

Link-Belt[®]

C R A N E S

PREFERRED TECHNICIAN TRAINING
CUSTOMER TECHNICIAN TRAINING





A message from Link-Belt

Welcome to Link-Belt Training. We are committed to providing quality training experiences.

Our goal is to provide the necessary skills, knowledge and abilities to Link-Belt crane service personnel, so that they can perform their job effectively and efficiently. We provide online training resources and classroom courses with hands-on troubleshooting scenarios.

The dedicated training staff here at Link-Belt strives to ensure that you have the most effective and enjoyable learning experience as possible. Our students can expect a comfortable training atmosphere with our knowledgeable instructional staff, access to modern Link-Belt crane models, quality accommodations and our Kentucky hospitality.

We look forward to seeing you in class and thank you for your interest in Link-Belt training.

Contact Information

Training Coordinator
Phone: (859) 264-6285
Email: JMcintyre@linkbelt.com

Link-Belt Cranes
Phone: (859) 263-5200
Address: 2651 Palumbo Dr. Lexington, KY 40509
www.linkbelt.com

Link-Belt Technician Training

The Link-Belt Preferred Technician Training program is provided to meet the needs of technicians who service Link-Belt cranes. Technicians who work for a company that owns at least one Link-Belt crane are eligible to enroll. Courses available include:

Preferred Technician Training:

- Level 1: Online Basic Training
- Level 2: General Knowledge & Skills
 - Telescopic RTC or Telescopic HTC Course
 - Lattice Course
- Level 2.1: Advanced Knowledge & Skills
 - Large RTC Course
 - ATC Course
 - TCC Course

Program Fee

There is a one-time administrative fee of \$537 per student to enroll in the Preferred Technician Training program. This enrollment fee covers the online training and all of the instructor-led training courses at the factory.

Program Completion

To complete the Preferred Technician Training program the technician must complete the following courses:

- Level 1.0 Online Training
- Level 2.0 Telescopic - RTC or Level 2.0 Telescopic - HTC
- Level 2.1 Large RTC, Level 2.1 ATC **or** Level 2.1 TCC
- Level 2.0 Lattice

Program Registration

Enrollments into the Preferred Technician training require approval through a Link-Belt Distributor. To enroll contact your local Link-Belt Distributor and provide the following information:

- Technician's Name
- Technician's Email Address
- Company Training Coordinator's Name
- Company Training Coordinator's Email Address

Upon enrollment into the program, students will receive an email with the details on how to begin the Level 1 online training.

Online Training Access

You must be enrolled in the Preferred Training Program to access the online training through our Link-Belt Preferred website.

www.Linkbelt.com

1. Click the "Sign in" button on the upper right side of the main page
2. Sign in with your user name and password
3. Click "Support," then "Training"
4. Click "Online Training" on the left hand side to access the online training site

Note: Only people who are enrolled in the Preferred Technician Training can see the "Online Training" menu option.

