

Chevron's popular LoadRite approach is now an available option for Chevron's Series 10 aluminum car carriers. Once again, a "simple solution" for loading sport imports, exotic cars, and vehicles with long overhang.





With the beginning of a New Year, many of us once again have made New Year's resolutions, maybe to quit smoking or my favorite, to lose weight. I would like to propose a resolution to you to set aside some time for training in 2006. It may include attending a class program such as those conducted by WreckMaster, a state association, an auto club, or from one of many well-known individual instructors such as Wes Wilburn, Joe Sroga or our own Tom Luciano. If you can't get away to attend a class, there are videos and manuals available from TRAA or WreckMaster and there are always quality articles in the towing publications.

Tom Luciano shared a letter he received from a well-respected, experienced manager at a large towing company. He complimented Tom on his last article, "Simple Hookup Engineering," in the winter issue of *On Call 24/7*. The manager wrote that the article was going to be mandatory reading for his drivers. Many things we all have learned throughout our years of experience are sometimes hard to convey in simple words or are sometimes forgotten. So letters like this let us know we're on track with the information we're providing. Feedback of any type makes all the work of publishing On *Call 24/7* worthwhile because we know it has value for our readers.

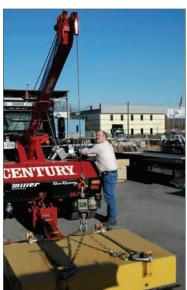
At Miller Industries, we are committed to the industry and to training. Watch for Tom, and other Miller Industries people, to provide classes and training throughout the year with many associations and during several tow shows across the country. We will also continue to provide you with educational articles and tips in *On Call 24/7*. We hope our efforts help you to achieve your training goals in 2006. As always, we welcome your suggestions and comments. Thanks for reading.

Randy Olson, Editor On Call 24/7

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On The Cover

Tom Luciano, Northeast District Manager and Training Instructor for Miller Industries, calculates line pulls using an electronic pull meter and counterweight on a Century 602. Miller Industries products undergo a series of different test methods during the design and manufacturing



process (see Joe Brown's article, page 22). Tests begin with Miller Industries' engineers using Pro-Engineer 3-D Design software and Finite Element Analysis and conclude with actual hands-on procedures such as pull meters, strain gauge and field tests. Tom finds being involved in some of the testing provides information that is beneficial to share during many of his training classes, especially when focusing on how load factors are placed on equipment during towing and recovery operations.

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On Call 24/7 is published quarterly by Miller Industries Towing Equipment Inc., 8503 Hilltop Drive, Ooltewah, TN 37363. Phone: (423) 238-4171, Fax: (423) 238-5371, www.millerind.com. Copyright ©2006 Miller Industries Towing Equipment Inc. All rights reserved. No part of this publication may be reproduced without written permission from Miller Industries Towing Equipment Inc.

Inside View

NINETY YEARS OF SERVICE



By Jeff Badgley President and Co-CEO

Ninety years ago, in the small community of Chattanooga, Tennessee, Ernest Holmes built a piece of equipment to help motorists in need. Around the turn of the century, in the automobile's infancy, an estimated 8,000 cars were on the nation's 144 miles of paved road. That's very hard to believe as our nation struggles today with over 200 million vehicles on who knows how many miles of paved road.

You have to wonder what Ernest, an interior designer by trade, was thinking that day he helped his friend retrieve his stuck vehicle. Obviously he was a man of foresight, realizing that as the automotive industry grew, so would the need for the ability to serve that industry. Yet he was also a businessman, patenting his invention and marketing it to automotive garages and other businesses serving the rapidly growing automobile market.

That drive – to help and serve others – still exists in most of the tow operators I know today. We read and hear the goodwill stories of towing operators who go above and beyond to help a stranded motorist, open a locked door for a worried parent and transport cars for local high school DUI programs so students can see first-hand the tragedies of drunk driving. We all know a tow operator who has donated a tow to a less fortunate person. We are an industry of men and women who care – about our customers and about our fellow towers.





We, at Miller, will find ways throughout this year to celebrate Holmes' 90th anniversary. Our hopes are that you will get an opportunity to join us in these celebrations. More importantly, we hope the industry we serve finds a way to promote its successes to the general public and gain the recognition and respect it deserves. The industry's 90 years of service is an integral part of the automotive industry's history. And the services we provide will continue to play a vital role in the transportation industry – no matter what the future holds.

Ernest Holmes would be proud of today's towing industry. And his legacy, the men and women who make up Miller Industries, are proud of the industry too. We're proud to provide you with the most reliable, best-built towing equipment available. We're proud to support state towing associations' education programs and continually bring you training through our well-known and respected employees. We're proud to visit with you at trade shows, and invite you to our "homes" – one of our four U.S. manufacturing facilities. And we're especially proud to support the International Towing and Recovery Hall of Fame and Museum, a tribute to the industry's history.





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The Very First Time

The Holmes twin boom mechanical wreckers were known for their ability to split the booms and tie off one winch to a dead man and/or use the side outrigger leg as a stabilizer while the other line could do a side pull recovery. That original concept has been further enhanced in the SP-850 XP through increased holding power via front and rear hydraulic jacks and the ability to use up to four winches in your recovery rigging.

By John Hawkins III Vice President of Sales, Heavy-Duty Products

It was the summer of 1977 when my father gathered a group of towers from across the state of Florida to meet for the first Professional Wrecker Operators of Florida Tow Show to be held in Orlando. Both my father and I had attended several well-executed Massachusetts tow shows and we knew if we gathered these professional tow operators from around the state, there had to be a recovery scenario that challenged their well-honed abilities. That challenge (go figure) was an old and retired cement mixer.

On the way to the location, while under tow, the mixer ended up on its side, in a drainage ditch, on a narrow two-lane road off of Old Winter Garden Highway. For "The Very First Time," I watched a Holmes 750 do the recovery off the side. I was literally hooked on its side pull capability. But unknown to us at the time, we were witnessing the end of an era. Mechanical wreckers were on their way out in the late 70s and hydraulics were moving in. Hydraulics would change our industry forever. However, it took several

decades for these great hydraulic machines to gain all of the side pull capabilities that the mechanical wreckers had offered our forefathers since that first split twin boom wrecker built by Ernest Holmes in 1916.

