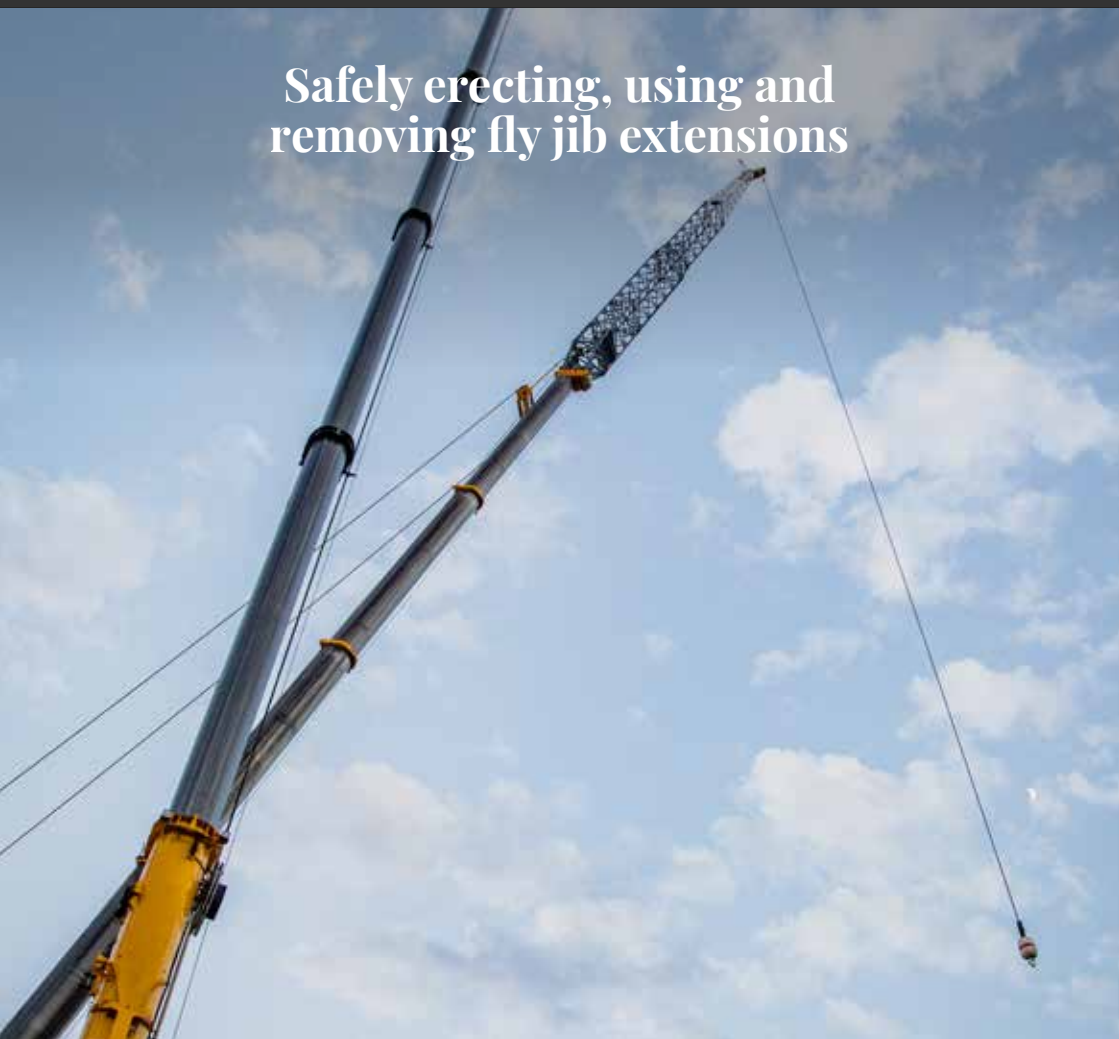
LIFTING MATTERS

Q3 2021

JIB SAFETY

Safely erecting, using and removing fly jib extensions



Thanks to this edition's contributors

UNIVERSAL CRANES

SMITHBRIDGE

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WHSQ
Workplace Health and Safety Queensland
worksafe.qld.gov.au

TRT MADE POSSIBLE

CALL FOR CONTENT

Are you an aspiring author? Are you passionate about the safety of your workmates? Do you have an idea for improving safety or efficiency in your workplace? We want to hear from you.

Contribute to Lifting Matters' vision of a safer industry by submitting your ideas and articles to **editor@liftingmatters.com.**

We are seeking stories about recurring incidents, significant incidents, ideas about safer and more efficient ways of working, any prevalent issues, good reminders, anything of a safety related nature.

You can submit a full article, anywhere from 200 to 1000 words, or you can send us ideas about what you would like to hear us discuss in future issues of Lifting Matters. If you're from a business, we will mention you as a supporter and publish your logo at no cost to you.

We can't wait to hear from you!

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Visit the archives at:

liftingmatters.com.au

From the Editor

Q3, July - September, 2021

Welcome to the Q3 2021 edition of Lifting Matters.

This edition we focus on safely erecting, using and removing fly jib extensions. CICA walk us through the industry best practice of jib extension attachment and removal; and we bring you a Training Toolbox on how to erect and stow a bi-fold boom extension. This edition highlights multiple incidents where jib safety has been compromised, at times with fatal consequences, due to equipment failure and human error.

We speak with Jack Burling about his experiences in our Operator's Opinion, and profile Patrick Silver, Project and Heavy Lift Manager at Universal Cranes. You can also read about Slew Safe™, an industry innovation turning the corner on pick and carry crane operator safety.

It's as important now, as it has ever been, to check in with one another – that's why we're supporting Workplace Health and Safety QLD's Safe Work Month and Mental Health Week 2021. Take a look at their upcoming events; read the latest MATES in Construction article; and make it a priority to check in with your family, friends, and colleagues.

