaks as it was getting quite warm with all the protective gear we were wearing. After one of these breaks, Olaf again refused to move a muscle, fuel was low, so we re-fueled it but it didn't even blink an eye. When the engine cover was removed, it was revealed that the electrical point connection was faulty and this was when, as per the advice of Peter, the last minute addition of plastic clip ties and electrical tape to our arsenal of spare parts, saved us a lot of trouble. Peter just used some of both these and secured the connection and we were off to Chillas. We reached Chillas at around 1 pm, checked into our Hotel and had a nice lunch. After lunch, Peter thoroughly



inspected all the three Vespas and re-secured the Olaf's electrical point. Afterwards we just lounged in the Hotel garden by the river side overseeing mountains. Got our Vespas fuel tanks filled from a nearby fuel station. Had a good shower, than diner and off to bed at around 10 p.m.

### Third leg –Chillas to Gilgit

About 50 kilometers of back breaking road from Chillas to Raikot bridge, and with this expectation, we were mentally prepared to take this portion of the day's ride very patiently as we didn't wanted our Vespas to take too much of a beating. Another early start of the day and we were off at around 6 a.m. To our pleasant surprise, from within this portion of the dreaded 50 kms a lot of patches of the road had been built so it was much better then what we had anticipated. After a couple of kilometers, Olaf stalled, it was the same point issue, to which Peter tended amicably and we took a water and photo session break as well. We made it to the Raikotbridge at around 8:30 a.m. and stopped at a restaurant for breakfast. We continued our journey with utmost excitement as we knew that beyond Raikotbridge the road was in spotless condition. Granite's gear was troubling me. Since it was bearable enough as it was just not engaging the first gear and with no steep inclines en-route we decided to continue. Unfortunately, owing to thick clouds Nanga Parbat was not visible from the view point but we made a stop at the famous "Three Ranges Meeting" point. A lot of tourists were already present here and all of them were amazed to such old machines making it this far via the Babusar pass. After a short sightseeing break, we continued towards Gilgit. Reached our Hotel at Gilgit at around 1 p.m. We had covered a total of about 135 kilometers and in good time too. Met some friends who were on their way back from an extensive tour on their 4x4s. After checking in, and offloading luggage we immediately started to rectify Olaf's and Granite's issues. Peter on spot and our valuable mechanic Nazir via phone, guided us well and myself and Bilal rectified Granite's gear issue. Had lunch, good shower and then went to the market to get some consumables like bottled water. Had a great chit chat session in the evening with local and foreign adventure travel bikers who were also staying at the same hotel. Had light diner and called it a night.

### Fourth leg –Gilgit to Hunza

We only had to cover about 95 kilometers in this leg and that too on an excellent road, so we had a relaxed start at around 9 a.m. Took a couple of water breaks and the Sun was showing all its might. Beautiful sceneries all along especially once we reached the portion from where sweet

Rakaposhi peak is visible all along the main Karakorum Highway. Peter was thoroughly enjoying the surroundings and the good road. As soon as we reached Pissan, a small village about 30 kilometers short of Hunza, the road was blocked owing to land slide. It had rained heavily during the past night and the road had been blocked since then. It wasn't much of alarm for us as we were very close to Hunza. It was a big blockage hence we had to wait for almost 3 hours before the road was cleared. During this time we simply enjoyed the views and had chit chat with other tourists stranded there. As soon as the road was cleared, we were off again, took a drinks break at one of the Rakaposhi view point. After which, as per plan, we took a detour to a place called Minapin, which basically is a small village about 25 kilometers short of Hunza. A 5 kilometers ride off the main Karakorum Highway led us to this amazing place called Diran guesthouse Minapin. We thoroughly enjoyed the complementary apricot tea and fresh apricots from the guest house's garden along with some French fries. The claim to fame of this guesthouse is that a track from this place goes to the Rakaphoshi base camp and summit as well. From there it only took us about an hour to reach our Hotel at Hunza. Checked in, cleaned up and had a light lunch. Myself and Bilal took our Vespas out to show them the Karimabad market to get some dried apricots. Came back in time to get a car and go to Duikar View point along with Peter to see the sunset. Duikar being the highest point of Hunza Valley at 9,000 feet boasts some exceptional views. Had a great diner at Eagle's Nest Hotel right at Duikar and came back to hit our beds at around 10 p.m.

