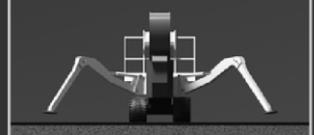
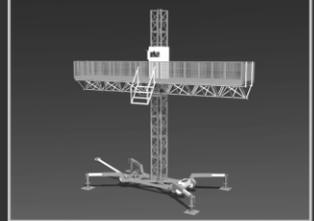




IPAF  
ElevAÇÃO  
Um encontro nas alturas



# IPAF ElevAÇÃO 2018

LATIN AMERICAN SAFETY OPPORTUNITIES-  
LEGISLATION, TECHNOLOGY

Mike Brown, VP of Sales and Market  
Development – Latin America

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# Agenda



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- Scope
- ANSI and CSA Modifications Status Information Source
- Existing Legislation by Country
- The Mexican Legislation Project
- Pending Projects (Homework for All)
- Outcomes to Strive For
- Upcoming Safety Technology from JLG



# Scope of Presentation



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- A high-level overview of current legislation in major markets
- Does not pretend to provide a comprehensive view of current legislation nor provide legal advice
- Not designed to highlight deficiencies of existing legislation
- Only salient and relevant highlights of each legislation outlined
- Covers countries comprising 90% of 2017 AWP sales to Latin American countries



# ANSI and CSA Standards Updates



[www.ipaf.org](http://www.ipaf.org)

- Provided by and updated regularly via [jlg.com](http://jlg.com)
  - Go to [jlg.com](http://jlg.com)
  - See “Stay Informed-Be the first to know about developments and changes to new ANSI and CSA standards.
  - Click on “Get Updates”
  - Complete contact information.



# Existing Legislation by Country

- Norma Argentina “Argentine Institute for Normalization and Certification” (IRAM) 3928-1, (2013, 44 pages)
- Contemplates:
  - Manufacturers responsibilities
  - Distributor responsibilities
  - Owners responsibilities
  - Users responsibilities
  - Operators responsibilities
  - Rental company responsibilities
  - Renters responsibilities

- “NR-18, Annex #4” (AWP Specific, 2008, 5 pages), and “NR-35” (Work at Heights General, 2012, 6 pages)
- Contemplate requirements for:
  - Minimum security
  - Machine operation
  - Maintenance
  - Operator training
  - Fall protection
  - Ongoing work in process via the “ABNT” comprised of representatives from IPAF, manufacturers and rental companies.

- “Decreto Supremo No. 594”, Regulations for Industrial Safety, (General, environmentally focused, base document 1999 with multiple additions and modifications since, 36 pages)
- Contemplates
  - Use of “personal protection elements” (EPP) to prevent and protect from specific accident risks (Decreto Supremo No. 173)

- “Resolución 1409” (Work at Heights General, 2012, 27 pages)
- Contemplates:
  - Obligations for employers and employees who work at heights
  - Minimum worker training and existing certifications
  - Fall protection devices and systems
  - Jobsite safety marking requirements and signage

- “Norma Oficial Mexicana (NOM) 009-STPS-2011”, Safety Conditions for Work at Heights, (2011, 55 pages)
- Contemplates:
  - Employer and worker obligations
  - General safety requirements
  - Worker training requirements
  - Fall protection devices and requirements per application
  - Specific section on AWP safety requirements
  - Procedures for the evaluation of compliance (27 pages)

- Collective Bargaining Agreement Between Panamanian Construction Chamber of Commerce (CAPAC) and the Panamanian National Construction Workers Union (non-legislative, general agreement, 2014-17, 257 pages, two devoted to work at heights)
- Contemplates:
  - Special payment rates for workers up to and then over 125 meters of height
  - Required safety equipment for work at heights mentioned but not specified

- “Ley 29783” Health and Safety in the Workplace (General, 2016, 39 pages)
- “Norma G.050” Safety During Construction (General, 2015, 25 pages)
- Contemplate:
  - Section on safety for lifting/hoisting equipment (cranes) including suspended platforms
  - Sections on ladder and scaffolding use
  - Basic personal protection equipment (EPP) including for work at heights, four sub-sections, one contemplating requirements for fall protection belts

# The Mexico Experience



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- In 2008, three principal AWP manufacturers joined forces along with the Asociación Mexicana de Distribuidores de Maquinaria (AMDM) to promote work at heights legislation
- Jointly hired an attorney/legal consultant to assist with approach to “Secretaría de Trabajo”
- Persisted for one year basing drafts of AWP content on prevailing Brazilian and Colombian legislation for insertion into general work at heights legislation.
- In 2011, “Norma Oficial Mexicana” (NOM)-009-STPS was published
- From this, the Ministerio de Trabajo created “DC5” permits for fleet owners (4K valid in country today) and “DC3” permits for machine operators (non-AWP specific).
- NOM-009 is generally applied today by multinational construction companies on “AAA” jobsites who request DC5 compliant fleets



# Regional Legislative Summary



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- Six countries with specific work at heights legislation or work at heights elements within general safety regulations. (ex. Panama)
- 212 total pages of safety legislation or related state regulation on work at heights
- 90% of 2017 AWP sales to Latin American countries covered by this legislation.
- Limited effective enforcement of the above at most levels of government and safety oversight.