Please get in touch with us! You can visit us on Facebook, LinkedIn, or drop us an email any time. If you have an incident report, ideas about safer and more efficient ways of working, widespread issues, valuable reminders, or anything else safety related, we want to hear from you. We look forward to working together to protect our people and save lives in the crane industry. Any contributions for our next edition are due by **Friday 10 December 2021.**

If you prefer printed glossy copies for your crane cabs, cribs, mess hall, or reception, please send your postal address and the number of copies you require to editor@liftingmatters.com. ***Lifting Matters*** is available to view at www.liftingmatters.com.au or you can subscribe to receive an email copy each quarter.

Stay safe and see you next edition!

Thank you

DASHELLE BAILEY, EDITOR
editor@liftingmatters.com

Contents

Industry Best Practice of Jib Extension Attachment and Removal

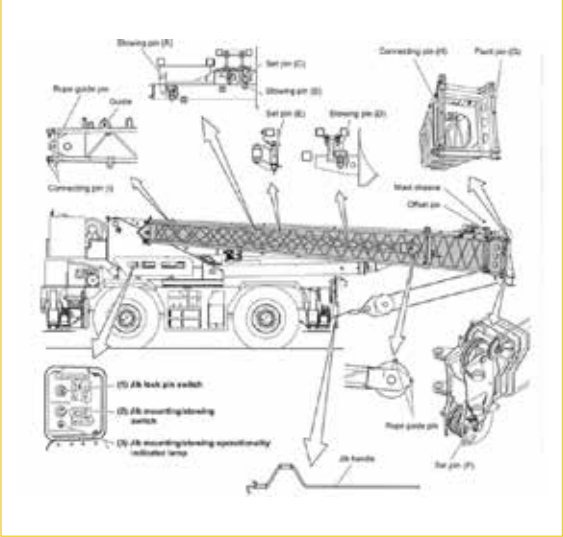
Article contributed by **CICA**

Crane operators are often required to rig the crane with a fly jib extension to meet site requirements. The primary purpose of using a fly jib is to extend the working height of the main boom; a secondary purpose is to increase radius to move around an obstacle. Like most crane operating tasks, there are risks involved in installing and operating the crane fly jib, so safety is paramount.

To install and use the crane fly jib it is important to always refer to the manufacturer's instructions. The prescribed sequence of fly jib installation is important to follow, and it will vary between crane models.

The safety of the operator and crew should always be front of mind. Falls from heights is still the number one workplace injury in the construction sector. Fly jibs can often be done near ground level, but just out of reach, so a ladder or work platform is required. It is important to ensure that a secure and footed ladder is utilised. If walking on top of the main boom, ensure the correct harness is used and fits correctly. Make sure the type of lanyard will provide fall arrest before contact with the ground.

As shown on this Tadano GR-800EX-2, there are many components to install and secure the jib both while it is stowed and when in use.



Tadano GR-800EX-2

The manufacturer's recommended steps to install or remove the fly jib from a crane should be followed, but swing away fly jibs have these common steps:

1. Set up the crane's outriggers and level the crane.
2. If the hoist rope that you will be using for the fly jib is already on the main boom, pay out enough rope to install on the fly jib before disconnecting the rope from the boom head.
3. The main boom should be set to manufacturer's specifications for angle and extension.
4. Unpin the fly jib stowage pins and attach the pivot point of the fly jib to the main boom head.
5. Stay clear of the swing area of the fly jib by using a tag line and ensure no other obstacles will be contacted when the fly jib is swung into position.
6. Swing the fly jib into position and attach the connecting pin to the other side of the boom head.
7. Place the wire rope correctly over the sheaves and ensure all guide pins and retaining clips are reinstalled.
8. Reconnect all electronic sensors including moving the anemometer from the main boom to the fly.
9. The boom may have to be raised to a certain angle before the hook block is lifted off the ground.
10. Check the Anti-2 block sensor on the fly jib is working.
11. Ensure the RCI is programmed to the correct fly jib configuration and angle before lifting commences.

The wire rope can act like a saw blade on boom sections or laces if reeved improperly.

Stowing a HTC fly jib

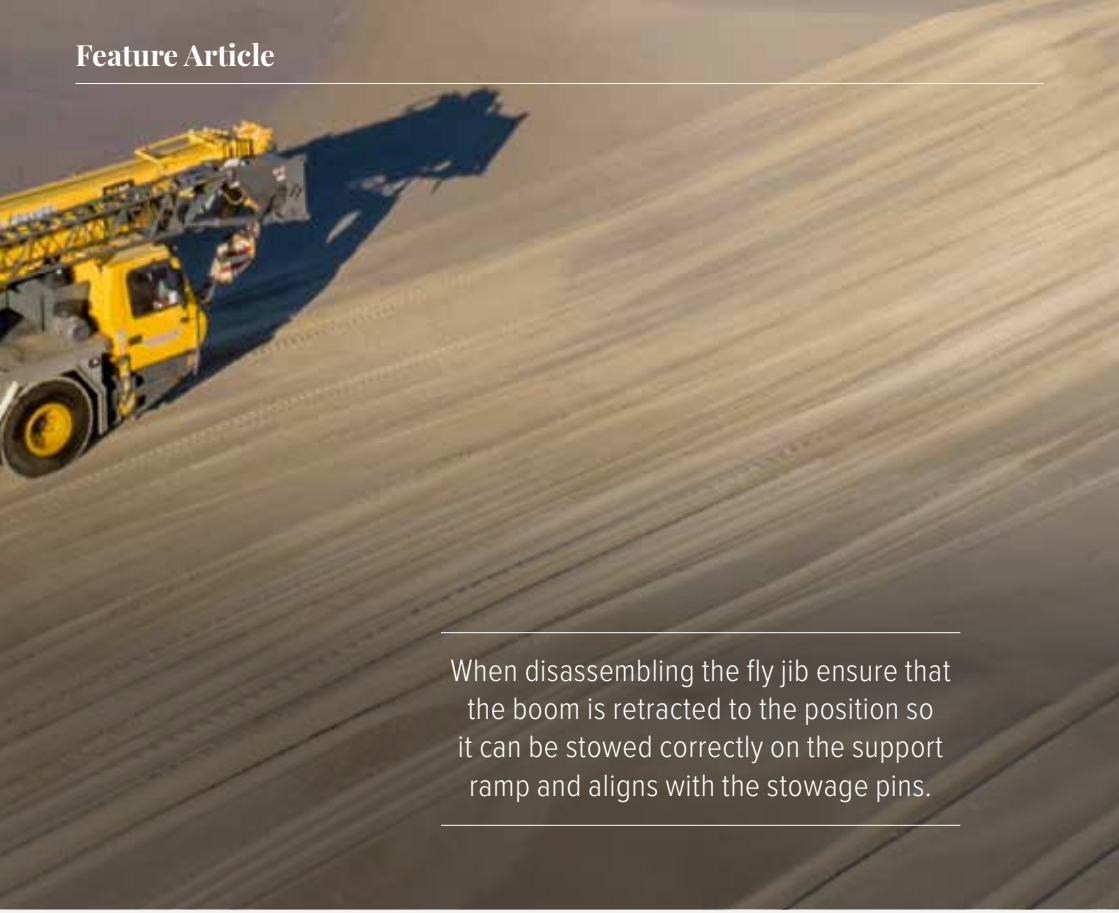
It is important that the reeving of the wire rope is correct, to be sure it is retained by the guide pins and that retaining clips are secure on the guide pins. The wire rope can act like a saw blade on boom sections or laces if reeved improperly.