### Fifth leg –Hunza to Sost

We started off at around 8 a.m. as we had to cover merely 90 kilometers in the day. This leg had a lot in store for us as we were to see quite a bit to attractions on the way. First up was the Attabad lake. We took a boat ride which lasted around half an hour and as always it was spell binding experience. With tall mountains on both sides and clear turquoise water of

**We then proceeded to another major attraction of this area – Passu Cones as known as Passu Cathedral.**





**This leg required us to ride from about 12,000 feet to 15,357 feet and back covering about 176 kilometers. It was still raining from previous night when we started our day's ride at around 6 a.m. The wind chill while riding was quite something to tackle.**

the lake, the experience is unmatched. Soon after the Lake, we rode in to a small village called Gulmit and stopped at the Marco Polo Inn for some cold drinks. The staff was very courteous and extended us the invitation to visit a museum which was being maintained nearby. They were kind enough to welcome us in to the home a local resident who showed us around his place to give us an overview of how the locals live. It was an incredible experience and a very pleasant stop. After Gulmit, as per plan, we stopped at Hussaini village. Parked our Vespas on the road side, asked for directions for the nearby newly developed tea stall and started our walk towards the famous Hussaini suspension bridge. It's quite a long rope bridge which seems quite dangerous actually but is extremely scenic and the locals use it to move to and from Hussaini village to other villages to the east of the river. It was a short 10 minute hike to the bridge and after some pictures and experiencing a couple of steps on this bridge we headed back to where our Vespas were parked. We sat at the tea stall had tea and the most incredible Dowdo soup which is an old traditional soup made of home made noodles. The views from this place while sipping tea were phenomenal. We then proceeded to another major attraction of this area – Passu Cones as known as Passu Cathedral. The ride was as comfortable as possible and the Vespa seemed to be enjoying the environment too. We made another stop at Ambassador Hotel Passu, solely because of the incredible views of Passu Cones from this location. We spent about half an hour there enjoying the magnificent views. It was almost 5 p.m. When we left Passu and clouds were thick forming up. We proceeded with a sense of urgency as we wanted to avoid rain. We had to cover about 38 kilometers from Passu to Sost. We made our last stop of the day at Boltoro glacier view point for a few snaps and proceeded further. As soon as we were crossing Khyber, another small village which is



about 15 kilometers short of Sost, we rode into heavy cross winds. The winds were so strong that our little Vespas were swaying right, left and centre. Luckily it hadn't started raining yet. After a tough 30 minutes ride, we finally made it to Sost and by this time it had started to drizzle. Never the less, we got our Vespas fueled up and then checked into the Hotel. It had been an awesome day with absolutely brilliant scenes through out our ride. We inspected our Vespas as soon as the rain stopped, cleaned up, had diner and called it a night as the next day was the most important one which was to lead us to the apex of our whole trip.

#### **Sixth leg –Sost to Khunjarab and Back**

This leg required us to ride from about 12,000 feet to 15,357 feet and back covering about 176 kilometers. It was still raining from previous night when we started our day's ride at around 6 a.m. The wind chill while riding was quite something to tackle. We had to rely totally on our mental toughness for bear the harsh and un-supportive weather. In order to cater to lack of oxygen owing to high altitude we kept munching on dried apricots that we had bought from Hunza. It took us about two hours to cover a distance of about 50 kilometers. Although we were aptly dressed, still the cold got quite un-bearable, and we had to stop at a check point. The officers stationed at the check post were kind enough to invite us inside and warm up along side the stove. Extremely appreciative of them as them also gave us some hot tea. We spent about half an hour there to just let our bodies become a bit warmer. The weather continued to be the same till we reached the Khunjarab top which took us another hour and a half. The moment we made it to the top we had forgotten all the roughness of the journey. We took atleast a million pictures and indulged in small chit chat sessions with local and Chinese tourists who actually were quite impressed when they saw such old and docile machines making it to the top. The return journey to Sost took us almost 4 hours as well. It was a day well spent; we had achieved what we had set of for.