A decade later. I traveled to the United Kingdom for the Association of Vehicle Recovery Operators Trade Show (Europe's largest tow show at the time). I was in awe of our fellow tow operators from across the pond and their unique equipment (hidden winches, tie backs, outriggers, jack legs, etc.) all tucked away within the vehicle that made it a task master for about any recovery job it encountered. After the show, I drove to Scotland and later ended up just north of London, having navigated hundreds of miles of narrow back country roads, through many remote areas. These roads were the heart of England's transportation system.

I learned quickly that there was no such thing as parking a wrecker crossways in the road because the axles would be off the often-shoulderless roads. In a country so rich in history, I found that the towing industry faced



When working off the rear of the unit, the operator has the ability to use all four of the powerful winches in his recovery operation. In this demonstration of a reverse roll using a cement mixer, the two winch lines from the XP are run through snatch blocks attached to the end of the recovery boom while the two main winches on the Century 9055 serve as catch lines.

unique, and to say the least, difficult daily recovery challenges.

It was at that very show that a prominent tow operator from the United Kingdom suggested to Michael Boniface, an engineer with a well-respected towing equipment manufacturer in Europe, a design for the new hydraulic units that would offer comparable capabilities as the original Holmes mechanical wreckers. Specifically the tow operator wanted the ability to pull from the side with some type of stabilizing outrigger leg and a winch. It took several years before the first "Sidewinder" was introduced, but when it appeared, the unit recaptured the lost ability to stabilize the wrecker during an aggressive side pull.

In the early 80s, when the first big hydraulic recovery units started appearing in the states, we were all amazed by the reach and means to extend or retract a boom under load. The Century 1030 pioneered this concept, but within two years it was replaced by the Century 1040 offering two new and innovative features: diagonally-opposed rear jacks (replacing the straight up-and-down jacks first offered) and diagonallyopposed front outriggers. The reason for these two features was simple: The new Century 1040's jacks and front outrigger system increased the side pull stability but alas, still not to the degree of the Holmes mechanical wreckers.

In the mid 90s, Boniface Engineering was acquired by Miller Industries and with that came the collaborative efforts among the industry leaders in both the North American and European towing equipment manufacturers. This marriage would bring together the best in recovery and towing designs and techniques of the two different worlds. Our first challenge was to bring the "Sidewinder" to the states and match it with the Century 5030, the most popular heavy-duty integrated towing and recovery unit ever produced. The name "Sidewinder" was already trademarked in the United States, so after much deliberation, the unit was renamed the SP 850 (SP for Side Pull and 850 after the famous Holmes 850, which without a doubt was the most powerful factory production mechanical wrecker ever.) The unit was unveiled at the 1997 PWOF trade show and was sold to Scotty's Carriage Works



The SP-850 XP allows the operator to perform recoveries off the side, ideal for narrow roads or when trying to minimize lane closures. This capability is reminiscent of the older Holmes mechanical wreckers.



For a typical heavy side pull operation, the front winch line on the SP-850 XP is run though a snatch block at the casualty and then attached back at the D-ring located on the top of the jackleg. One line from the main winch on the recovery boom is run to the casualty and the opposite winch line is run down to the rear tailboard D-ring to help stabilize the boom.

The XP's winches are mounted low into the frame with the cable running through a pulley and up through a pivoting sheave head. This system, which includes an air tensioner, provides for better cable spooling while allowing repositioning of the jack leg without affecting the winch line.

See The Very First Time on Page 8



in Cameron, Missouri, and is in operation in his fleet today.

Like the first unit, the following units incorporated Boniface's design from the UK with the Century 5030, but by the next year's Florida Tow Show, the design had been totally Americanized. The unit was now available in two models, the Century 5030 and 9055, but also now had an option of four winches, two on the SP 850 and two standard winches on the recovery boom.

Five years later with nearly 50 units in operation, we addressed a total redesign of the SP 850 to increase features and benefits that you, our customers, said were important to your recovery operations. In the fall of 2004, the all-new SP 850 XP was introduced. The "XP," standing for "Extra Pull," gave the unit dual 35,000-lb. planetary winches low mounted in a new lighter-weight frame, adjustable hydraulic pivoting legs with a wider stance when pivoted out, new tie backs, and a standard toolbox configuration with more storage space.

Imagine pulling off the rear of your recovery unit with not two but four lines pulling a tractor-trailer on its side or a buried track hoe. Imagine not two but four jack legs buried down anchoring your unit for increased stability. Imagine pulling up to a fully loaded mixer with the tires facing you with no way to turn your unit crossways in the road and only having the ability to pull from the side. Or how about having two separate winch lines to work with in a side pull even without a dead man to tie off to. This is only the beginning of endless possibilities of what this unit can do in some tough recovery situations. Like a rotator, you also have the means to tow heavy vehicles such as mixers, packers, snorkel, pumper, bucket or fire trucks with increased front axle weights.

And even though it has been compared to rotators because of its capabilities to work off the side, the units are really worlds apart. In total weight the XP can be 8,000 to 10,000 lbs. lighter and at a fraction of the cost (with two more winches). Who's to say what the future may offer with the XP. We have built a number of units over the past years using both the SP and XP models mounted in front of our popular rotators for the export markets. At the recent Baltimore

tow show, the SP 850 XP was introduced with the Vulcan V-100 and is also now available with the Vulcan V-70.

What I do know is that in today's market, no one and I mean no one offers the features and the benefits of the XP for side pull recoveries. So if you are looking to add a unit to your fleet with the diverse features and benefits the XP can offer along with your choice of the proven technology of the Vulcan V-70, Vulcan V-100, Century 7035 or Century 9055 heavy-duty integrated towing and recovery units, you will be entering a family of satisfied recovery specialists. If you would like additional information, contact your local Century or Vulcan distributor or give us a call. We would also be happy to put you in contact with one of the many towing professionals who presently operate an XP and they would be glad to share their experiences.

The SP-850 XP front hydraulic legs can fold up, allowing for use of standard tool compartments with additional storage compartment space over the original European design.



The front adjustable hydraulic jack leg is equipped with a pivoting flat pad for hard packed surfaces such as asphalt or concrete and has a plunger pin that allows the pad to be locked in a spade configuration for increased holding on soft surfaces such as sand or gravel. A D-ring can be used on the top or bottom of the jack leg to attach the hook from your winch line or a snatch block.





The XP option was recently introduced on the Vulcan V-70 and V-100 and the Century 7035 and 9055.