When disassembling the fly jib ensure that the boom is retracted to the position so it can be stowed correctly on the support ramp and aligns with the stowage pins.

Do not stand under the jib or on the side of the jib in the area it will pivot, as the jib can rotate freely when the connecting pin is released. Once the fly jib is secured the crane can travel to the next job.

Underslung fly jibs follow a similar procedure, but do not have the main boom horizontal during installation and disassembly. The hoist rope is used with luffing up of the main boom to unfold the fly jib and bring it into position. Once it is in position, the fly jib angle is set.

These steps apply to boom mounted fly jibs on All Terrain, Hydraulic Truck Crane and



When disassembling the fly jib ensure that the boom is retracted to the position so it can be stowed correctly on the support ramp and aligns with the stowage pins.

Rough Terrain cranes. This brief overview is an oversimplification for fly jibs that are installed on large capacity hydraulic or lattice boom cranes.

CICA Position Paper, CICA-PA-0005-A, discusses who can assist the crane operator when changing the reeving arrangement or installing a fly jib. Some WHS regulators interpret the Intermediate Rigger HRWL definition to include the installation of swing away and underslung fly jibs as rigging and derigging the crane. CICA's position is that this activity does not need to be completed by an intermediate rigger but needs to be completed under the guidance of the crane operator following the manufacturer's recommendations in the operation manual. CICA Members have access to all guidance notes and position papers, go to www.cica.com.au to learn more about CICA membership.▪

February 2007

Jamestown, South Australia

Project:	Wind Turbine Installation
Cranes:	Liebherr LG-1550 with 63m main boom and 28m luffing fly
The Outcome:	Significant property damage including carousel, nitrogen cylinder, main assembly lattice section, and pennant rods. No injuries.

The primary cause of the incident was luffing the fly down too far.

Damage to strut

Masts have rotated over causing damage

Damaged lacings

Initial damage to the carousal when lowering the boom to the ground

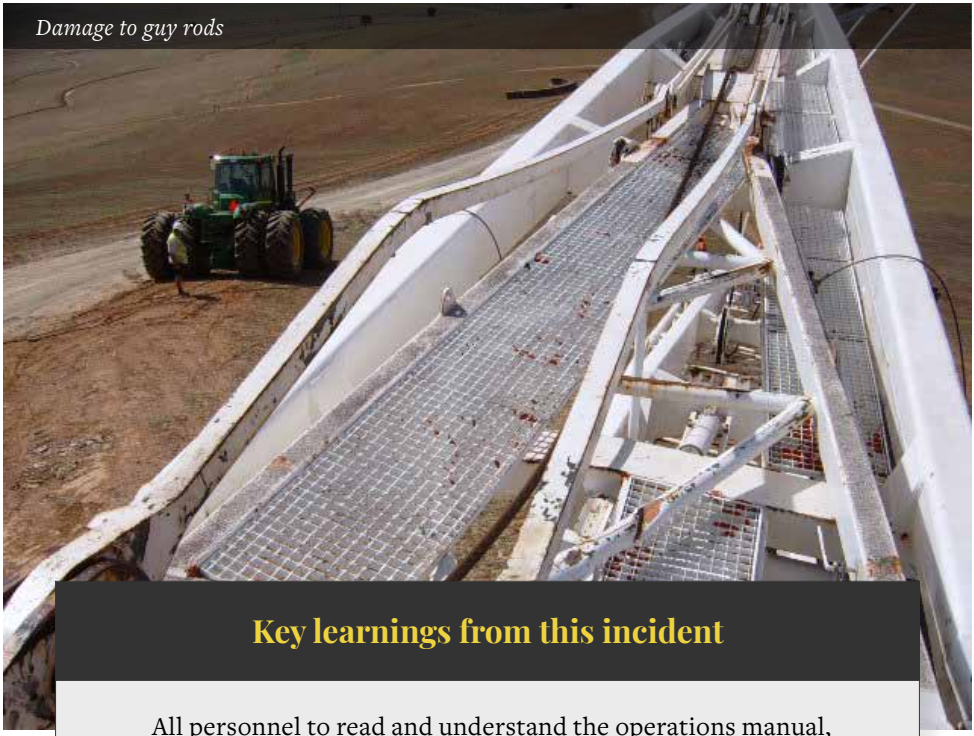
In February 2007, a Liebherr LG-1550 with 63m main boom and 28m luffing fly was being used for a turbine installation project near Jamestown, South Australia.