# Pending Assignments for the Region



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- Organization of additional regional or sector lobby groups comprised of manufacturers (see Brazil and Mexico experiences), rental companies and selling dealers along with industry associations
- Development of legislation in countries or trading blocs where this is currently lacking
- Bolstering of legislation which currently exists to add detail to requirements, applications and penalties for non-compliance.
- Simplification and standardization of legislation where excessive or not applicable
- **Seek enhanced enforcement at all levels, municipal, state and federal**



# What We Can Expect to Come from These Efforts



[www.ipaf.org](http://www.ipaf.org)

- Enhanced productivity for much needed regional development efforts
- Increased AWP rental and sales volumes especially in construction applications
- Parallel growth of related parts and service businesses
- **Greater safety for workers involved in all job tasks carried out at heights region-wide!**





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# Upcoming Safety Technology from JLG



# Self-Leveling Chassis



[www.ipaf.org](http://www.ipaf.org)



## BOOM LIFTS

SAFETY AND PRODUCTIVITY ENHANCEMENTS WITH CHASSIS LEVELING SYSTEM



# Self-Leveling Chassis



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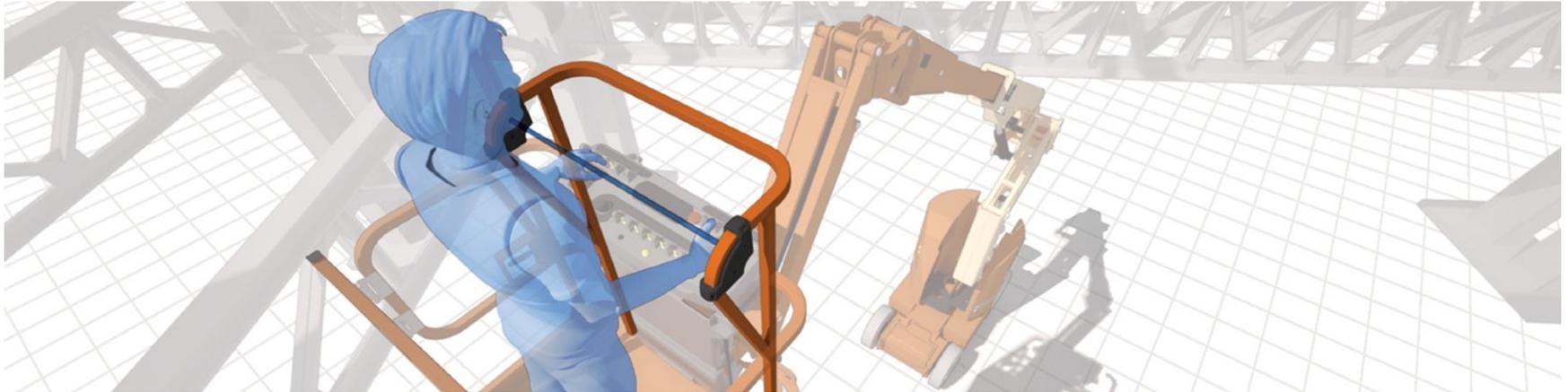
- **Realtime Leveling**
  - Automatically levels machines in longitudinal direction, lateral direction or both
  - Reduces three wheeling, allows machine to maintain traction
- **Up to 10° Slopes**
  - Increases uptime, reduces repositioning
  - Eliminates need to grade worksite around building being worked on
- **Easy Transport**
  - Chassis can be lowered to reduce total height of the machine



# SkyGuard



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- SkyGuard becomes activated when an operation interrupts the beam of light across the control panel
- When activated, SkyGuard:
  - Stops the function in use at time of activation and activates a horn
  - Momentarily reverses the function in use at the time of activation
  - A flashing strobe is optional, but will go off when SkyGuard is activated



# Variable Tilt



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# Variable Tilt



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- Variable tilt provides the ability to work at limited height on slopes
- Displays “zone” the machine is in to inform operators why they can or cannot elevate
- Increased working envelope vs. competitive units
- Reduces service calls for machines not elevating



# SmartLoad Technology



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# SmartLoad Technology



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- Automatic Attachment Recognition
  - Allows the telehandler to recognize attachments on the end of the boom and displays the appropriate load chart
- Load Management System (LMIS)
  - Graphically depicts the location of the load within the load chart, providing an indication of compliance to the operator and prevents the operator from violating the boundaries of the chart
- Load Stability Indicator (LSI)
  - Works in conjunction with LMIS to limit operation when the load is nearing the maximum capacity indicated on the load chart



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