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Building It for You

By Dan Sebastian,

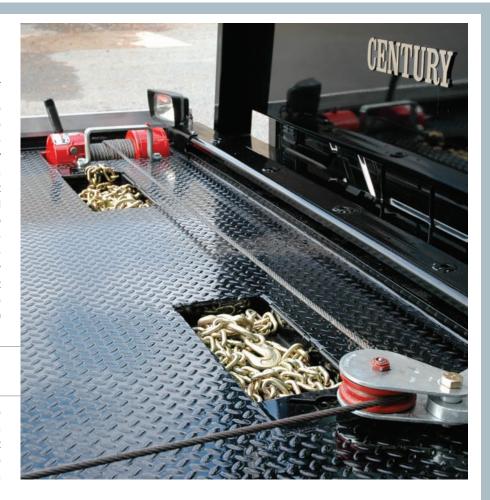
President of Miller Industries Carrier Operations and Randy Olson,

Vice President of Marketing

Miller Industries builds carriers like we were working the jobs ourselves. We constantly look at new ideas and technologies domestically and from our plants in Europe. We regularly talk with professional operators in our constant search to improve safety, operation and performance. Then we turn it all over to our engineers and say, "Make it happen." And they usually do make it happen, as evidenced by several new options and features we introduced at the recent Towman Show in Baltimore for our popular Century and Vulcan 10 Series carriers.

SIDE MOUNT WINCH OPTIONS

There has been an increase in the number of automobiles equipped with either a permanent or screw-in transport hook or eye mounted on one side at the front of the vehicle. This originated on



imports and exotics but has worked its way into the general models. With center-mounted winches, it is difficult to get a straight pull which results in the vehicle not tracking straight onto the deck or the eye or hook being bent or twisted when pulling at an angle even when using a snatch block at the front side of the carrier. After studying different options, some

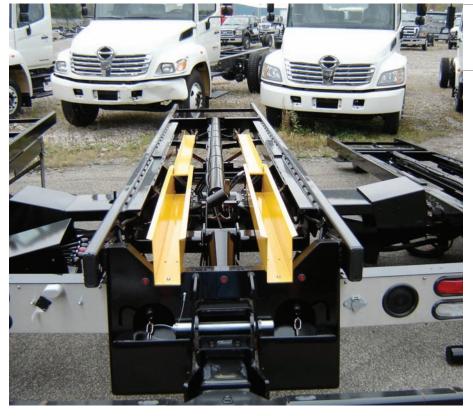
more costly and complicated than others, we introduced our side mount winch option. The carrier's winch is installed at the front of the carrier bed parallel to the side rail and the cable is run through a pulley assembly that is mounted into a slide tray at the front of the bed. By simply pulling a pin, the pulley assembly can easily slide into one of five positions and

lock to ensure a straight-line pull of the vehicle onto the carrier. Several other benefits include the easier access to the winch clutch release handle and the additional useable deck space and clearance at the front of the bed. This option is now available on all Century and Vulcan Steel 10 Series carriers equipped with a stationary cab protector.



ALUMINUM OVERLAY SIDE RAIL OPTION

Most towers choose steel decks for strength and durability when purchasing a new carrier, but we still receive a lot of comments from towers that they prefer the appearance of the polished side rail on our aluminum carrier. We went to work and developed the aluminum overlay side rail option, which incorporates a fixed polished aluminum side rail to our popular Century and Vulcan steel carriers. The narrow profile of the aluminum extrusion also provides more useable deck width between the rails making it ideal for vehicles with dual or wider tires. Roller tips and inside stake pockets are also included with this new option.



STANDARD DUAL SLIDE TRAYS SYSTEM

Now standard on all new Century and Vulcan 10 Series carriers, this feature separates the hydraulic hoses and electrical wiring that moves with the carrier deck into two separate trays. The new deeper trays reduce twisting and bending to provide longer life along with easier replacement. The hydraulic winch hoses are molded together to reduce friction and eliminate the need for additional hose sleeves. With the increased use of 21' and 22' carrier decks, we also extended the carrier sub frame by 28" to provide more strength and durability while eliminating the need for a midship support bracket.

We look forward to your continued input on our carrier lines as we strive to offer you the most innovative and reliable products to handle your tough demands.

24/7

Proof's in the Performance

POWER MEANS CONFIDENCE

John Tumino, president of Tumino's Towing in Ridgefield Park, New Jersey, has no problem making a commitment because he knows the capabilities of his operators and his towing equipment to get the job done. On a busy Friday morning in October on Route 80, a tractor-trailer with a half-load of diesel fuel overturned. The state police wanted to know how long it would take to clear the highway. With confidence in his people and equipment, John told them they would have it done in an hour and a half.

Tumino's responded with their Century 1060S rotator, Vulcan V-70 and Vulcan V-50. The 1060S and V-70 were positioned on the side of the overturned tanker and rigged to do a reverse roll. The V-50 was positioned at the front of the tractor with a line going through a snatch block down at the V-50's rear spade and then hooked up to the tractor's front axle. As the tanker



came over, the V-50 was in position to hook up to the casualty and tow it away.

"I didn't disappoint the state police with a recovery time of only one hour, just as my heavy-duty Vulcan units don't disappoint me," John said. "My operators swear by them."

OOPS THERE GOES ANOTHER ONE



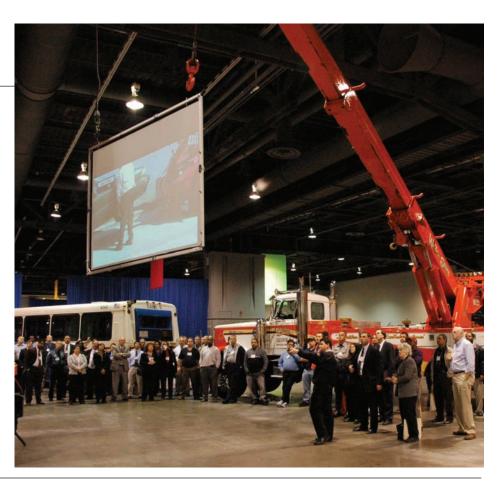
At a building construction site near the foot of Signal Mountain, Tennessee, bad went to worse when a tracked excavator weighing 130,000 lbs. sunk up to the cab and another 100,000-lb. excavator dispatched to help met the same fate. With both units now buried, it was time to call the professionals. Doug Yates Wrecker Service responded with their 9908 60-ton and 9909 70-ton Challenger rotators and proceeded to hook to the first excavator

using a pair of CAT dozers as deadmen. With the rigging complete, in no time the two powerful Challenger recovery units had both excavators back on high ground and working.