Due to inclement weather and safety concerns, the boom of the crane was unable to be raised for work throughout the day. A decision was made late afternoon to recommence work at 0200 the following day. Shortly after this decision, a break in the wind provided an opportunity to lift the boom and reeve the hook in preparation for the night's work.

The boom was lifted to around 25° and the luffing fly lowered in order to reeve the hook. The hook was reeved and it was observed that the rope had jammed. The boom was then lowered again in order to rectify the rope.

The Supervisor instructed the Operator to lift and place the hook and lay the boom for the night. The Operator started to lower the luffing fly (so as to a-frame the boom before lowering to the ground), when the Supervisor observed that the luffing fly was heading forward beyond the point of stability. As the Supervisor hurried to radio the Operator, the A-frame of the carousel fell forward over centre and collapsed onto the luffing fly, causing extensive damage.

The primary cause of the incident was luffing the fly down too far. Contributing factors also included fatigue from working in difficult weather conditions (with little to no shelter from the heat and wind) and under pressure due to a pending two AM start.



Damage to guy rods

Key learnings from this incident

- All personnel to read and understand the operations manual, including the specific configuration required for the setup. Have a secondary party check for compliance to machine requirements, and use a tick sheet for final checks on configuration.
- Compose individual Safe Work Method Statements (SWMS) for all configurations of machine to ensure all checks and special operations are observed.
- Maintain clear communications, and have second/third party guide crane movements to ensure safety at all times.
- An awareness of personnel's health and wellbeing is advantageous especially when working in arduous conditions

September 2017

Miami and Fort Lauderdale, Florida

Tower top and counterjib after the incident at the first failure site

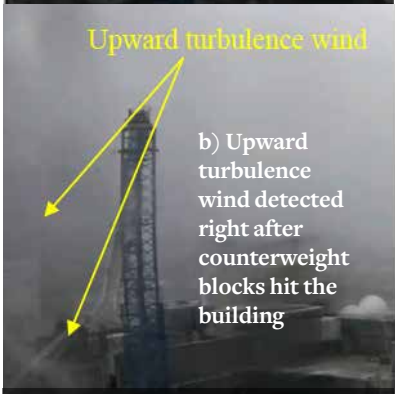
Tower top and counterjib after the incident at the second failure site

Project:	Multiple building sites
Cranes:	Three x SK-315 cranes
The Outcome:	Property Damage

In September 2017, Hurricane Irma hit the west coast of Florida, USA. The tropical storm conditions across Miami and Fort Lauderdale caused the collapse of three SK-315 hammerhead tower cranes that had been put out of service and allowed to weathervane.

In all three crane failures, only the jibs, counterjibs, and the tower top collapsed. The crane masts, ties and foundations remained intact. The cause of the failure was the same in all three cases: the detachment of the crane jib from its turntable due to turbulent wind loads. Once the jib started falling, the two jib pendants were released. The forces on the tower top apex from the jib pendants decreased from the maximum to zero in a short amount of time. The two tower top columns toward the counterjib failed because of the transient load change on the tower top.

a) Jib jumped off the left bearing connection



b) Upward turbulence wind detected right after counterweight blocks hit the building

Upward turbulence wind detected when the crane collapsed at the first failure site (Courtesy of Mr. Nick Tangredi)

Collapsed crane after the incident at the third failure site

Thankfully no one was injured due to construction being at a standstill and residents either evacuated or taking shelter from the hurricane. There was also limited damage to the construction sites.

In the first failure in Miami, the crane had a 180ft jib, 64ft counterjib, and 39 kilopounds (kips) counterweight. All five concrete blocks of the counterweight hit the interior of a 33- storey apartment building, damaging the already-completed floor slab. The second crane failure was located a couple of miles away, involving a SK-315 with a 147ft jib, 64ft counterjib, and 32kips counterweight. All four counterweight pieces fell on the street below piercing the pavement. The third failure was located at a construction site in Fort Lauderdale, approximately 35 miles north of Miami. The crane lost its counterweight but no damage was reported.

It is important to note there were over two dozen other cranes in the Miami area alone that did not collapse, including a fourth SK-315 that was positioned at a lower height and protected by tall structures.

Jib foot bearing connections – jib side (the first failure)

Aerial view of the second failure site – looking east

Recommendations from this incident

Occupational Safety and Health Administration (OSHA) were initially called to site to provide technical assistance in the safe dismantling of the cranes. However, the failure of three SK-315 cranes in a similar manner prompted OSHA to launch an investigation, based on suspicions there were potential deficiencies in this particular crane model.

The following includes the recommendations from the investigation conducted by structural engineers from the Office of Engineering Services (in OSHA's Directorate of Construction), with input and cooperation from the manufacturer and owner of the cranes:

- On coastal areas with tall buildings and locations prone to frequent turbulent winds, local governing bodies should consider asking engineers to conduct simulations based on dynamic analysis to get a more realistic wind evaluation than quasi-static analysis. Instead of conducting cost-prohibitive wind tunnel tests, engineers could conduct a Computational Fluid Dynamics (CFD) analysis, which has become affordable due to the rapid advance of software and computing technology.

- Terex, the crane manufacturer, should evaluate the design of jib-to-turntable connections to prevent possible detachment of crane jibs in high turbulent wind in the future.

- To prevent catastrophic collapses of the crane tower top in the future, it is recommended that tower tops be evaluated and designed with a higher safety margin, and the design should also be based with loads applied from only the counterjb.

- The jibs in all three cranes were suspended by single pendants. In the event that the jib begins to sway to the sides, the single pendants could not be expected to secure the stability of the jib. It is, therefore, recommended that two symmetric pendants or cables be considered in the design of the tower cranes. Terex should consider adding pendants to the existing SK- 315 models.

