In a significant breakthrough, L&T's Construction & Mining Equipment Business Unit has bagged a prestigious order from M/s. Hindustan Zinc Limited, a Vedanta Group Company, for supply of 17 Nos of Komatsu-make 240 Ton payload capacity Electric Dump Trucks - Model 830E-AC. This model will be the largest-ever dump truck to make its entry into India and shall herald the beginning of a new era of mega mining activity in the country. In addition to these machines, L&T has received orders for a fleet of large-size supporting equipment such as Wheel Loaders, Wheel Dozers, Track Dozers and Motor Graders. The total value of the order is Rs. 364 Crore.

The equipment will be deployed for expansion of Rampura-Agucha Mines of Hindustan Zinc Limited in Rajasthan. The expansion will augment the existing capacity from 5.0 million TPA to 6.0 million TPA of mined ore and total rock handling from about 35 million TPA to 95 million TPA. Rampura-Agucha is the biggest open-cast non-coal mines in India and also the deepest. The Dump Trucks will be utilised to bring the blasted material from a depth of 210 meters.

These Dump Trucks will be supplied from Komatsu’s Plant at Peoria, Illinois, United States. L&T’s Construction & Mining Equipment Business Unit will assemble and commission the equipment and also provide after-sales product support in the form of a Full Maintenance Contract spread over a period of 5 years. Delivery of the equipment is expected to be completed in a phased manner by the end of this calendar year.
Degaul Avenue in the steel town of Durgapur wore a festive look on 2nd April 2009. The occasion was the inauguration of Phase-II Operations of Durgapur Service Centre of L&T’s Construction & Mining Equipment Business Unit. The Service Centre with its new imposing building was all decked up in floral finery and colourful festoons. Distinguished guests, esteemed customers and senior executives from Komatsu Ltd., Japan, Komatsu India Pvt Ltd., L&T-Komatsu Limited and L&T were given a traditional welcome on their arrival.

At the function held in the new bay, the Phase-II was inaugurated by Mr. Yoshinori Komamura, Member of the Board and President, Construction & Mining Equipment Marketing Division, Komatsu Ltd., Japan. Mr. S. Chakraborty, Director (Technical), Eastern Coalfields Limited and Mr. R. Sinha, Director (Technical), Bharat Coking Coal Limited were the guests of honour.

Earlier in the day, Mr. Tapas Kumar Lahiri, Chairman-cum-Managing Director, Bharat Coking Coal Limited, visited the Service Centre and viewed the facilities. Important customers from the public sector who participated in the event included Mr. A.N. Sahay, Chief Engineer (Excv) and Mr. G.V. Rao, Chief General Manager (Excv), BCCL, Dhanbad; Mr. A.K. Virmani, Mr. S. Raghavan, Senior Vice-President, Industrial Products & Machinery, L&T and Mr. S.K. Mittra, Executive Vice-President, Construction & Mining Equipment Business Unit, L&T, participated in the programme.
Executive Director (Works) and Mr. J. Singh, General Manager (Mech), SAIL-ISIP, Burnpur; Mr. A.K. Sinha, General Manager (Materials) and Mr. B.B. Singh, Dy. General Manager (Materials), SAIL-RMD, Kolkata.

The private sector was represented by Mr. H.K. Kar, General Manager (Mines), Hindalco; Mr. Narayan Sharma, Head (Maintenance), Tata Steel Ltd, Naomundi; Mr. Manoj Agarwalla, Director, Dhansar Engineering Company Pvt. Ltd., Dhanbad, Mr. Deepak Chakraborty, Director, Calcutta Industrial Supply Corpn, Durgapur; Mr. Subhra Gupta, Director, A.M. Enterprises, Haldia; Mr. Sunil Rungta, Director, Rungta Projects Limited, Ranchi; Mr. Maruti Maheswari, Executive Director, Maheshwari Brothers Limited, Kolkata; Mr. N.K. Sarkar, Director (Technical), Godavari Commodities Limited, Durgapur; Mr. Vinit Agarwal, Director, BKB Transport Pvt. Ltd., Dhanbad; Mr. Sanjeev Singh, Director, Rabin Singha Heavy Earthmovers Pvt. Ltd., Kolkata.

L&T’s Durgapur Service Centre, which now has a total built-up area of 4750 sq.m, is a highly specialized facility that mainly caters to the customers in the eastern sector. It houses spacious modular bays and comprehensive facilities to handle large jobs and major repairs of construction and mining machines. Its range of activities include complete overhauling of equipment, rehabilitation of worn-out components, repair and overhaul of engines, reconditioning of hydraulic components, undercarriage, transmissions, final drives, torque converters and structures.