Co-owner Shannon Yates said, "We rely on our Challengers to handle the toughest recoveries, from heavy construction equipment to overturned tractor-trailers. Our customers know they can in turn depend on us to get their equipment back on the job."

Industry News

Paul Craze, Miller Industries Auto Load Specialist, and John Hawkins, Vice President of Heavy-Duty Sales, explain the operation and capabilities of towing and recovery equipment to a group of transportation and law enforcement professionals at the National Capitol Region Incident Management and Homeland Security conference in Washington, D.C. Woody Herring of Willow Springs Towing and Recovery in Fairfax, Virginia, and Ray Hodge of Highway Garage Inc. in Fredericksburg, Virginia, brought up Woody's Century 1060S rotator for display alongside other emergency response equipment — from a mobile fire command center to a helicopter. Gay Rochester of Rochester Imarc also spoke to the group during the event. Miller Industries' goal was to help traffic and law enforcement understand the capabilities professional towers have to clear an incident and keep traffic flowing. The forum also provided a great opportunity to explain the large investment in equipment and training required by towing companies, which will help the industry's efforts to gain recognition and respect for the services provided.



THERE IS NO SUBSTITUTE FOR EXPERIENCE

There is no short cut for experience when it comes to building a winch for towing and recovery. It is that experience which tells us some operators prefer worm gear winches over planetary and vice versa. That's why we build a full line of both. Take your pick. You can have a worm gear winch from 3,000 lbs. to 30,000 lbs. or a planetary gear winch from 8,000 lbs. to 50,000 lbs. It's your call. With Ramsey's work tested performance in virtually any weather or recovery situation, you get the best winch out there.

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The Cause Continues

Miller Industries thanks Rush Peterbilt, Lee Smith, International Truck, Freightliner of Chattanooga, Freightliner, Eaton, Cummins Engine, D. P. Winch, Phoenix USA, Quality Industries, BA Products and Interstate Machine for their early and generous support of the Survivor Fund.

By Randy Olson

It was exciting to see the positive reaction at the Baltimore tow show to the "Wall of the Fallen Memorial" which is being donated by the Miller Family Foundation to the International Towing and Recovery Hall of Fame and Museum and to the towing industry. I was also overwhelmed by the support behind the start of the Survivor Fund, which will offer financial support to the families that have lost a loved one in a tragic accident while assisting the motoring public. Having grown up in a towing business, this all hits very close to home. My father was hit twice at the scene of accidents in his towing career and I was hit once by a drunken driver, which totalled the tow truck and landed me in physical therapy for over a year with back and neck injuries. I considered myself lucky to only have been injured, which happens to so many of us in this industry, and not killed. Due to my injuries, my physician recommended that I find another line of work, so I shifted my dream of taking over the family business and was fortunate enough to find a place in this great industry.



Miller Industries thanks all of those individuals at the Balitimore show who purchased over 2,000 wrist bands. The Survivor Fund wrist bands are just a small way of remembering our heroes and offering some financial help to their loved ones. We are looking forward to seeing each of you wear your Survivor Fund wrist bands for the unveiling of the Wall of the Fallen Memorial during Towfest in Chattanooga on September 9.

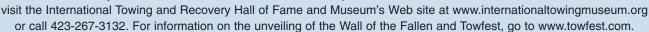
Everyday towing professionals put their lives on the line to keep traffic and commerce flowing while assisting stranded motorists. It is about time that the level of awareness of the general public is raised for the heroic efforts and dangers that towers take by putting themselves in harm's way, and that we honor

those who have made the ultimate sacrifice. The Wall of the Fallen will be a lasting place of honor and remembrance to preserve the names of those professional towers who have been killed in the line of duty. I encourage everyone involved in our industry, from suppliers to towers, to unite behind this cause.



The Survivor Fund wrist bands is one small way of helping remember those heroes and offering some financial help to their loved ones. I encourage everyone involved in our industry from suppliers to towers to unite behind this cause.

If you would like to make a contribution or purchase Survivor Fund wrist bands,





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All Chain Attachments Are Not Created Equal

By Tom Luciano

Recently I had the privilege of assisting a very experienced tower in spec'ing out his new heavy-duty unit. The question came up about what additional equipment, forks, and attachments he would need. As we went down the list, he agreed on most of the items until we came to the chain hook adapters. He commented that since we had hook end caps for the cross bar along with a pair of fork riser brackets that also had grab hooks attached, having chain hook adapters wouldn't be much more beneficial. I explained to him that different chain attachments vary, just like lifting forks, and some work better than others for specific uses. For further explanation on how to use chain hook adapters, I took the tower to a nearby trucking company.

Ironically, the trucking company had a tractor equipped with a product pump that was just brought in by another towing service. A taillight was torn off the back of a Mack tractor as a result of the tow. (See Photo 1). This is because the wrong tool or attachment was used. Some of you



Lifting the rear axle using forks can cause problems by having to raise the vehicle to an excessive height.

may be quick to figure out that the angle iron used by all of us at some time or another caused the taillight on the right to break. This can be avoided by removing

the taillights, but let's face it, operators find that this is not always easy. Bolts can be rusty, hard to remove, difficult to reach and time-consuming.

An operator may try to fork the rear axle, but with the offset rear differential it is often a challenge to position a fork between the spring and housing on the right side. Another potential problem when you fork the rear axle and raise the unit is the rear drive is lifted but the front rear axle lowers because of the center trunion pivot. With this hookup, you have to lift the unit excessively high or you risk the possibility of squaring off the front drive tires if they hit the ground. Or, you can always take additional time to chain up the front axle. In many cases this cannot be accomplished because a subframe that is used on many dump trucks, garbage packers, bucket trucks or van bodies with pull-out ramps makes it difficult to get chains over the top of the frame. And you need to be cautious of height clearances in the case of lifting the unit too high, especially with box vans. An operator may try to use the chain end caps that come standard with your unit, but the problem still exists in this example with the interference from the pump jackshaft that protrudes past the frame rail.