Course Registration

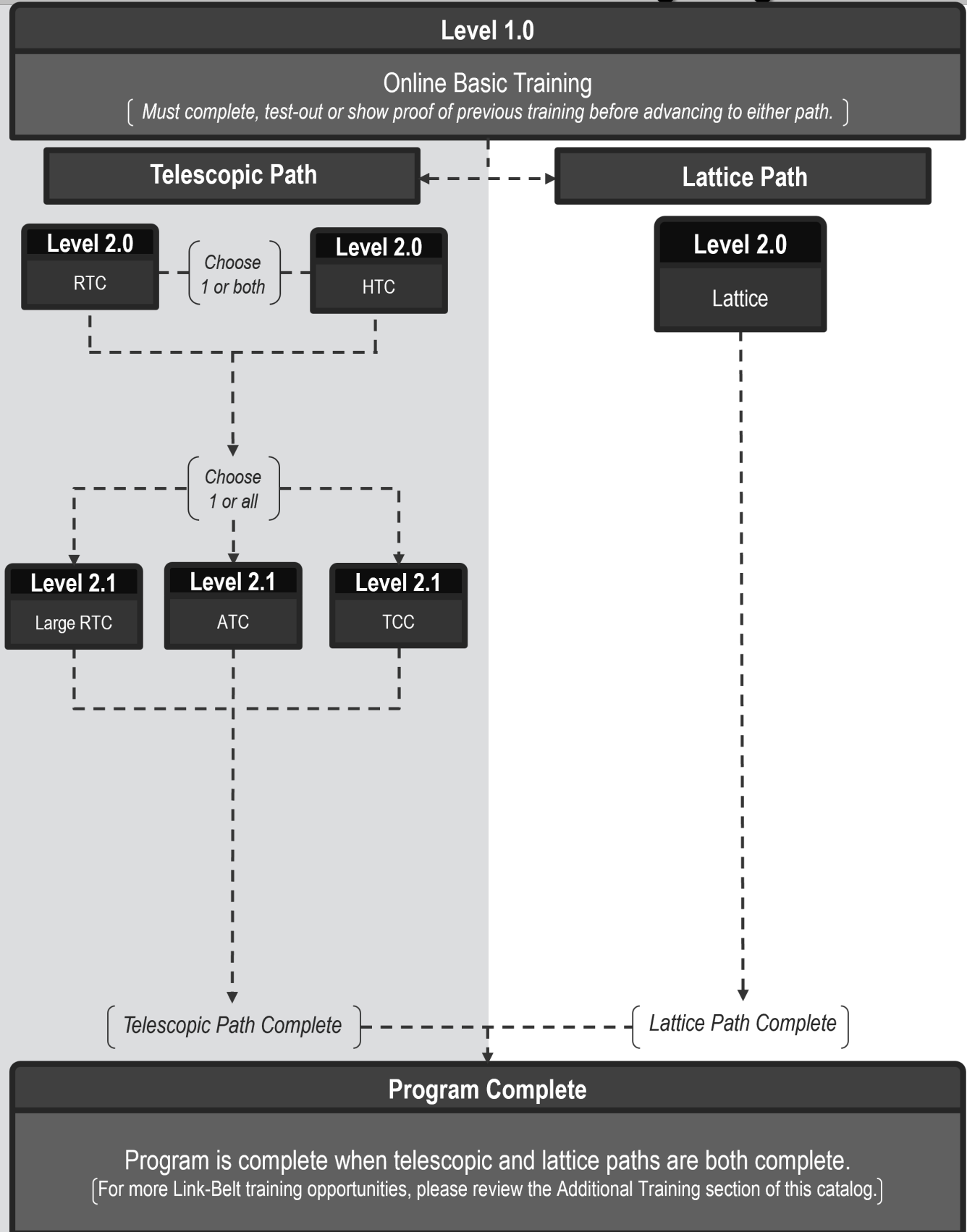
Once the technician has completed the Level 1 online training, they can register for the instructor-led training held at the Link-Belt factory in Lexington, Kentucky. The course schedule is posted on the Link-Belt Preferred website "Training" tab.

To register for instructor-led training, a dealer training coordinator will need to complete the online enrollment request form on behalf of the technician.

Courses are confirmed 30 to 45 days in advance. Do not make travel arrangements before the course is confirmed due to the possibility of a cancellation.

Once the course is confirmed, the technician registered for the course and their training coordinator will be emailed a confirmation letter with class and hotel information.

Preferred Technician Training Program



Level 1: Online Training

The first level of our technician training is taught through a series of online courses. The Level 1 courses help ensure that every technician attending factory training has the same base of knowledge and is ready for the technical depth of our training courses. Technicians must pass or complete all the assigned online learning courses to complete Level 1. Once the Level 1 online courses are completed, the technician qualifies to register for the instructor-led training sessions at the Link-Belt factory in Lexington, Kentucky.