Incident Gallery

April 2021

Christchurch, New Zealand

OUTCOME:
CRUSH INJURY

In early 2021, a Grove GMK-5130-2 with 28.5t counterweight complete with a 3.6m heavy duty ISS panel jib was being used to rotate and place concrete panels on a site in Christchurch, New Zealand.

The Operator started the process by removing the ancillary hook and rooster sheave. He then raised the deflection sheave, before slowly releasing the safety mechanism of the front connection. However, the Operating Instructions Lattice Extension for Grove was not referred to during the operation, resulting in several steps of the process being skipped. These steps included releasing the rear connection, swinging the ISS on to the main boom head, and pinning it to the right-hand side, before releasing the front connection.

Missing these steps resulted in the 825kg jib falling and crushing the operator against the top rail of the EWP.

January 2019
Charlottesville, Virginia

OUTCOME:

INJURY AND BUILDING DAMAGE

A crane partially collapsed at a building site in Charlottesville, Virginia, in January 2020, injuring a construction worker.

The Manitowoc's luffing jib came down on the 4th and 5th floors of a new office block under construction. Whilst the crane operator was uninjured on the ground level, a construction worker on the upper floors of the building suffered a compound fracture to his leg.

Emergency services were called in to rescue to worker. He was lowered to ground floor using a tower ladder truck, before being transported to the University of Virginia Medical Center with non life-threatening injuries.

It is thought the jib pendant cables or retaining pins failed, allowing the jib to drop, however Occupational Safety and Health Administration were working with the construction company to investigate the cause of the incident.


NBC29 News

NBC29 News


NBC29 News


WRAL News

February 2021
Brooklyn, New York

OUTCOME:
NEAR MISS


NY Post

The jib of a Potain luffing tower crane dropped in February 2021 due to a failed luffing mechanism. The crane was located at the site of a 31-storey luxury high-rise development in Brooklyn, New York.

According to the New York's Department of Buildings preliminary investigation, "technicians were on site performing maintenance work on the tower crane when the crane's boom experienced a partial collapse." It is estimated the portion of the crane that collapsed measured 175 feet (approx. 53m).

The jib was facing away from the building when it collapsed against itself, causing no damage to the tower construction project. Thankfully there were no injuries to workers or passersby.

November 1998
Liverpool, England

OUTCOME:
FATALITY


BBC News UK

In November 1998, a crane hire company was lifting telecommunications equipment from a ground level car park to the 12th floor of the Royal Liverpool University Hospital using a Demag AC-755.

The crane had been working on its main boom with a fixed fly jib extension. A second crane was being used to add an extra 6m lattice section of fixed fly jib to the tip of the telescopic boom when the incident occurred. As the existing fixed fly jib configuration was dismantled and pins were removed, two boom sections – weighing 2.4t and 1.6t – collapsed.

One of the lattice structures struck the 27-year-old operator as it fell. Medical personnel tended to the operator at the scene, however he later succumbed to multiple chest and abdominal crush injuries.

February 2016

New York, New York

OUTCOME:

FATALITY AND MULTIPLE INJURIES

A Liebherr LR-1300 crawler crane collapsed in New York in February 2016, resulting in a fatality and multiple injuries. It had been positioned to replace generators and cooling towers on the roof of a 25-storey building.

Due to inclement weather conditions (high winds and snow), it was decided to lay down the 371ft luffing jib and 194ft boom. With the boom angle at 69.4° (less than the manufacturer's recommended 75°) and the luffing jib at 45°, the Operator began to lower the crane. The wind increased, flipping the boom and jib towards the ground, overturning the crane at 1800.

As it collapsed, the jib head hit several buildings causing damage. The boom of the crane fell onto a motorist's parked car resulting in a fatality of the owner standing nearby, and injuries to two others in nearby vehicles. The crane operator sustained minor injuries.

An investigation into the incident by the Occupational Safety and Health Administration (OHSA) found "the crane tipped over or overturned as it failed to remain stable under a decreasing boom angle and increasing wind". It was also found that the crane hirer was aware of impending weather conditions the day before the incident but did not take preventative action to stow/park the crane overnight.▪

Boom and jib on the ground after the incident – street view

Jib head section after the incident – aerial view

Erecting and Stowing the Bi-Fold Boom Extension

Article contributed by **SMITHBRIDGE GUAM**

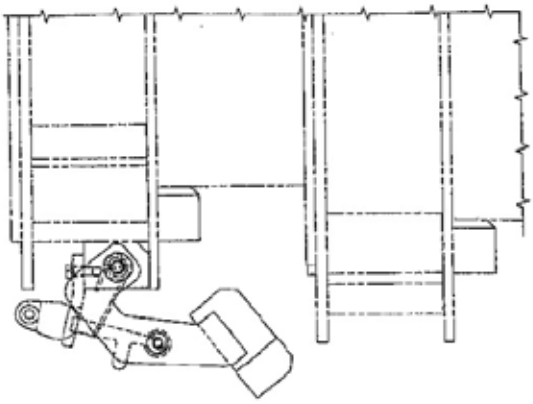
Operators at Smithbridge Guam recently undertook hands-on training in the safe erection and stowing of a bi-fold boom extension. It became imperative to ensure the team was adequately trained as the fleet currently has several cranes with fly attachments including a Grove RT760, GMK4080, MK5130, and GMK5275.

Incidents had occurred elsewhere in the Smithbridge Group where inadequate training in erecting boom extensions had resulted in an injury and/or delays on site. Smithbridge Guam made it a priority to deliver a Training Toolbox with practical application to their crew so they would be familiar with the operator's manual and correct sequence procedures, prior to working on any related jobs, to improve safety and service outcomes.