So we now go back to the angle iron to support the hookup chains and we are back to the taillight issues (Photo 2). The next possibility may be the use of the fork riser bracket (Photo 3). This is a good possibility because it will allow you to position the risers on the ends of the frame rails and also gives clearance to the jackshaft. Notice what I did to eliminate the possibility of the risers sliding while in tow. Due to backing up the tow truck and not being perfectly centered on the tractor, the risers were not evenly spaced on the crossbar. To take up space, I turned a receiver to face upwards and placed the lock pins in the end of the crossbar. This eliminated any additional movement sideways because the riser on the right side is positioned all the way in.

Never do any tow without the lock pins in the end of the crossbar. As you are coming into a corner or making a turn, receivers can slide on the crossbar and one could possibly slide off the crossbar if the lock pin isn't in place.

See Photo 4 and the positioning of the chains around the frame. Notice that they need to come out under the





See All Chain Attachments on Page 20

frame and not around the side. In this example we are using our standard fork receivers and now installing the chain hook slide-in adapters. These are the perfect attachment when you need to space the crossbar out away from jackshafts, pintle hooks, ball hookups and safety chain D rings that are positioned on the back of many tractors, straight trucks and dump trucks. You are able to have a large flat surface on the attachment that eliminates the possibility of rotation during bumps, shock loads and turns. This also allows an operator to mate the hook adapter to the frame end as is shown in this photo or a rear tail plate as in Photo 5 which totally misses the jackshaft and the D rings found on many tractors or dump trucks.

This demonstration shows just one example of how chain hook adapters can make your job easier. You are able to slide your receivers and chain hook adapters on the crossbar, and they give you additional clearance from the face of the crossbar to the face of the hook adapter compared to the fork riser brackets, which makes the hook adapters a valuable tool for many specialty hookups.

I would like to give special thanks to Ralph Cresta, President of National Wrecker Service in Portsmouth, New Hampshire, for the use of his tow truck and time for this article. If you have any questions or comments regarding this article or suggestions for future articles, e-mail tluciano@millerind.com.





CHAIN SAFETY TIP

When using any chain-type attachments, always position the welded side of the chain link to face upwards and not in the throat of the grab hook. Just about every grab hook tries to cut the chain when force is placed on it. The welded side of the chain link is the weakest side and should not be placed in contact with the hook throat.





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You're there to help others, and the Business Class® M2 is there to help you. That's because we've designed it with you in mind. With a wheel cut of up to 55 degrees, it can maneuver with ease, getting vehicles out of the tightest of spots. It's spacious and comfortable. And with a 2,500 square-inch windshield and sloping hood for increased visibility, you'll be well equipped to handle the demands of your business and get more done. To learn more about how Freightliner Trucks can help you run smart, visit us at www.freightlinertrucks.com.





The Men Behind the Magic

Tom Luciano calculates line pulls using an electronic pull meter and counter weight on a Century 602.

By Joe Brown Director of Engineering & Quality Assurance

At Miller Industries we are focused on the future, and we believe that the future lies in innovative designs, improved quality and value-added features for our customers. We have a long history of innovation in the industry, originating with Holmes and continuing with Century, Vulcan, Challenger, Chevron and Champion. Our organization has a top-down commitment to dedicating resources to Engineering, Research and Development efforts. With over 30 people in our engineering department and an annual budget of over \$3,000,000, we continue to lead the industry and never follow. Miller Industries has three different engineering groups and they all interact to provide you with the world's finest towing equipment.

MILLER INDUSTRIES ENGINEERING DEPARTMENT

Design Team Responsible for

initial design and computer-generated assembly in virtual environment.

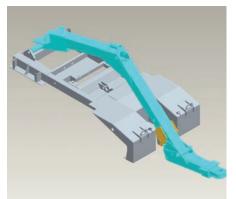
Light-duty Heavy-duty

Manufacturing Team

Responsible for completion of initial designs including the building and testing of a prototype.

Systems Team

Responsible for ensuring the resources are in place for real-world manufacturing processes.





At Miller Industries, we believe that continuous improvement and development of new designs and innovations is critical to our continued success as an Original Equipment Manufacturer.

Design Engineering Teams are divided into separate heavy- and light-duty groups that focus on new product development. Each team is led by a Senior Engineering Manager who individually has more than 30 years experience in the towing and related industries. Design engineers on each team are trained in Pro-Engineer 3-D CAD design software that allows them to design each part and assemble it in the virtual environment of the computer where fit, interference, and function can all be checked before any parts are manufactured. This software also allows us to perform Finite Element Analysis (FEA) on structures to assure they are designed properly for the inservice loads they will experience. Miller Industries has invested significant time and financial resources into the purchase of this software, the equipment to run it, and the employee training to operate it.

Manufacturing Engineering Teams take over where the design group leaves off with the completion of the initial designs. They are responsible for fixturing, process design and engineering support of the finished products. The 3-D models they create are used by our tool designers who create 3-D fixtures and tooling around them. The prototype shop, which is a part of the Manufacturing Engineering Team, builds the fixtures and produces a prototype part on each fixture. These prototypes are checked with a coordinate measuring machine and the fixture is calibrated and certified prior to release for mass production. This team also builds and tests new production units and attachments in our new live test facilities before they are released for mass production.

The **Systems Engineering Team** is responsible for creation and maintenance of bills of material, control of engineering changes, drawing and document control and manufacturing costing of the finished product. They work with the Manufacturing Engineering Team and the Quality Assurance Team to support the current product and manufacturing processes. We feel that this division of responsibilities is critical to assure that we have ongoing support for our current products while concentrating on future designs and innovations.

addition to these in-house resources, we also have long-term relationships with Mechanical Design, Industrial Design and Testing Engineering companies. We use these companies for their specialized expertise in their respective fields. Representatives from these companies, representatives of the Engineering Department at our local university, key sales and product personnel from within our company and representatives from our distributor and customer base are included in our Design Steering Committee. This group meets periodically to review the status of new designs and advise us on technology trends, materials innovations and market requirements.

Of course our most valuable resource is the professional towers who put our equipment to the test every day. That is one of many reasons we attend major trade shows, bring in tower focus groups, and encourage towers to come visit our plants. Real world experience and customer input play a major role when we consider methods for improving an existing product or creating a new product.

MEET MEMBERS OF OUR ENGINEERING TEAM



John Cullum is one of our Senior Design Engineering Managers. He has been designing towing and recovery equipment for the last 35 years. John started his career as an apprentice engineer in England, followed by an assignment as a designer engineer with the Swedish towing equipment manufacturer EKA. In the 1980s, John worked for Mack Truck in Australia prior to joining Vulcan Equipment Company in 1987. He was the chief engineer at Vulcan when Miller Industries acquired it. John designed the Vulcan 940 as his first project and has led the design of all of the current Vulcan products. John is currently involved in development of new products.