It was not just the three of us; it took a whole team effort from our friends and peers namely, Adeel Khalid, Ahmad Butt, Bilal Ahmad Chaudhary, Salman Majid, Mian Zahir Said and Masood Alam Khan, who provided us with the much need motivation and ground support during both the planning and execution stage of this incredible journey.



# RUST IS NOT A CRIME!!!

By Syed Hasan Rizvi-Lubricant Technology & Production

If the most significant scientific discovery of gravitational force can result from a thought process instigated by an apple falling on a head, why can't we instill some basic concepts regarding Petroleum Products and Byco Lubricants through a structured series of home grown training sessions.

Rust is not a crime... doing nothing about it is. Scraping off just needs a little effort in the right direction.

Considering the need to inspire a culture of knowledge sharing within the Byco family, Lubricants team has taken an initiative of developing and initiating a series of periodic in-house trainings aimed at imparting key information regarding the fundamental concepts of Lubricants, Fuels and Quality Controls which covers Petroleum Product Fundamentals, Lubricant Fundamentals, Byco Lubricants Portfolio, Refine Fuel Fundamentals and Environmental Health Safety at works and at retail outlets.

By the Grace of Almighty Allah, the first training session of this series was held at Byco Regional Office Lahore, which was spearheaded by the Technical and Production Manager. Attendees included a cross section of Team Byco, belonging to various departments like Commercial Sales, Retail Sales, Administration, and Lubricants. The participants included members from the Faisalabad and Multan Zones as well. A total of 13 participants attended this first session.

The session touched upon Lubricants fundamentals, terminologies used, comparative analysis of Byco's and competitor grades.

Yes, I agree... science is boring, hence in order to keep the training session as crisp and as captivating as possible in order to make the participants engaged and attentive throughout the session, audio-visual aids were also used. A captivating video about the flow of lubricant with in an internal combustion engine and a spark ignition engine was also shown so as to give the participants some basic idea on the utility and working of Lubricant. Post session feedback was obtained from the participants and was reviewed in detail for gap closure.

With the support of HR colleagues, another two sessions were held at Core Skills at Support Development Centre Karachi. The participants included members from the Hyderabad & Sukkur Zones. A total of 42 participants attended these two sessions. The fourth session was held at Regional Office Islamabad. A total of 20 participants attended the session.

**Essentially, a lubricant's job is to control and minimize the sacrificial harmful effects of moving surfaces passing over one another under load and at speed.**

So far a total of 75 team members attended the training sessions and in days to come this training activity will be continued to cover maximum number of Byco team members across Pakistan.

## Significance of Lubrication and Lubricity

A lubricant is a substance introduced to reduce friction between surfaces in mutual contact, which ultimately reduces the heat generated when the surface move. The property of reducing friction is known as lubricity.

In addition to industrial applications, lubricants are used for many other purposes. Other use include

Cooking (oils and fats in use in frying pans, in baking to prevent food sticking), bio-medical applications on humans (e.g. lubricants for artificial joints), ultrasound examination, medical examinations, and the use of personal lubricants for sexual purposes.

In 2015, an estimated 70 Million tons of lubricants were consumed worldwide. Automotive applications dominate, but other industrial,

marine, and metal working applications are also big consumers of lubricants.

Essentially, a lubricant's job is to control and minimize the sacrificial harmful effects of moving surfaces passing over one another under load and at speed.