MAIN STEPS

ERECTING

1. Fully extend and set the outriggers
2. Position the boom over the front
3. If extended, fully retract all the boom section (0° boom or it will run away when it swings)
4. Lower the boom to minimum elevation to permit ease of installation of pins and access to the boom nose
5. Rig either the main hoist or optional auxiliary hoist cable for single part line with nothing but the wedge socket on the end of the cable.
6. Extend the boom enough to disengage the spring loaded boom stop block



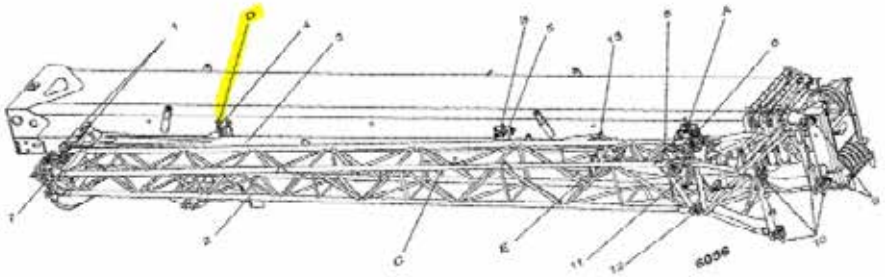
7. Pull down on the rubber hook to disengage the spring loaded boom stop block. Place the end of the rubber jook in the retainer plate. Fully retract the boom.

8. Remove the retainer clips from the attachment pins stowed in the base of the boom extension and insert the attachment pins through the attachment and anchor fittings on the right side of the boom nose. Install the retainer clips in the attachment pins.

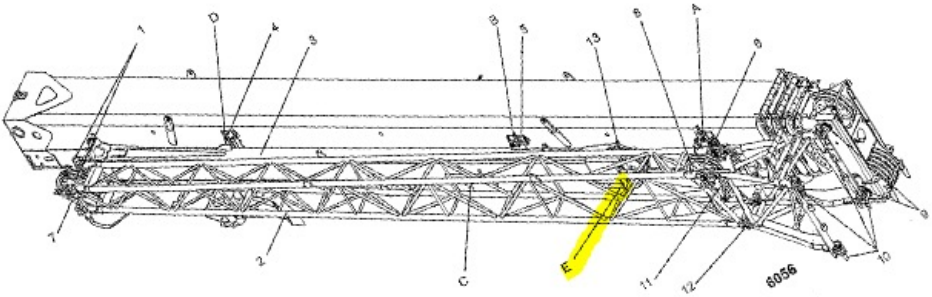
9. Remove the retainer clip from base to fly attachment pin and remove attachment pin from base section to fly section attachment fittings.

10. Stow the pin in the opposite attach fitting or the stowage lug.

11. Ensure the pin attaching the fly section to the boom base section rear stowage bracket is in place.



12. At fly section sheave end (see picture - E) push in on the spring loaded latch hook to release latch, allowing the base to separate from the fly



CAUTION

1. Raise the boom to horizontal and extend the boom just enough to clear the extension stowage lugs from the guide ramps and stowage pins on the front and rear stowage brackets.

2. Remove the hitch pin and clip pin securing the boom extension alignment device in the stowed position. Pull the push bar assembly out to the working position and secure it in place with the hitch pin and clip pin.

DANGER

1. When erecting the boom extension, ensure that all personnel and equipment are kept clear of the swing path.

2. Slightly raise and/or lower the boom to help control the extension. Using the rope attached to the tip of the extension, swing the extension into place ahead of the boom nose, engaging the anchor fittings with the attachment fittings on the left side of the boom nose.

3. Install the attachment pin into the upper anchor and attachment fitting on the left side of the boom nose. Install retainer clip in attachment pin.

4. If the boom extension alignment device does not properly align the anchor and attachment fittings to allow installation of the last attachment pin, refer to the Service Manual and adjust the boom extension alignment device.

5. Fully retract the boom until the bottom extension anchor fittings is against the boom extension alignment device and install the attachment pin in the lower anchor and attachment fittings on the left side of the boom nose, install the retainer clip in the attachment pin.

6. Lower the boom and remove the rope from the tip of the extension base section.

7. Remove the hitch pin and clip pin securing the boom extension alignment device in the working position. Push the push bar assembly back to the stowed position and secure it in place with the hitch pin and clip pin.

8. Rig the hoist cable.▪

Slew Safe™ Safety Feature Preventing Crane Rollovers

Slew Safe™, developed by TRT, is a significant new pick and carry safety feature. It is designed to minimise the risk of a crane rollover when the crane is lifting on uneven surfaces.

Background

Since their inception in 1980, articulated pick and carry cranes have become a staple part of operations across a wide range of industries. With unique characteristics differentiating pick and carries from slewing cranes, careful consideration needs to be given for their safe use (CICA).

The 2015 paper by RMIT, *Causes of Fatal Accidents Involving Cranes in the Australian Construction Industry*, stated 9% of all crane incidents in 2001-2013 were caused by plant overturning. This figure has recently been reported as 6% for Q1 2020 alone, according to data compiled in a collaboration between CICA and WorkSafe.

WorkSafe has attended many incidents where articulated mobile cranes have overturned.

Contributing factors include:

- Operating on surfaces that cannot support the weight of the crane and suspended load
- failure to derate the crane's lifting capacity as per manufacturer's requirements
- excessive boom angle and boom extension
- uncontrolled load sway (pendulum motion)
- moving up, down or across a slope
- changing direction (articulating) or manoeuvring around obstructions
- excessive speed, and
- under-inflated tyres.

Risk increases significantly if more than one of the above factors is present.

Overturning articulated mobile cranes can expose the operator, dogman, rigging crews and others to the risk of death or serious injury.

The lifting capacity of cranes is reduced when traversing slopes or changing direction, failing to derate the crane may result in the crane overturning.