Ralph McConnell, a native of East Tennessee, started his career at Lorain Equipment as a designer of mobile cranes in 1975. He joined Century in 1983 and designed the 20 Series Century Carrier. He has since led the design effort for the entire line of Century heavy-duty integrated units and the Century and Challenger rotator models. Ralph is a Senior Design Engineering Manager and is currently working on new model development and testing.

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2007 Emissions

NEW TECHNOLOGY MAY EQUAL BIG CONCERNS FOR TRUCK OWNERS

By Dayton Shepard Vice President of Sales and Marketing Lee-Smith Inc.

The New Standards

Stringent new federal rules go into effect January 2007 that dramatically change the emissions requirements for diesel-powered vehicles. These new rules require that nitrogen oxides (NOx) and particulate matter (PM) be reduced by 90% from 2004 standards.

The Environmental Protection Agency (EPA) says NOx is one of the main ingredients involved in the formation of ground-level ozone. It contributes to the formation of acid rain, to nutrient overload, (which deteriorates water quality), and contributes to smog and global warming.

Particulate matter is a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. In diesel engines, PM is primarily comprised of ash from burned diesel fuel and oils.

Reducing NOx and PM in diesel engines to meet these new standards can only be achieved with "clean diesel," advanced combustion technologies, and post-combustion treatment.

Clean Diesel

Clean diesel is another name for ultra low sulfur (diesel) fuel. Just as the federal government eliminated lead in gasoline during the 1970s, they are requiring that refiners substantially reduce sulfur in diesel fuel. By September 1, 2006, 80% of all U. S. diesel fuel must be at or below 15 parts-per-million sulfur. In 2007, diesel engines will require ultra low sulfur fuel to reach the emissions reductions mandated by the new standards.

2007 Diesel Engines

Most diesel manufacturers started to make changes in their engine designs in the late 1990s to ready themselves for the mandated emissions changes ahead. In 2002, engine manufacturers introduced components and systems such as variable geometry turbochargers, exhaust gas



recirculation and new advanced fuel injectors. These components and systems were designed to produce efficient powerful diesel engines that also produced lowered emissions.

The 2007 (calendar year) engines continue to refine and advance these technologies. These engines are more complex due to increased variables in the fuel management system and because they require more sensors associated with the exhaust trap and filter.

The engines will produce lower, almost no emissions. But fuel economy will most likely be reduced by at least 1% to 2%. It's still not clear if oil change intervals will be negatively affected, but most assume it will. More frequent oil changes will create higher maintenance costs on 2007 units.

Traps and Filters

While new 2007 diesel engines will be "cleaner," they need help to reach the tough 2007 standards. Most engines will come with a combination particulate trap and catalytic converter. The device, let's call it a filter, looks like a large muffler. There are a few important things to understand about these filters.

These new filters are expensive. Replacement costs are estimated to be \$3,500 to \$6,000. The catalytic portion of the filter uses precious metal coatings to effect control of NOx. These filters generate a great amount of heat, and because they

are larger, they take up more space and add weight. They are also a serviceable component so they will require maintenance.

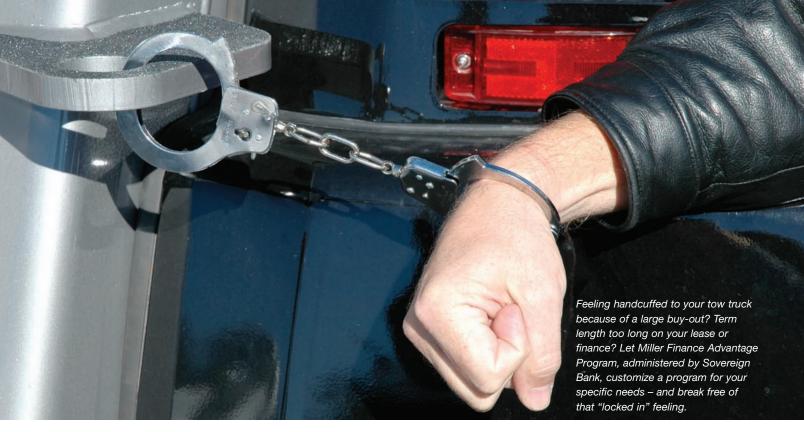
The Big Decision

All this new technology has created big concerns for truck owners. Many large fleets have decided to replace more trucks than usual in 2006 to avoid the January 2007 changes. Evaluate your own unique position and consider the following:

- Due to 2007 emissions changes, truck prices are estimated to increase \$3,000 to \$10,000 per vehicle.
- Fuel economy is almost certain to be reduced by a minimum of 1% to 2%.
 - Maintenance costs will increase.
- The big question that remains unanswered is whether the early production engines will be reliable.

This is new ground for all manufacturers. Not all are at the same stages of development and testing. Some will be ready by January 2007 and almost certainly some will not.

It's time to carefully consider your vehicle replacement schedules. Demand will be high for new units during 2006 and supplies of new truck chassis is expected to tighten. If your needs include replacing or adding new units in the next 18 to 24 months, talk to your Miller distributor today. They can explain truck and equipment options and help you decide when it will be best to schedule your next purchase.



Miller Finance Advantage is Your Advantage

By Michael Paez Senior Vice President Commercial Vehicle Market Sovereian Bank

Today's financing rates continue to be low by historical standards, but they are beginning to trend upward. Despite this trend, there are still opportunities to secure financing terms that are most favorable, particularly if you approach the loan process with a clear understanding of your lender's expectations. The same care you use in selecting your towing and recovery equipment vendor should be applied to selecting your finance relationship. A surefire way to ensure you have the best of both can be done in one easy stop through your Miller Industries distributor. He can direct you to the Miller Finance Advantage Program, administered by Sovereign Bank, which offers a wide range of products.

There are several important components of the purchase and finance process that if followed will provide real advantages to the purchaser.

1. Begin by clearly identifying the type of vehicle and body you will require for your specific needs. To help you do this, contact your local distributor who will be happy to assist you in creating your personal truck specifications. Your distributor will help choose what is right for you, provide you with the exact cost of the equipment and a written buyer's order, which details all specifications and component pricing.