COURSE DESCRIPTIONS

Basic Electrical

Estimated completion time: 2 hours or Test out

- Ohm's Law
- Wiring and Symbols
- Introduction to Electrical Circuits
- Using a Multimeter

Basic Mechanical

Estimated completion time: 4 hours or Test out

Fundamentals of Mechanics

- Actuators
- Clutches
- Brakes
- Bearings
- Gears
- Belt/Chain Drives
- Couplings

Basic Hydraulics

Estimated completion time: 4 hours or Test out

- Introduction to Hydraulics
- Hydraulic Pumps
- Hydraulic Actuators
- Hydraulic Valves

Crane Nomenclature

Estimated Completion Time: 60 minutes

- Link-Belt Cranes
- Link-Belt Serial Numbers
- Terms for Sections of a Crane
- Boom Types and Components
- Upper Components
- Carrier Components

Link-Belt Cranes General Lube and Maintenance

Estimated Completion Time: 30 minutes

- Link-Belt Crane Operator's Manual General Information
- General Lubrication Information
- Overview of Lubrication and Maintenance Charts

Link-Belt Crane Operating Safety Series

Estimated Completion Time: 90 minutes

- Safety Decals and Captions
- General Safety Overview
- Working Near Power Lines
- Crane Safety
- Luffing Attachment Operation
- Personnel Handling Guidelines

Link-Belt Crane Rating Manual (CRM)

Estimated Completion Time: 30 minutes

- Overview of CRM Notes Section
- Overview of CRM Charts
- Utilizing the CRM Charts

Link-Belt Pulse 2.0 RCL Navigation

Estimated Completion Time: User Decides

- 120HT Example
- TCC-800 Example

Link-Belt Schematic Symbol Assessment

Estimated Completion Time: Under 20 minutes

- Gives the student an understanding of what symbols are used during course instruction and troubleshooting.

Link-Belt CANBus Electronics

Estimated Completion Time: 50 minutes

- What is CANBus?
- CANBus Hardware
- System Working vs Functioning
- Importance of Resistors



Level 2: Factory Training

Level 2 technician training includes instructor led training held here at the Link-Belt factory in Lexington, KY. Level 2 consists of two distinct categories; telescopic cranes and lattice cranes. Within the telescopic category, there are two primary courses and three secondary courses. Technicians must complete atleast one of the primary courses before they are eligible to enroll in the secondary courses.

LEVEL 2 COURSES:

Primary Courses (Your choice of one or both):

- Level 2.0 Telescopic - RTC
- Level 2.0 Telescopic - HTC

Secondary Courses (Your choice of one or all):

- Level 2.1 Telescopic Crawler Cranes
- Level 2.1 Large Rough Terrain Cranes
- Level 2.1 All Terrain Cranes

Primary Course:

- Level 2.0 Lattice

COURSE DESCRIPTIONS

Level 2.0 Telescopic - RTC or HTC

Class Size: Minimum 4/Maximum 8

Duration: 4 days

Prerequisite: Successful completion of Level 1.0 Online Training

Models Covered: Greer, Pulse and Pulse 2.0 cranes

Topics covered include:

- Machine Overview & Set-Up
- Fly Erection
- Hydraulics
- Electrical
- Full Power & Latching Booms
- RCL Navigation
- Troubleshooting

Level 2.1 Telescopic Crawler Cranes (TCC)

Class Size: Minimum 4/Maximum 8

Duration: 3 days

Prerequisite: Level 2.0 Telescopic - RTC or Level 2.0 Telescopic - HTC

Models Covered: TCC-500, 550, 750, 800, 1100, 1200, 1400, 2500

Topics covered include:

- Assembly/Disassembly
- Linde Pump Controllers
- IQAN Engine Display
- Hydraulic Systems
- Electrical Systems
- TCC Troubleshooting and Diagnostics

Level 2.1 Large Rough Terrain Cranes (RTC)

Class Size: Minimum 4/Maximum 8

Duration: 3 days

Prerequisite: Level 2.0 Telescopic - RTC or Level 2.0 Telescopic - HTC

Models Covered: RTC-80110 II / 80130 II / 80150 II

Topics covered include:

- Hydrostatic Travel
- Suspension
- Closed Loop Winch Circuits
- Parker IQAN Control systems
- Linde DVC 10 Pump Control Module
- RTC Troubleshooting and Diagnostics

Level 2.1 All Terrain Cranes (ATC)