Lubricants are generally composed of a majority of base oil plus a verity of additives to impart desirable characteristics. Although generally lubricants are based on one type of base oil, mixtures of the base oils also are used to meet performance requirements.

Lubricants perform the following key functions:

- Keep moving parts apart
- Reduce friction
- Transfer heat
- Carry away contaminants & debris
- Transmit power
- Protect against wear
- Prevent corrosion
- Seal for gases
- Stop the risk of smoke and fire of objects
- Prevent rust

Lubrication plays a key role in the life expectancy of an engine. Without oil, an engine would succumb to overheating and seizing very quickly. Lubricants help mitigate this problem, and if properly monitored and maintained, can extend the life of engines.

## Quality Fuels our Excellence

Wood was one of the first fuels to be used by humans and is still the primary energy source in much of the world.

The first known use of fuel was the combustion of wood or sticks by Homo erectus near 2,000,000 (two million) years ago.

Throughout most of human history fuels derived from plants or animal fat were only used by humans. Charcoal, a wood derivative, has been used since at least 6,000 BCE for melting metals. It was only supplanted by coke, derived from coal, as European forests started to become depleted around the 18th century. Charcoal briquettes are now commonly used as a fuel for barbecue cooking.



Continued on page 11



# CELEBRATING INDEPENDENCE DAY AT BYCO

By Saiqa Basit-Freelancer

Iqbal's vision, Jinnah's struggle

World witnessed a new nation on 14th of August

Allama Muhammad Iqbal and Muhammad Ali Jinnah were the wheels of same canon, the former, one of the greatest poet; thinker and philosopher of all times envisioned a separate homeland for the Muslims of the sub-continent and the latter one of the most inspiring leaders of all times metalized this vision with his restless struggle.

The struggling Muslims of the sub-continent were suffering from all sorts of discrimination and were absolutely directionless; however these two great leaders instilled a sense of direction and made them realize the importance of separate homeland where they can live without any prejudice.

Pakistan is not a country, it is not a piece of land, it is not just a spot on the world map, it is an ideology, the ideology of 91million muslims of the sub- continent at the time of partition, six million muslims of the sub-continent laid down their lives to see the emergence of a sovereign state "Pakistan" on August 14, 1947.

14th of August is a day of devotion, commitment and promise for the people breathing and praying independently all the way from Karachi to Khyber, Dadu to Gilgit, and Islamabad to Chaman to thank Allah Almighty for this sacred land and recall the vanished heroes – men, women, young and old , for losing their today for our better tomorrow.

Team Bayco celebrate the Independence Day with emotional deviation. Byco offices were ornamented in green and white. Every

**Pakistan is not a country; it is not a piece of land, it is an ideology, an ideology of 91 million Muslims of the sub-continent at the time of partition**

**Byco join hands with every Pakistani to nurture our homeland to the new pinnacles of success and pray to the Allah Almighty for its progress and prosperity**

member united under the Flag to sing the National Anthem hand in hand orchestrating their voices with one another to revive the lesson of faith, unity and discipline, green and white in the outfits, and workplace depicted the love of all for the country and its flag.

Everyone bore flag on their chest to keep it closer to their heart and Byco offices turned out to be the source of reviving patriotism and stimulating nationalism with just a small effort.

Byco join hands with every Pakistani to nurture our homeland to new pinnacles of success and triumph and pray to Allah Almighty for progress and prosperity of our mother land.





LIFE @ BYCO





## Rust is not a crime... Doing nothing about it is... Scraping off just needs a little effort in the right direction.

Coal was first used as a fuel around 1000 BCE in China. With the energy in the form of chemical energy that could be released through combustion but the concept development of the steam engine in the United Kingdom in 1769, coal came into more common use as a power source. Coal was later used to drive ships and locomotives.