Durgapur Service Centre was initially commissioned in the year 2000. With the inauguration of Phase-II, which has state-of-the-art machinery; testing facilities for engines, transmissions, hydraulic components and skilled manpower; L&T has reiterated its commitment to the customers to keep their fleet of machines in excellent working condition and achieve high uptime. L&T is also taking up value-added services from this Service Centre, which include full maintenance contracts, repair contracts, site support agreements, customized services and recon programmes which give the users guaranteed availability and ensures optimum utilization of equipment.

The establishment of this key repair facility from L&T in Durgapur is a big advantage to the customers, especially in the East, who can look forward to rejuvenating their old machines with a new lease of life and seek comprehensive and all-encompassing service solutions from a world-class set-up at their doorsteps.
The blue sea and the docks had fascinated Mr. Naresh Bulchandani ever since he was a small boy. As he grew up to become a graduate in the port city of Gandhidham, he became aware of the enormous developments taking place in the port sector and the vistas of opportunities it had to offer. He chose to move in a different path, notwithstanding his family’s interests in the entertainment business. The bustling Kandla Port gave Mr. Bulchandani a springboard for his own venture and later, the Mundra Port gave his activities a big push.

Today, Mr. Bulchandani is Director of M/s. Balaji Heavy Lifters Pvt. Ltd. as well as of M/s. Aditya Marine Limited, both operating from Gandhidham with strong interests in material-handling and stevedoring activities respectively at Mundra Port, the most modernized port located on the West Coast of India. He started off in 1996 with forklifts and cranes for handling bulk cargo like fertilizer and sulphur. With increased port-handling activities, he gradually expanded the fleet with purchase of excavators, loaders and 20 ton tippers. He made his foray at Mundra Port in 2002 starting with coal handling of 1 million MT and now boasts of handling 6.5 million MT annually. He has plans for the next target of 9 million MT very soon.

“The highly mechanized handling system at Mundra Port is the most advanced. It has enabled us develop our capabilities and reach higher benchmarks,” says Mr. Bulchandani. He has all praise for the Adani Group which is promoting Mundra Port as the best port in the private sector with world-class facilities and high-scale automation.

“As one of the main contractors of Mundra Port, we have been handling close to 17,000 MT materials per vessel which includes commodities and minerals”, says Mr. Bulchandani. They have deployed the equipment round the clock in the port for handling steam coal, imported from Indonesia and South America and for further dispatch by railway rakes for use in the power plants. They have also handled close to 7 million MT in the Special Economic Zone attached to Mundra Port, the only one of its kind in the country.

M/s Balaji Heavy Lifters Pvt. Ltd. has on rolls about 600 people including professionals who are in close contact with the job-sites to monitor equipment productivity. They are also focused on the employees’ growth and providing them with good compensation and handsome benefits. Their resolve in employee welfare is aptly reflected in the procurement of equipment fitted with AC cabins, which are deployed in the port area to keep the blazing heat experienced in the summers, at bay.

The company owns a combination of L&T-Komatsu PC130/PC200/PC300 Hydraulic Excavators. “We have an excellent record of equipment productivity and each of our machines log 5000 hours annually,” reveals Mr. Raju Ramnani, Manager (Maintenance), who is Mr. Bulchandani’s trusted lieutenant. “We take up all maintenance practices on timely basis and hardly get...
into trouble”, adds Mr. Ramnani who has been working with the company for 11 years now, after exiting his own business. He is a keen planner and replenishes stock of spare parts, much in advance.

As part of tax planning, Mr. Bulchandani has diversified into wind mill industry through a power-purchase agreement with the State Governments of Tamil Nadu, Kerala and Gujarat contributing substantially on 20 yrs lease period. Mr. Naresh Bulchandani has new plans up his sleeve like a foray into contract mining, which promises a big boost to his revenues and putting up a multiplex in Gandhidham, the heartbeat of Kutch district.

**Alpa Infrastructure – Highway to Success**

Mr. Rasik Gondaliya, Managing Director, M/s. Alpa Infrastructure Pvt. Ltd., has tastefully done up his office in the teeming city of Rajkot. True to his name, Mr. Rasik Gondaliya has a fine sense of aesthetics, which he has reflected in the decor of his chamber with pleasing interiors and shades.