WorkSafe Victoria: Prevent pick and carry cranes from overturning

Nearly 75-80% of pick and carry cranes currently operating in Australia can pick up a load over the front on firm level ground, slew through many charts, and drive across various side slopes and terrain without any de-rating for pitch and roll. This results in the crane becoming unstable and increases the potential for an accident, without any warning to the operator or other stakeholders nearby.

Of the 4,000 pick and carry cranes currently operating in Australia, only the machines manufactured after 2013 or having had Dynamic LMI's subsequently fitted, provide operator alarms when operating on side slopes, meaning all others can easily go off the chart without any warning to the crane operator.

Solution

As the manufacturer of the TIDD Crane, TRT's primary focus has been safety, from the first prototype of the PC25 in March 2014 to the newer PC28 launched in May 2019.

> It was recognised there was growing concern in the construction and infrastructure sectors towards the number of incidents – often unpublished – involving articulating cranes causing serious harm to people.

Although newer pick and carries are built with a number of safety features that aim to limit or even prevent the operator from putting the machine in a position that may result in an incident, TRT instigated the development of Slew Safe as a leading safety-system to minimise crane rollovers.

Slew Safe was designed to save lives and improve driver safety when operating TIDD PC28 cranes. It is now a standard safety feature on all new TIDD PC28's and it is able to be retrofitted onto all TIDD PC25's.

How Slew Safe Works

When the crane is operated in the GREEN and AMBER areas of the lifting chart, Slew Safe will remain inactive. When the crane in operation moves from green and amber to RED, this is an overload notification based on the lifting chart which will activate Slew Safe.

Once Slew Safe is activated it will do the following:

- Show a visible warning on the ECU
- Reduce the speed of the power steering to 15% in the unsafe direction
- Makes steering harder with instant feedback through the steering wheel to operator
- The engine will "load up" making an audible sound change for operator
- Constant audible alarm both inside and outside the cabin to warn the operator and dogman of overload

Slew Safe activation shown on the TIDD Crane ECU

In addition, the inbuilt LMI restricts operation in the unsafe direction allowing the operator to reconfigure the load or put the load down, causing them think about how to do it safely or do it another way (visually tracks and states on indicator 66% and 75% charts). This system cannot be overridden and will help prevent crane rollovers from occurring on sites across Australia.

> "Working with Tier One clients, we are obviously aware of the focus on Pick and Carries in general and the concerns around their safety specifically. One of the biggest drivers around the TIDD purchase is the fact that you can take the machine to Tier One customers and demonstrate the risk mitigation features of the PC28".
>
> - Michael Yates, Crew NSW

Slew Safe delivers the operational features customers want with significant new safety innovations. It is innovation where it matters, for both operator and site safety.▪

Operator's Opinion

Jack Burling

JACK BURLING
LIFTING CONSULTANT
– AUCKLAND CRANES

Jack Burling is a second-generation crane operator, holding a NZ national certificate for mobile cranes for 11 years. He currently works as a Lifting Consultant for Auckland Cranes. Jack shares with us his experiences around jib incidents and what can be done to maximise safety.

Jack, how did you come to be in your current role? Perhaps you could you give us a summary of your professional journey so far...

I started on the ground with a crane crew on the west coast of New Zealand's South Island (Holcim Cement Works). I never looked back, slowly working my way from the man cage to the seat in the crane. I obtained national certification along the way, and all the associated heavy traffic licences. When family responsibilities increased, I was happy to move my feet under the desk and work as a Lifting Consultant for Auckland Cranes.

Given your experience, have you personally been involved in any incidents involving crane jibs / jib extensions?

I have - the Operator telescoped out with the computer in fly erection mode. The auxiliary hook became jammed against the fly head sheave (applicable to this model as this was the procedure for releasing pendant bars to change fly jib rake angle). The Operator was under the impression they were winching down, and unaware that they were actually telescoping out. Before anyone could call a stop to the proceedings, the Operator had pulled the

I believe clear constant communication is the key to safe crane operations.

auxiliary hook through the fly head sheave and over the top. Thankfully no-one was injured, however there was substantial damage to the crane's fly jib head sheave.

What learnings did you take from that experience?

I think the biggest learning was to always ensure the ground crew have radio communications with the Crane Operator whilst installing/detaching jibs, otherwise they have no way of stopping any unintentional movements or jib damage. I believe clear constant communication is the key to safe crane operations.

We agree that's crucial! Apart from a lack of communication, what is the most common action or behaviour you witness in the field that leads to operators becoming involved in unsafe situations? And, how do you think we can fix it?

Failure to read and understand the Operator's manual associated with the machine being operated. Every machine is different, no matter how many we have operated. Unsafe situations occur when someone assumes to know what they're doing without the proper information. Training for new machines and unfamiliar equipment is so important to undertake, including reading and understanding the manual!▪

People Profile

Patrick Silver

Patrick Silver joined the Universal Cranes family in 2017 in the lift engineering team, after spending two years at Smithbridge on projects in Australia and Papua New Guinea.

We caught up with Patrick to find out why health and safety matters to him, and how he thinks an effective safety culture can be built.

Patrick Silver
Project and Heavy Lift Manager
Universal Cranes

Thanks for taking the time to chat with us Patrick! Can you give us a summary of your professional journey so far?

I started my professional career working as a site-based engineer. My first project was the construction of Daunia Coal Mine in Moranbah where my team was responsible for the project's bridges and culverts. After finishing up in the in the Bowen Basin, I worked in various site engineering and construction management roles across QLD, NSW, and Papua New Guinea.

Since joining the engineering team at Universal Cranes, I've been responsible for the preparation of lift studies and plans, design of specialised rigging, method planning, preparation of technical reports, tendering, site inspections, and monitoring and supervision of complex and heavy lifts.

My role is to ensure safe crane operation and rigging practices. This is achieved through the preparation and review of in-depth lift studies and by always maintaining solid communication with our crews.

What do you think is the most important issue in crane safety today?