By the 19th century, gas extracted from coal was being used for street lighting in London. In the 20th and 21st centuries, the primary use of coal is to generate electricity, providing 40% of the world's electrical power supply in 2005.

Fossil fuels were rapidly adopted during the industrial revolution, because they were more concentrated and flexible than traditional energy sources, such as water power. They have become a pivotal part of our contemporary society, with most countries in the world burning fossil fuels in order to produce power.

Fuel consumption, mileage, horsepower... a lot goes into choosing the right car, and maintaining that car means you choose the right fuel.

Currently Byco has played a leading role in developing high quality fuels through our research, development, passion and commitment. We continue to drive fuel technology forward to meet the needs of our customers as per National & International Standards.

### Frequently Asked Questions

Q 1. What is the most common cause of engine consume oil?

Ans. Oil consumption depends primarily on two things: the valve guides and piston rings. If the valve guides are worn, or if there's too much space between the valve stems and guides, or if the valve guide seals are worn, cracked, missing, broken or improperly installed, the engine will suck oil down the guides and into the cylinders. The engine may still have good compression, but will use a lot of oil.

Q 2. Why people usually add oil every 1 to 2 weeks depending on how far drive or if use the AC or not?

Ans. Add oil every 1 to 2 weeks and certainly not as much as a quart. Putting too much oil into the engine is bad and can cause serious damage to the engine.

If the oil level in an engine is low, then it should be top-up, with modern cars such practice is rare. Do not expect a car to need any oil between services unless there was a problem. If losing oil regularly then need to investigate where the oil is going as may have a serious problem with the engine.

Q 3. Why should do an oil change?

Ans. Dirt builds up in the oil after a few days, new oil looks dark, but that is largely cosmetic. Old oil is not simply black colored but contains large amounts of soot as well as larger items of dirt such a metal shavings. Draining the oil completely washes out all the larger pieces of dirt from the engine - most of which can't see but would cause wear in an engine if left in.

Q 4. What could be causing the white/blue smoke from the engine?

Ans. Blue or white smoke coming from your engine usually indicates burning oil, which can be caused by:

- Overfilling the crankcase with oil Incorrect oil grades
- Inoperative crankcase breather
- Crankcase air leak
- Blown head gasket
- Worn cylinder and/or rings

Q 5. How to chose a right engine oil for vehicle?

Ans. To choose the right lubricant for vehicles, use the viscosity grade(s) recommended by the original equipment manufacturer (OEM) for the

life of the engine and especially during the engine's warranty period. Viscosity grades are primarily recommended according to the expected ambient temperatures, particularly the starting temperatures.

Q 6. What damage would gasoline do to a Diesel Engine?

Ans. Gasoline that is mistakenly poured into diesel engine can potentially damage the following parts:

- Diesel Engine Pump,
- Fuel Lines
- Injectors

Q 7. What damage would Diesel do to a Gasoline Engine?

Ans. Spark plugs won't fire & Engine won't start.

Rust is detrimental to the reliability program remember to always fight it at its root causes. Eliminate the root causes of a failure which will reduce the likelihood of that failure's occurrence. Always use right lubricants for better protection.



# THE IMPACT OF PHYSICAL SURROUNDINGS ON EMPLOYEES

By Asif Khan-SPM Port Control

Workplace plays an important role on employees' physical and psychological health. Employers who are willing to adopt an evolutionary psychological approach to organizing their workplaces may drastically improve their worker's overall physical and psychological health as well as their overall productivity. This will, in turn, decrease employer costs related to medical care, absenteeism, and lack of productivity.

Organizing and decorating our workplace and its surroundings, our priority is to store and accommodate papers, files and supplies with shelves, drawers and cabinets in a sophisticated manner. Once we have that under control, find a desk that is stocked with everything you need stored in deep drawers and a high-quality staring material gives you plenty of surface space to work with. Finally, take the time to personalize our workspace with plenty of photographs and interesting

**Office layout should serve our workflow and overall creative process. Set up crucial electronics and equipment within easy reach; computer should be positioned in ergonomics way so there is no glare on monitor and stress on your body parts while sitting & working.**

knickknacks.