2. If you have a truck to trade in, it is important to know the real value of this vehicle before you hit the showroom floor, because your trade will impact the true cost of the new unit. Every unit has a true market or wholesale value, which helps determine your Actual Cash Value, or ACV. It is also very important to know your payoff amount for a trade-in. The difference between the value of the trade-in and the payoff due is your equity. If the payoff is greater than the trade-in's value, however, there will be a shortfall, which dealers and finance people refer to as being "upside down." If you find yourself in the "upside down" situation, you will need to cover this shortfall in your new purchase.

3. If you are in the market for a used vehicle, you must consider increased wear and tear maintenance, non-warranty service, the potential cost of downtime, and perhaps shorter life cycle for such equipment. Get the total picture and then make comparisons. Factor any additional costs of the purchase to obtain a realistic operating cost for the unit in some measurable increment: hourly, daily or at a min-

imum, weekly. Include fixed costs such as your payment, insurance and maintenance as well as driver costs and fuel cost. With the full understanding of the type of equipment you need, your analysis of the costs involved and your determination of the anticipated useful life of the vehicle, you are now ready to move into the financing arena.

You should be able to specify the bank or finance company of your choosing. The choice of this relationship is second only to your choice of equipment. You will want to work with an experienced lender who understands the nuances of the towing and recovery business, and one who will look for solutions tailored to your individual needs. If you are in the shopping mode, you may want to consider obtaining a prequalification approval much the same as you would when looking for a new home. This will give you a clear picture of what your borrowing capacity is and the relative terms and conditions to expect. Depending on your overall financing needs, you may even want to consider establishing a line of credit with your lender for your equipment purchases.

The loan process begins with the "necessary evil" of completing a full credit application, which all lenders require in some form, with small variations in the



I started my towing business in 1999 and tried several different finance companies before I started to work with Sovereign Bank through my local Miller distributor. The paperwork is quick and easy and I know I am dealing with someone who is knowledgeable about both the towing business and the equipment. I don't think there is a better option available for a towing company today.

William Needle President Assured Collision Inc.

information needed. It is important that you provide the lender a complete and honest representation of your business information.

- Supply your complete legal business name in full as it appears on your state and federal filings along with your tax ID number. It is truly amazing the number of credit applicants who do not know or remember their legal business name or know what type of entity it is, whether it is a corporation, partnership, LLC or sole-proprietorship.
- Provide personal information for each of the business owners. Complete disclosure is critical to a lender's evaluation, and all owners who have a financial interest or shareholding interest in the business should provide their credit information and expect to be called upon as a guarantor.

Lenders have different levels of information disclosure required based upon the dollar amount of your financing request. Under the terms of the Miller Finance Advantage program, qualified applicants can obtain financing up to \$150,000 on an application only. If your finance needs exceed that amount, full financial disclosure is required which translates to tax returns for both the business and the guarantors. This seemingly routine requirement necessitates that you start record keeping early. The use of a basic bookkeeping software package will keep you organized and help you establish the discipline to manage your affairs and to allow your financial advisor to complete and file your returns on a timely basis. Secondly, good record keeping will allow you to negotiate better terms with lenders, as you are clearly able to demonstrate the real performance of your business.

 Once your lender has completed the review of your application, they will render a credit decision. You can often get this decision within a day if you have provided a complete application. The lender representative should provide a finance quote that is detailed and in writing, and it should spell out what is due up front, monthly and at the end of the term. Of particular concern should be the end of term "buy back" or "residual." Most contractors today opt for fully amortizing their loans in order to own the equipment at the end of the term. Many low-rate deals quote only the rate during the term of the contract and don't take into consideration the residual pavment due at the end, which can be substantially higher than the value of the vehicle at the end of the term. If the deal seems too good to be true, there are probably some questions you need to ask

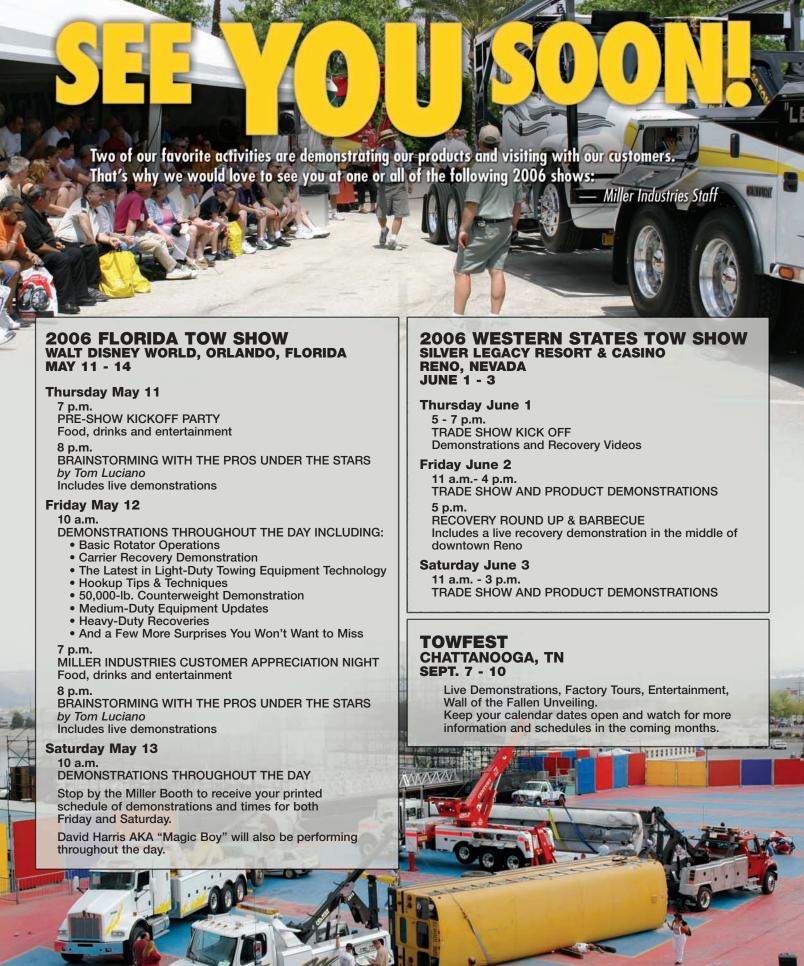
before you proceed. Check the "hidden" costs of a contract as well, such as costs associated with extra mileage or onerous early termination fees. Before you sign, ensure the document matches what, how much and how long you agreed to finance.