It all began in 1983 when Mr. Gondaliya as a fresh chemistry graduate did not want to join his father who was an agriculturist growing cotton, groundnut, and wheat. Instead, Mr. Gondaliya endeavoured to start his own venture in summer vacation with the help of his friends. Between 1984 and 1987, he encountered a dull period when he did not see much business coming. He, however, was not deterred.

“In 1988, there was a surge of projects in roads, canals and rural development. We knew infrastructure was coming. I bought a few machines like loader backhoe and compactors as I wanted to concentrate on road projects. There was no looking back”, says Mr. Gondaliya, who moved from strength to strength to consolidate his business.

His initial work involved re-carpeting and maintenance of existing roads as well as state highways. He subsequently moved over to construction of commercial buildings and apartments. “I purchased L&T-Komatsu PC200-6 Hydraulic...
Excavator as I had to resort to digging deep foundation”, he reveals.

He had since taken up many assignments in road works, the prominent being the 42-km stretch of six-laning of Baroda-Bharuch Highway through L&T ECC, where L&T-Komatsu PC200-6 machine was extensively deployed. “PC200-6 Hydraulic Excavator is a badiya machine. It has the power of many machines,” he says excitedly. Happy with its performance, he purchased two more machines. He also owns a Komatsu Motor Grader, which has been supplementing work in his road projects.

Today, Mr. Gondaliya is a registered AA-class contractor with Gujarat’s Irrigation Department. He has handled VENU-II scheme under Rajkot Division which involves working on multiple canals. He also hires machines from the local market when he runs up against tough deadlines and completion schedules. He is presently working on several road projects, the important ones being four-laning of Halol-Shamlajee (171 km), Rajkot-Jamnagar-Wadinar(130 km), Ahmedabad- Maliya(186 km), in which the quarrying has already started.

Most of the time, Mr. Gondaliya is busy with site visits for sorting out technical hitches and coordination with local panchayats for road mapping and in his office for interacting with vendors and scouting for new opportunities. He is extremely happy that Gujarat is on a roll when it comes to speedy implementation of infrastructure projects and feels that there is a scope for more players with expressways and port development happening in a big way.

Besides this, Mr. Gondaliya has undertaken mining for extracting “black metal” (13 lakh ton) at Rajpardi, Halvad and Vjarkee sites for L&T ECC. There may be a day when Mr. Gondaliya’s son would join this business. But right now, his son is busy in UK, doing a course in automobile engineering.

**Varsani Construction Co. – Mining Wealth**

In the quaint and dusty town of Bhuj, the district headquarters of Kutch, L&T has a star customer Mr. Murji Vishran Varsani who heads M/s. Varsani Construction Company. As an earthwork contractor, he has executed assignments in desilting, canal works, land reclamation, road works and overburden removal with equal gusto. Incidentally, Mr. Varsani doubles up as the elected Panchayat President of Mankuwa village, which adds up a great deal to his responsibility.

Mr. Varsani says the village is over 400 years old and his father had established the business of operating buses from Bhuj to Ahmedabad and then branched out to coal loading through trucks and centering work in building construction. However, Mr. Varsani moved to a different trajectory.

He started off in 1996 by hiring loaders and tractors for pond clearance and dam works. In 2000, he acquired an excavator with which he began earthwork near the Indo-Pak border abutting Rann of Kutch. Among other jobs he has executed relates to 5 km canal works of Sardar Sarovar Dam near Vadodara and cleaning of power house in Godhra.

In June 2005, he got an opportunity to venture into lignite mining at Gujarat Mineral Development Corporation’s Mata-na-madh mines which involved...
overburden removal of 3 lakh cu.m. every month. “It was then I first bought L&T-Komatsu PC200-6 Hydraulic Excavator to kickstart my operations. I expanded my fleet soon and have been working tirelessly,” says Mr. Varsani. He has since deployed L&T-Komatsu PC300 & PC450 Hydraulic Excavators and Komatsu D65 & D41 Dozers to now mine 9 lakh cu.m. every month.

Not content with the hometurf, Mr. Varsani chose to move over to the neighbouring Chattisgarh in July 2007 to bolster revenues. He won an order from South Eastern Coalfields Limited for overburden removal in Korba Project where he had to deploy a combination of Komatsu PC400 and PC650 Hydraulic Excavators alongwith 35 Ton Rear Dumpers to work on the hard strata. He maintains a close contact with the project engineers and technicians, who have been trained extensively in mining and equipment maintenance.

