



Extension Boom Instruction Manual and Work Safe Program

MODELS:

CE20
C60-TH & CE60-TH
C100 & CE100

1620 Oakland Avenue, Kansas City, MO 64126
Toll Free: 1-800-821-7563
www.AMHAttachments.com



Compliance Professionals, Inc.

Robert J. Lockett, Regional Director of Operations

February 22, 2008

Mr. Ross Gault, Sr., President & CEO
Arrow Material Handling Products.
1620 Oakland
Kansas City, Missouri 64126

Dear Mr. Gault,

After a review of the blueprints and specifications of the Arrow Material Handling Products Boom series (truss, jib, and extendable) they are, in our opinion, fully compliant with the intent of applicable OSHA standards.

We have reviewed the owner's manual, operating instructions, and suggested compliance programs for these booms and their variants. In our opinion, if the end user chooses to explicitly follow the recommendations and instructions contained therein in their entirety, the end user should be able to correctly and safely use these booms for their designed purpose and remain within OSHA compliance during daily use.

Thank you for the opportunity to be of service to your firm.

Most sincerely,

Robert J. Lockett



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Extension Boom Instruction Manual and Work Safe Program

American Steel American Muscle American Pride

Thank you for selecting an ARROW attachment!

Your Extended Boom has:

- Been designed by an in-house engineering department using registered Professional Engineers;
- Been built with materials our purchasing department has gone to great lengths to ensure the materials specified for your Extended Boom are the best obtainable and meet all applicable specified standards (ANSI, ASTM, ASQC, and/or MIL-SPEC);
- Been entirely manufactured according to print using OSHA regulations by a trained and experienced workforce located in the heartland of America;
- Been built right and built to last with you and your employee's safety in mind.

We can and do control every aspect of how an extension boom is engineered and how it's built. But we can't control how it's used after it leaves our plant.

OSHA compliance.... ARROW created this Extension Boom instruction manual and Work Safe Guide to assist you in understanding OSHA guidelines for safe use and to conform to those guidelines.

Yes, should you choose to use it, there will be some paperwork to fill out and keep on file. There will be some inspections to perform... but would you spend ten, yes, TEN minutes a day to go a long, long way to being truly OSHA compliant when using our attachment?

We know you would be totally OSHA compliant if only you knew how. We will help you along the way. It's not hard....

Spend that same TEN minutes going through this program by reading these instructions and looking at the forms that have been created for you... and you'll have a safer workplace in which to use our Extension Boom.

It's vitally important to know what to check on your equipment. But it's even more vitally important for you to have a written program in place to do so and *be able to demonstrate that you have been doing the inspections.*

There are two portions of the OSHA code that pertain directly to extended booms. They are:

- *inspection of the Extended Boom itself*
- *inspection of the forklift used to lift the boom*

We have created a punch list of inspection criteria for each of these areas. These are only **SUGGESTED** lists and may certainly be modified for your specific operation. Should you have a question about them, we recommend you call your local area OSHA office and ask for the duty inspector. They really are quite eager to help you. You do NOT have to give them your name or your company name nor do they have caller ID – so relax! If you wish, you may also call your ARROW authorized reseller, or ARROW's product assistance department at 1-800-821-7563, extension 383, we'll get back to you with the correct answer to your question.

Now, look at the Daily Extended Boom Inspection Criteria (Attachment A). These are the items that we require to be inspected EVERY shift before the lift is used. If it is not used that day, no inspection need be done.

It is **STRONGLY** suggested that the Daily Inspection Log (Attachment B) be completed on a daily basis as you complete the inspections. Without this log, you will have a very difficult time convincing anyone the inspections were done. If it's properly filled out, someone else is going to have a tough time proving you didn't perform the inspection. Which would you prefer?

Once the sheets become full, **THEY SHOULD BE FILED AWAY IN YOUR COMPANY ARCHIVES AND KEPT FOR A MINIMUM OF TEN (10) YEARS.**

We have created similar sheets for your forklift(s) (Attachment B). Additionally, there is a Extension Boom training acknowledgement form (Attachment C) you can use with employees after reviewing the Extension Boom Work Safe manual.

Thank you again for choosing an **ARROW** attachment. We provide this Work Safe program as part of our commitment to providing the best equipment backed by the most comprehensive support program in the industry.



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Recommended Operating Rules for Extended Booms

DO NOT OPERATE THIS EQUIPMENT UNTIL:

- The lift vehicle manufacturer has approved it to be used with extended booms.
- The owner/operator manual is read and thoroughly understood.
- ALL supplied safety restraints and safety pins are applied before use.
- You are familiar with all applicable government regulations.
- Your personnel are trained in these regulations and licensed where applicable.
- Your personnel are trained in the use of this equipment.

GENERAL OPERATING RULES:

- An inspection of the Extension Boom must be made before ***EACH SHIFT*** (reference daily inspection criteria).
- The Extension Boom must never be loaded beyond the manufacturer's specified load limits. This information may be found in the Operator's Manual and/or applicable decals and/or identity plates located on the unit.
- Forklifts used to hoist the Extension Boom must be fully OSHA compliant.
- The lift capacity established by the manufacturer of the industrial truck used to lift the Extension Boom shall never be exceeded.
- The forklift operator must be properly licensed and trained in the use of the Extension Boom.