Office layout should serve our workflow and overall creative process. Set up crucial electronics and equipment within easy reach; computer should be positioned in ergonomics way so there is no glare on monitor and stress on your body parts while sitting & working. Lamps & lights should be placed strategically around the entire room so that there is as enough light is available where required (proper lighting is crucial for avoiding eye strain).

Our work area should also be ergonomically sound. Given that we will spend countless hours in our desk chair, be sure to consider its overall function. It's important to select a sturdy desk that can contain all your work documents in one place, chair should have a comfortable cushion, lumbar support and the ability to swivel and roll so we can easily reach items instead of straining for them. Also have adjustable arm rests that allow for our shoulders to stay relaxed and elbows bent at 90 degrees. As for our keyboard, we want the "B" key be directly centered in front of us.

The best way to store our papers is by investing in a filing cabinet, built-ins are the best options. Built-in shelves are an elegant way to store our files and documents. To give your work area a personalized touch, bring in framed photographs and must-have accessories, like pencil cups, paper trays and holders, try to find bright, vibrant patterns to add a pop of color or even novelty pieces that will make you smile every time you look at them. Keep track of key tasks with a bulletin board, chalkboard or whiteboard; they're great for reminders and can also be used to hang documents & drawings.

When looking for office decorating ideas, always think in terms of inspiration; your work area should be functional but also reflective of the things that motivate you.

**To give your work area a personalized touch, bring in framed photographs and must-have accessories, like pencil cups, paper trays and holders, try to find bright, vibrant patterns to add a pop of color or even novelty pieces that will make you smile every time you look at them.**





# PAKISTAN



@byco\_pakistan

# ZINDABAD



Byco



Byco Pakistan



# RECENT OUT BREAK OF CONGO VIRUS

By Ali Shan Kazmi- Freelancer

Crimean-Congo Hemorrhagic Fever (CCHF) is a viral disease that spreads through tick bite. It was first described in Crimea in 1944 and was called Crimean Hemorrhagic Fever. It was later also described in Congo. The disease is more common in Africa, Asia, East Europe and the Middle East. A recent outbreak has been reported in Pakistan. Crushing of infected tick could also result in infection. Infection may rarely occur if people breathe in the virus passed out in the infected animal's excreta. Thus, people who work in close contact with livestock such as those working in agriculture, slaughter houses and veterinary hospitals are at a higher risk of acquiring the disease.

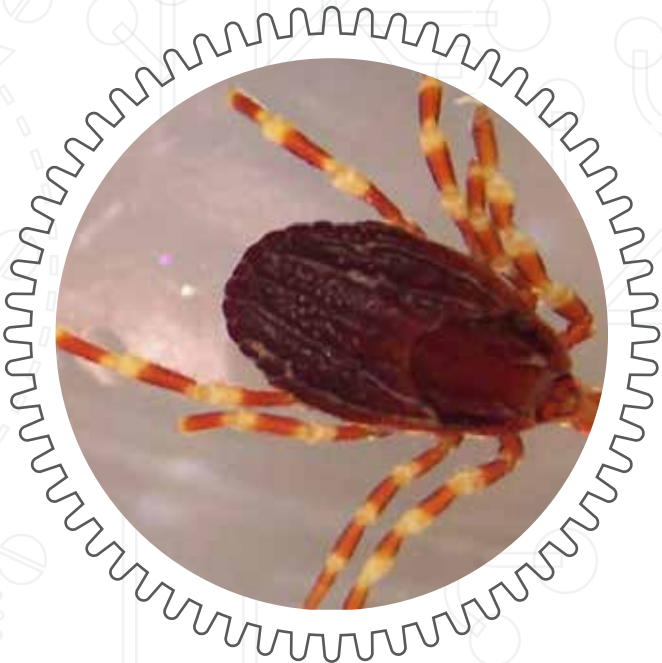
Once a human is affected, the infection spreads to other people if they come in contact with the patient's infected blood or body fluids.