Mr. Varsani’s role as the Village Sarpanch at Mankuwa revolves around beefing up the amenities for the 17,000-strong population of the hamlet. He works out a road map with the help of executive teams on road development, drainage cleaning and facilitating drinking water. He is instrumental in starting a filter-based drinking water plant for the village with investment from his school-mate who is a big industrialist in Kenya, thus setting up an example in public-private partnership! He is also working towards developing vegetable mandi for the traders and opening up of new bank branches to encourage local people into investments. He has even constructed a beautiful Swaminarayan Mandir there.

At GMDC mines, Mr. Varsani has established site infrastructure with dormitory and mess facility to take care of the employees working there. He has employees
mainly hailing from Bihar and Chattisgarh States and has trained them adequately in handling equipment and looking after its mandatory maintenance. The employees are given boots and helmets on periodical basis and at times they work on three-shift basis.

Son Mr. Rajesh Varsani is a robust gentleman who finds joy in working with these mining machines. He has been giving a helping hand to Varsani Constructions and independently handling some of the areas especially to do with mining operations. He has already put in nearly 4 yrs experience. “As blasting is not allowed, we use rock breaker application which helps us loosen the overburden. The work is tough and often we encounter big rocks which tend to affect machine operation and productivity,” says Rajesh. He is assisted by Mr. Nitin, who is close to the Varsanis, and has a rich and shared experience with regard to deployment of the machines in the mines.

**Komatsu Supports Special Olympics**

For the fourth successive year, Komatsu America Corp. proudly helped plunge over 20,000 rubber ducks into the Chicago River in the annual “Windy City Rubber Ducky Derby” to benefit the Special Olympics held at Illinois, USA. Recently, a Komatsu’s HM300-2 30-ton Articulated Dump Truck dumped the ducks into the river from the Columbus Drive Bridge, signalling the start of the race. Each year for the Rubber Ducky Derby, ducks are adopted by sponsors and dumped into the river to “race” downriver. Prizes are awarded for the first ducks to cross the finish line with all event proceeds going to the Illinois Special Olympics.

Komatsu has been part of this Special Olympics event since its inception. For several months leading up to the duck derby, employees of Komatsu held a variety of fundraising events to support the event and the company then matched those funds. The Special Olympics focuses on improving the lives of individuals 8 years of age and older with intellectual disabilities through year-round training and athletic competition in a variety of Olympic-type sports.

(Source: KAC website)
Magtron Gets 1000th PC71

L&T’s Construction & Mining Equipment Business Unit crossed a new milestone with the delivery of the 1000th L&T-Komatsu PC71 Hydraulic Excavator at Bangalore. At a function held at L&T-Komatsu Limited on 11th May 2009, the symbolic key of the machine was handed over to Mr. S.A. Mallikarjun, Partner, M/s Magtron Earthmovers, Ranebennur by Mr. S. R. Subramanian, Chief Executive, L&T-Komatsu Limited and a plaque by Mr. S.K. Mittra, Executive Vice-President, CMB, L&T.

M/s. Magtron Earthmovers is a fleet owner of PC71 Hydraulic Excavators. The Company already owns 6 Nos. of L&T-Komatsu PC71 and 1 No. of L&T-Komatsu PC200-6 Hydraulic Excavators. The first PC71 excavator supplied to this customer in 2004 has logged over 10,700 hours so far. The other machines supplied between 2005 and 2008 have logged between 2700 and 8600 hours.

1001th PC71 Machine Enters East

The ‘little giant’ L&T-Komatsu PC71 Hydraulic Excavator crossed a new milestone in the East with the handing over of 1001th machine to M/s. Gouranga Lal Chatterjee Construction Pvt Ltd. recently in Kolkata. Coinciding with the event, Mr. G. L. Chatterjee and his son Mr. Indranil Chatterjee were felicitated. The function was attended by the L&T team along with Mr. N.C. Ghosh and Mr. Supriya Basu of M/s. Tripti Engineering Services Private Limited. Speaking on the occasion, Mr. Chatterjee recalled his long association with L&T, which had transformed from a mere business relationship to being partners in progress.