A buyer who has done his homework and is clear on the total cost of his new investment will truly get the best price and terms. The choice to buy is an important one and so is the choice of finance partner. Your Miller distributor and your Sovereign Bank representative are always available to assist you in every facet of the purchase, from selecting the right equipment to customizing the finance package that is right for you.

IMPORTANT TIPS

- To avoid being in an "upside down" position with any equipment purchase and financing, it is important to match the realistic useful life of the equipment to the finance contract term. The term of your financing should take into account your usage of your equipment. Actual equipment lives differ for everyone, and the higher the utilization (hours and days per week on the road) of the equipment, the shorter the finance term should be.
- To get the most favorable financing available for you, it is critical to guard your credit profile and manage your financial performance. In this era of rapid information, identity theft is increasing. Check your credit report regularly, and be sure to request that any inaccurate or outdated information is cleared up before you set out to make any major purchase. If you do have derogatory history, it is important to disclose this to your lender up front along with a full explanation. Full and honest disclosure is important to

- a lender's evaluation of your specific situation and may allow for some discretion on the part of the lender.
- There are great payoffs to keeping good financial records. They will tell you if you are really operating at a profit, detail your actual costs, and give you a good overview of your profit level. It is not uncommon to find contractors performing work and billing for their services only to be paid 30, 60 or even 90 days or more after the fact or not be paid at all. Every day you are not paid you have provided financing for your customer at no cost to them and at a real cost to your business in terms of lost opportunity for the cash and a direct impact on your cash flow. Knowing your real cost per call, per mile, and per hour of operation directly correlates to the rates you charge for each type of service. New equipment can pay off in tangible ways if you know the true cost of operating it and you price your service accordingly.



New Products

ROUND 'EM UP WITH CHEVRON'S OUTLAW

Chevron's all new OUTLAW series is ideally suited for high volume towing, impound and repossession work. The boom and hydraulic auto load system allow the tower to operate the unit from the safety and convenience of the cab, exiting only to install safety chains, straps and tow lights. Parallel-parked vehicles can easily be picked up at a 90-degree angle on crowded city streets or parking lots.

The OUTLAW features all new high-impact-resistant composite modular body sides with large, spacious tool compartments for ample storage. For more information on the OUTLAW, call Chevron at 800-886-6400 or visit your local Chevron distributor.



CHEVRON'S SLIDEWINDER OFFERS GREATER FLEXIBILITY

As more vehicles are equipped with screw-in eyehook attachments located at one side, getting a straight-line pull from the winch cable to the disabled vehicle has become more difficult, even with the use of a snatch block. Chevron's SlideWinder option allows you to maintain a straight-line pull onto your carrier deck. The SlideWinder planetary winch is mounted on one end of a horizontal slide track with a vertically-mounted pulley on the opposite end of the track to promote even spooling of the cable onto the winch drum. A sliding roller guide is moved along the slide track by a double-acting bidirectional hydraulic cylinder that is ported through one rod end to eliminate moving hydraulic hoses. The free spool winch release handle is easily accessible and can be ordered with air-free spool on air-equipped trucks. The SlideWinder assembly bolts to the front of your Chevron carrier deck and can be used with a deck-mounted or stationary cab protector. For more information, contact Chevron at 800-886-6400 or visit your local Chevron distributor.



A brushed aluminum tubular light pylon is now standard on Century's Midnight Express and Vulcan's Intruder series of self-loaders equipped with a high-impact and corrosion-resistant composite body. The new pylon, available in 33-inch or with a spacer kit for 36-inch applications, provides better rear visibility, includes three center LED ID lights built in and has a sleeker appearance. A similar design of the aluminum tubular light pylon is also available on Century's 60-ton rotators.







Miller Rocks Baltimore Again!

Baltimore's cold weather didn't slow a record crowd of over 1,300 towers from packing the Hard Rock Cafe and adjoining Hard Rock Party Barge for what has become the number one-attended event at the American Towman Show. Towers were treated to Miller Industries legendary hospitality that included some delicious food, great music, a little bit of magic and the chance to socialize with Miller factory representatives and fellow towers.

If you attended the American Towman Show in Baltimore this year, "Miller Rocks" was the place to be Friday evening for some fun, laughter and camaraderie. Saturday and Sunday the venue changed to the show floor where attendees spilled out of the Miller Industries booth into the aisles to listen to presentations and view the finest towing and recovery equipment available from the Industry Leader.



The Century, Vulcan and Chevron booths were loaded with the latest advancements and technology in towing and recovery equipment. Along with viewing the products, Miller engineers and manufacturing personnel were on hand to answer questions and exchange ideas and concepts with the professional towers who operate the products everyday.



Guests braved the cool temperatures to receive their commemorative "Miller Rocks at The Hard Rock" T-shirt. The "Miller Rocks" T-shirts have become one of the most coveted souvenirs of the show season.



At Miller Industries we believe the best way to explain what our products can do for you is by demonstrating their capabilities. This presents a challenge at an indoor show such as Baltimore, so we resort to the next best thing, "Virtual Demonstrations." John Hawkins explains the operation and features of a Miller heavy-duty unit to the crowd with the aid of a video showing actual recovery footage. Other presenters included Tom Luciano on heavy-duties, Paul Craze on auto loads, and Fred Grueber on carriers. A picture is worth a thousand words and the pictures of our equipment in action speak for themselves.



Some of the guests tore up the dance floor, while everyone got the opportunity to enjoy the sounds of the Kevin Kline Band that performed during "Miller Rocks" Friday evening.



Midtown traffic. Construction choked streets. Dumpster strewn alleys. And that's just your first delivery. Navigating city streets is no picnic. And for a small business owner, being stuck in traffic equals money lost. Your salvation? The International® CF Series—part of International's proven line of mid-sized trucks. With an exceptionally tight turning radius, unmatched reliability, high payload capacity and the industry's largest dealer network to cover your back, the International CF Series is built to perform equally well on city streets and ledger sheets.

If the Situation Demands Strength, Let Your Vulcan be the Answer

Versatile. Powerful. Vulcan equipment. It's what you need – no matter what the job. Self-loaders. Car carriers. Towing and Recovery units big or small. Vulcan equipment is built to get the job done – no matter what it requires.



Innovative. Durable. Brutally Tough.