As crane technology continues to develop, I think complacency is one of the key issues facing our industry. Due to the nature of mobile and crawler crane work, crews are constantly operating in different environments, each with their own set of risks and hazards (e.g. ground conditions, overhead and underground services etc.). It is crucial to maintain vigilance and attention to the task at hand, no matter how routine.

We absolutely agree! What do you think is the key to an effective safety culture and how do you help build that culture?

I believe it is important that employees of all levels be consulted and included in the planning and review of safety systems and initiatives. I also think there should be emphasis on promoting a positive safety culture; celebrating a safe act or observation.

Positive reinforcement and responsibility at all levels certainly helps foster that culture. What keeps you motivated in your role from day-to-day?

To put it simply, my motivation is to make sure everyone gets home safe at the end of the day. It can be easy to get caught up in large projects and pressing deadlines, but the safety of our crew is always the most important aspect of a lift.▪

It is crucial to maintain vigilance and attention to the task at hand, no matter how routine.

MATES in Construction

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MATES in Construction targets suicide prevention in the construction, energy and mining industries – and the not for profit organisation's efforts have been recognised by the World Health Organisation.

MATES has been helping workers for more than 13 years and recently reached a milestone as it clocked up 200,000 workers provided with general awareness training. That figure has now grown to more than 230,000, as well as 21,000 people CONNECTOR trained and nearly 11,000 cases managed, which has helped the program to be recognised on the international stage.

A World Health Organisation guide details six key pillars to nation-based suicide prevention and showcases MATES in Construction as an example of world's best practice in multisectoral capacity building.

MATES in Construction acting CEO John Brady said LIVE LIFE: An Implementation Guide for Suicide Prevention in Countries outlines a range of practical tips and considerations to support effective whole-of-society responses that enhance community resilience.

"When MATES started in 2008, suicide was seen almost entirely as a health problem requiring health responses. Programs such as MATES have shown that we achieve much more when we engage all of the community," Mr Brady said.

"We know that each year more than 195 construction workers in Australia die by suicide and many more are permanently incapacitated following suicide attempts. Construction workers are six times more likely to die by suicide than an accident at work.

"A five-year review of MATES conducted in 2016 showed that suicide rates in the industry had fallen by almost 8 per cent after the introduction of MATES in Construction.

"We are unbelievably proud that the World Health Organisation chose a small Australian program such as MATES to demonstrate what can be achieved in suicide prevention by engaging worksites."

MATES also has information on the mental health issues raised by COVID, including tips for coping with stress and resources for work sites.

The Queensland Government supports MATES in Construction by providing $1 million annually to fund suicide prevention services in the construction industry, and regional Queensland and small business, with an emphasis on young construction workers. In July 2020, the Queensland Government renewed its commitment to MATES by signing an agreement to provide $1 million per annum from 2020 to 2025.■

For more information, visit: *https://mates.org.au/construction/*

Safe Work Month and Mental Health Week 2021

Workplace Health and Safety Queensland

Safe Work Month and Mental Health Week raise community and industry awareness about the importance of work health and safety, and the benefits of mentally healthy workplaces. Everyone has the right to come home safe and healthy at the end of each working day.

Upcoming Events:

October 1

Safe Work Month Launch

9am

You'll find out:

- how a healthy diet can keep you full and energised for your workday as well as providing you with many long-term health benefits
- tips to make your home electrically safe to help protect your family and loved ones
- how other businesses have made positive health and safety improvements at their workplace.

Our launch event features guest appearances from Queensland's Safety Ambassador Shane Webcke, Everyday Gourmet and MasterChef star Justine Schofield, representatives from the Queensland Country Women's Association, the Electrical Safety Office, and our Safety Advocate Garry Nichols.

October 6

The evolving role of safety leaders

9.30 - 10.30am

In an age of highly competitive and often volatile markets, the role of safety leader is constantly evolving. The push to achieve more with less, while maintaining a social and ethical licence to operate, places an increased expectation on leaders to get the most from their people in a safe and sustainable way. Throw in the added complexity of generational differences, an aging workforce, the need for total worker health, changing work environments and an organisation's cultural maturity, and it becomes clear that there is no 'one-size-fits-all' approach to leading for safety.

And, as you'll hear from Dom, safety leadership isn't just about you as a leader, but also the person you are leading, their skills and willingness to engage, and the situation they find themselves in. So, how do leaders not only embrace, but also set themselves up for success in a landscape that is constantly changing?

In this interactive and engaging session, you will:

- understand the multiple roles expected of today's safety leader
- explore how to adapt leadership strategies to different levels of safety culture maturity
- identify different safety leadership strategies for different individual employee variables in the workplace, including managing expectations both up and down the line.

October 11

Mental Health Forum 2021

8.00am – 4.45pm

The Mental Health Forum is an opportunity to hear from industry experts as we discuss how we can promote, prevent, intervene early and support recovery when it comes to mentally healthy workplaces.

While building a mentally healthy workplace makes good business sense, controlling psychological health and safety risks is also a legislative requirement. Attending the forum is a great opportunity to demonstrate your commitment to building a mentally healthy workplace, nurture your teams' capabilities and professional development opportunities, and improve your organisational awareness of psychological health and safety and the importance of early intervention.

October 14 Creating mentally safe workplaces Strategies for promoting mental wellbeing 1.00 - 2.30pm	In this highly interactive workshop, Dr Fisher provides practical tips on reframing how we define accomplishment beyond the performance appraisal and builds your understanding of the importance of belongingness and accomplishment as mental health fundamentals - and the role it plays in mentally healthy workplaces.
October 18 Injury Prevention and Return to Work Conference 8.30am – 5.00pm	The Injury Prevention and Return to Work Conference is back - bigger and better than ever. This year's program is jam-packed with expert presenters who will discuss, analyse, and give their perspectives on key injury prevention and return to work topics. Don't miss out on your opportunity to connect with business leaders, work health and safety and workplace rehabilitation professionals.

Any questions?
Want to support?
Contact us!

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