M/s. G.L. Chatterjee Construction patronised L&T in early nineties with the purchase of the first L&T 90-3 machine for road construction. The customer, over the years, has been working on small and medium projects with L&T-CASE loader backhoes and compactors. The firm has now secured the prestigious contract of Belgharia expressway and has since inducted PC71 Hydraulic Excavator as the obvious choice.
L&T presents Komatsu’s PC1250-8R Hydraulic Excavator which combines manufacturing expertise and technological innovation to deliver unmatched productivity and exceptional value. L&T launched Komatsu PC1250-7 Hydraulic Excavator in India during 2003, and the latest version -- Komatsu PC1250-8R -- during December 2008. Over 50 such machines are deployed in mining projects in Coal, Lignite, Iron Ore, Cement and other mining sectors in India.

The new PC1250-8R which is fitted with the powerful turbo-charged and air-to-air cooled Komatsu SAAD170E engine delivers 672HP at 1800 rpm. Environment friendly features like low-fuel consumption, four-level selectable economy mode, low noise etc makes it superior in its class. Other main features of PC1250-8R are:

**Outstanding work performance and productivity**

- **Optimum usage of Power**: Komatsu SAAD170E engine actualizes high-power to low fuel consumption with the optimum fuel injection by electronic heavy duty HPCR (High Pressure Common Rail) fuel injection system. The electronic control system sets the rotational speed of the cooling fan according to the coolant and hydraulic oil temperature; effectively uses the engine output to prevent wasteful fuel consumption; and reduces noise during low-speed fan rotation. To meet working conditions, the operator can set the Eco Mode to upto four levels so that production requirement is achieved at lowest possible fuel consumption.

- **Two Mode Setting for Boom**: Smooth Mode provides easy operation for gathering blasted rock and scraping operations. Power Mode can be switched on when digging force is needed for more effective excavation.

- **Shockless Boom Control**: This shockless valve automatically reduces the amount of vibration present when operating the boom. Operator fatigue is reduced (which can improve safety and productivity), and spillage caused by vibration is minimized.

- **Twin Swing Motor System** provides excellent swing performance, even on slopes.

- **Working Mode Selection**: The PC1250-8R Hydraulic Excavator is equipped with two working modes – Power and Economy Modes. Each mode is designed to match engine speed, pump flow, and system pressure to the current application, giving the operator the flexibility to match equipment performance to the job on hand.

- **Heavy Lift Mode** gives the operator 10 percent more lifting force on the boom when needed for handling rock or heavy lifting applications.

- **Swing Priority Setting** allows the operator to use the same easy motion for 180 degree loading as 90 degree loading operations. By altering the oil flow, this setting allows the user to select either the boom or swing as the priority for increased production.

**Excellent Reliability and Durability**

- **Strengthened and wear-resistant bucket (Heavy duty version)**: The bucket for specific use in quarry is impact and wear resistant, providing high performance and long life. Combined with adoption of long life XS teeth, durability of the bucket is drastically enhanced. The XS tooth is of a unique shape with superior digging performance, long-term high sharpness, great penetration performance, hammerless, safe and easy tooth replacement.

- **Arm with Rock Protector** prevents dent on the plate while handling rock.

- **Guards and protectors for undercarriage**: The
undercarriage is strengthened to provide excellent reliability and durability when working on rocky ground or rock. Sturdy guard shields the travel motors and piping against damage from rocks. Track roller guard (full length) is available as an option.

- Clean and reliable hydraulic circuit
- Two fuel main-filters for improved fuel reliability: The reliability of the fuel systems is improved because the fuel main filters installed remove contamination and sludge contained in fuel.
- High pressure In-line Filtration: The machine has the most extensive filtration system available, providing in-line filters as standard equipment. An in-line filter in the outlet port of each main hydraulic pump reduces failures caused by contamination.
- O-ring Face Seals: The hydraulic hose seal method has been changed from a conventional taper seal to an O-ring seal. This provides improved sealing performance during operation.
- Highly Reliable Electronic Devices: Exclusively designed electronic devices such as Controllers, Sensors, Connectors, Heat Resistant Wiring and Circuit Breakers have passed severe testing.
- Boom Foot Hoses are arranged under the boom foot, improving hose life and safety.

Working Environment – Operator Comfort
- Large Comfortable Cab provides an exceptionally comfortable operating environment. The large cab enables full flat reclining of the seat back with headrest.
- Low noise and vibration with cab damper mounting: Noise level is remarkably reduced, not only the engine noise but also swing and hydraulic relief noise. The new, improved cab damper mount system incorporates longer strokes. Its mounting combined with a strengthened left and right side deck aids vibration reduction at the operator’s seat.
- Large capacity air conditioner (optional): The air conditioner has a bi-level control function. This improved air flow function keeps the inside of the cab comfortable throughout the year.
- See through sky-light for better upward visibility
- Low noise cab
- Multi-function user friendly color monitor: Superb recognition colour monitor provides exceptionally clear and easy-to-read information in all lighting conditions.
- Washable cab floor mat has a gently inclined surface and drainage holes to facilitate runoff.