Infection could also spread in hospitals during injections and surgical procedures. Hospital staff that treat patients with CCHF are at a higher risk for developing the infection.

Symptoms vary person to person but this is what you can expect: Usually, flu-like symptoms appear first, which may end in a week's time. In nearly 75% of cases, signs of hemorrhagic fever appear in the first week if not treated properly. This means emotional confusion, aggression, mood swings, fever, red eyes, flushed face, joint pain, nosebleeds, vomiting and black stools. The liver gets swollen which causes pain in the upper abdomen. This can be followed by kidney failure, breathing problems, low blood pressure, rapid heart rate and eventually a shock (a serious case of poor blood circulation). In the second week, the condition may start improving, more likely if you seek treatment.

Adequate precautions should be taken to avoid being infected in epidemics. People exposed to domestic animals or those undergoing activities like hiking should wear protective gear to avoid tick bites.

Hospital staff should also take adequate precautions while treating patients with the disease.



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Ref:

[https://en.wikipedia.org/wiki/Crimean%E2%80%93Congo\\_hemorrhagic\\_fever](https://en.wikipedia.org/wiki/Crimean%E2%80%93Congo_hemorrhagic_fever)

# COMPANY ANNOUNCEMENT

## BYCO ANNOUNCES PROFIT OF RS 1.4 BILLION IN FY16

Karachi, September 06th 2016: Byco Petroleum Pakistan Limited declared profit after tax of Rs.1.4 billion for the year ended June 2016. The company showed significant improvement which came primarily on the back of better inventory management and increased sales volume.

The company, which has a refinery, petroleum marketing arm and oil-import terminal, further penetrated in the market by increasing its sales volume by 27% in current year. This is the fourth consecutive year where sales volume of the company increased significantly thereby showing consistency in company's operations.

The company has been investing and optimizing network of its retail outlets and in current year, the marketing arm of the company sold 19% more products than the last year. The company earned EPS of Rs. 1.40 compared to Rs. 0.07 last year, according to the results released on Tuesday.

The spokesman of the Byco further added that apart from operating the refinery, the company also imported large volume of petroleum products at its own floating jetty (the Single Point Mooring) which helped in increasing the turnover and added profitability.

The official further added that the SPM proved to be a game changer for the company as it helped in quick import of crude oil and products in large volumes. SPM provided great flexibility in terms of vessel berthing and unberthing with virtually no waiting time and bringing in larger vessels compared to the other ports of the country.

The company has filed a petition with the High Court for merger with its wholly owned subsidiary and the parent company in a bid to integrate different parts of its petroleum supply chain.

## INTERESTING FACTS

- A cockroach will live for weeks without its head before it starves to death
- The average person laughs 10 times a day
- You're born with 300 bones, but by the time you become an adult, you only have 206
- The six official languages of the United Nations are: English, French, Arabic, Chinese, Russian and Spanish
- Coca-Cola would be green if colouring weren't added to it
- Honey is the only food that does not spoil. Honey found in the tombs of Egyptian pharaohs has been tasted by archaeologists and found edible
- Most dust particles in your house are made from dead skin
- Right handed people live, on average, nine years longer than left-handed people
- If you try to suppress a sneeze, you can rupture a blood vessel in your head or neck and die
- People say "Bless you" when you sneeze because when you sneeze, your heart stops for a milli-second

### Editorial Column

**Imran Ghaznavi**  
Editor-in-Chief

#### Contributors

**Kashif Bashir**

**Shabbir Hussain/Rabia Ahmad Malik**

**Syed Hasan Rizvi**

**Saiqa Basit**

**Asif Khan**

**Ali Shan Kazmi**

**DO  
YOU  
KNOW**