- The forklift driver must remain at the controls of the forklift, with the engine running, at all times when the Extension Boom is under load.
- When placing material into a wheeled vehicle, the receiving vehicle or trailer MUST be firmly chocked and all braking systems set.
- The wearing of hardhats and steel toed footwear is recommended by all personnel within the immediate area when the Extension Boom is in use.
- Should there be the possibility of objects falling from the Extension Boom, the manufacturer recommends the establishment of a Controlled Access Zone (CAZ) directly underneath the boom under load and extending outward ten (10) feet in all directions.
- No modifications may be made to either the hoist vehicle and/or the Extension Boom without the express written consent of the manufacturer after their review and written reply of approval by a registered Professional Engineer (P.E.).
- Unauthorized (other) personnel are expressly forbidden from attaching the Extension Boom and/or utilizing the forklift with the Extension Boom affixed.
- It is suggested that personnel using the Extension Boom be required to read these operating instructions and sign the manufacturer's release before they are allowed to use the equipment. This signed release should be retained in their respective personnel files for the duration of their employment.

ELECTRICAL HAZARDS

Adequate clearance must be maintained between the Extension Boom and any aerial electrical lines. All lines are to be considered energized unless they are Locked Out and Tagged Out by authorized personnel. The minimum standoff distance is recommended to be ten (10) feet.

COLLISION HAZARDS

When in use, adequate clearance between the Extension Boom and physical objects must be maintained.

The use of at least one (1) trained spotter is highly recommended to assisting the safe transport of lifted loads.

ENVIRONMENTAL HAZARDS

The Extension Boom shall not be used during periods of high winds or storms unless an authorized person has approved of such use.

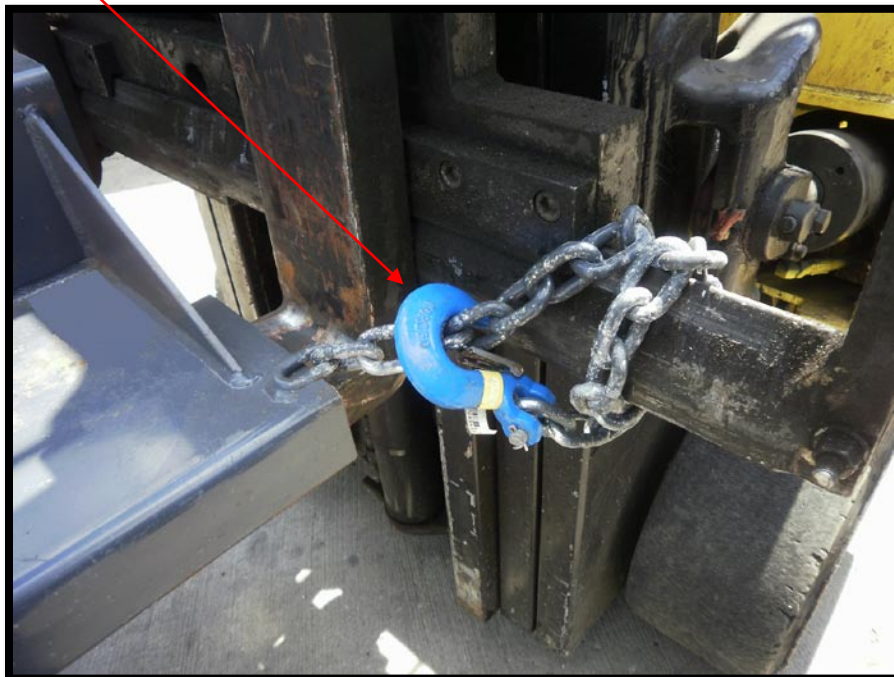




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DAILY BOOM INSPECTION CRITERIA

1. Visually inspect the Extension Boom for physical damage, corrosion, bending, and freedom of extension (if so equipped), and overall cleanliness;
2. Check welds for cracking or breaks.
3. Check each lift mount hole for elongation or cracking.
4. Check safety chain for secure fastening, no damage, cracking, or elongation of links or hook.



5. Check safety pin(s) for proper operation and no sign of cracking or bending;



6. If equipped with lifting hook, check lifting hook for throat spreading ($>15\%$), lateral twisting ($\geq 10^\circ$), or cracking.

7. If equipped with lifting hook, check condition of throat safety latch.



Daily Forklift Inspection

Battery Powered

- Hydraulic Fluid leaks _____
- Hydraulic Hoses _____
- Hydraulic Fluid level _____
- Battery Corrosion or Leaks _____
- Damage to Forks _____
- Top Clip Retaining Pin and Heel _____
- Overhead Guard _____
- Brakes _____
- Parking Brakes _____
- Tires in good condition _____
- Seat Belt Condition _____
- Horn Operative _____
- Back Up Alarm _____
- Lights operative _____
- All Gauges Operative _____
- All markings/ID plates legible _____
- Forklift cleanliness _____
- ALL controls working smoothly _____

Daily Forklift Inspection

Petrochemical Powered

- Hydraulic Fluid leaks _____
- Hydraulic Hoses _____
- Hydraulic Fluid level _____
- Petrochemical leaks _____
- Damage to Forks _____
- Top Clip Retaining Pin and Heel _____
- Overhead Guard _____
- Brakes _____
- Parking Brakes _____
- Tires in good condition _____
- Seat Belt Condition _____
- Horn Operative _____
- Back Up Alarm _____
- Lights operative _____
- All Gauges Operative _____
- All markings/ID plates legible _____
- Forklift cleanliness _____
- ALL controls working smoothly _____



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Extension Boom Training Acknowledgement Form

Company _____ Date _____, _____

Name _____ Dept _____

I acknowledge having completely read the Operating Instructions/Safety Manual and fully understand its contents. I understand that I am to contact my supervisor on any work safety related issue of which I am not absolutely sure how to proceed.

I understand this company's commitment to my personal safety and well being while on the job.

I will, to the best of my ability, work safely to protect myself, my fellow workers, and the company assets at all times.

Employee Signature

Management Signature