Easy Maintenance
- Easy cleaning of cooling unit: The hydraulically driven fan can be reversed to facilitate cleaning of the cooling unit.
- Single-level maintenance
- Easy Checking and Maintenance: Inspection and maintenance points are grouped to facilitate easy engine and hydraulic component checks.
- Reduced Maintenance Costs: High performance filters are used in the hydraulic circuit and engine. Longer hydraulic oil, hydraulic oil filter, engine oil and engine oil filter element replacement intervals significantly reduce maintenance costs.
- EMMS (Equipment Management Monitoring System): This self-diagnostic system carries out abnormality checking function; maintains history on replacements carried out and warns when service is due and stores data on trouble to serve as references for future trouble shooting.
- VHMS (Vehicle Health Monitoring System) controller monitors the health conditions of major components and enables remote analysis of the machine and its operation. This contributes to reduced repair costs and to maintaining maximum availability.
- Anti-slip Plates: Spiked plates on working surfaces provide anti-slip performance.
- Large Handrail, Step and Catwalk provide safe and easy access to the engine and hydraulic equipment.

Improved Safety Features
- Operator Safety Design- Strengthened fully pressed cab
- Global Safety Design- meets USA, EU and Japan standards
- Neutral start with PPC lock solenoid valve
- Step Light with Timer provides light for about one minute to allow the operator to get off the machine safely.
- Horn Interconnected with Warning Light (optional) gives visual and audible notice of the excavator’s operation when activated.

Inter-changeability of Bucket – Buckets of PC1250-7 and PC1250-8R are interchangeable.
Machine Operation

Reduce Idling

The easiest way to decrease your carbon footprint is to reduce engine idling which, in many cases, studies have shown to be unnecessary (see Idling Myths & Facts below). This can reduce particulate matter (PM), nitrogen oxides (NOx), carbon monoxide (CO), and hydrocarbon (HC) emissions. You will reduce fuel consumption, reduce required maintenance, and increase engine life. And, when the machine is turned off, reduce noise levels.

Idling is the most inefficient operating mode for the engine. Diesel engines achieve optimum performance at a reasonably high RPM. An idling engine does not generate enough heat to achieve proper combustion.

Deposits can build on the pistons and cylinder walls, contaminating the oil and creating friction that can wear out engine components faster. Reducing wear on the engine will increase component life and reduce the need for oil changes and engine rebuilds, thereby lowering operating costs.

Most new machines have some type of idling caution feature in the display or more advanced ways to monitor idle/production time as part of the machine monitoring system.

Excessive idling is not only bad for the environment and your engine, it’s bad for your wallet as well. Less idling also means fewer operating hours for your machine and higher resale value.

Idling Myths & Facts

Myth: Diesel engines need to idle at least 5 minutes in the morning, especially on cold days.

Fact: Most manufacturers currently recommend that diesel engines run for not more than 3 minutes before operating. Diesel fuel gelling problems have been resolved with winter blends which withstand colder temperatures better. Check your operator’s manual for information about the machine.

Myth: Idling is good for your engine.

Fact: An idling engine is not operating at its peak temperature; fuel combustion is incomplete. Fuel residue can condense on cylinder walls where it can contaminate oil and damage engine components increasing fuel consumption by 4% to 5%. Excessive idling can also allow the water to condense in the exhaust which can lead to corrosion.

Myth: Shutting off and restarting is hard on the engine and uses more fuel.

Fact: Frequent restarting has little impact on engine components and the savings which result from reduced idling, greatly offset any additional costs.

General Operating Procedures

Good operating skills are essential to green performance and it is important to keep your machine in good condition through recommended inspection and maintenance to ensure that it can run as efficiently as possible.

- Choose the right machine and attachment to match the job requirements
- Match your equipment to optimize loads and number of cycles
- Stage equipment to minimize travel distance
- Avoid loading your equipment beyond recommended ratings
- Reduce your travel speed and limit rapid acceleration and deceleration
- Use “Economy” mode when “Power” mode is not needed. Most machines will have some type of a reduced power mode feature or a way to monitor fuel efficiency.
- If the worksite requires building a new road, limit the grade to 10%.

(Source: Komatsu Green Brochure)