Class Size: Minimum 4/Maximum 8

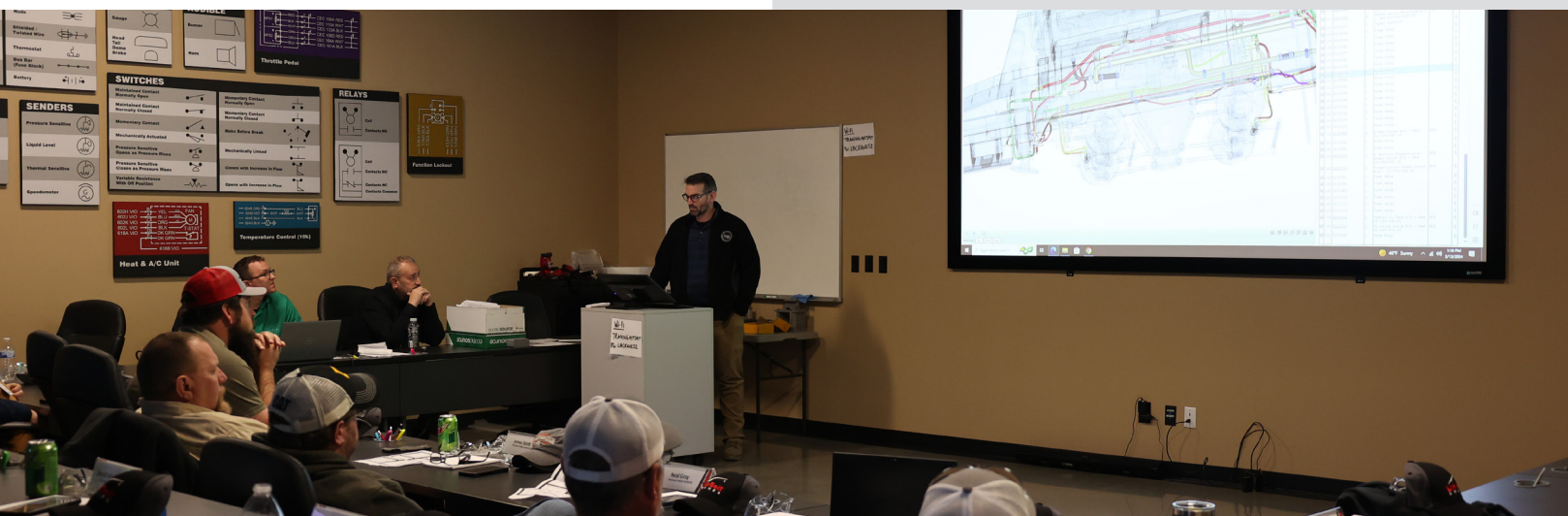
Duration: 3 days

Prerequisite: Level 2.0 Telescopic - RTC or Level 2.0 Telescopic - HTC

Models Covered: 175AT, ATC-3210, ATC-3275, HTC-3140

Topics covered include:

- Hydraulic suspension/outriggers
- Rear steer
- ATC fly erection
- Closed loop winch circuits
- Parker IQAN control systems
- ATC troubleshooting and diagnostics



Level 2: Factory Training, Cont.

Level 2.0 Lattice

Class Size: Minimum 5/Maximum 12

Duration: 4.5 days

Prerequisite: Successful completion of Level 1.0 Online Training

Models Covered: H, HII, H5 and HSL lattice cranes

Topics covered include:

- Machine Overview & Set-up
- Machine Assembly/Disassembly
- Boom Assembly/Disassembly
- 2 Shoe Clutch Theory
- HYLAB Hydraulics
- HYLAB Electrical
- SML-10 Operations and Troubleshooting
- HSL Hydraulics
- HSL Electrical
- HSL Winch
- HSL-1 Operations and Troubleshooting
- Crane Rating Manual & Lift Concepts

Additional Training

Boom Inspection and Welding Course

Target Audience: Crane Technicians and Welders

Class Size: Minimum 4/Maximum 6

Duration: 4.5 days

Prerequisite: None

Materials Fee: \$300

The Boom Inspection and Welding class is intended to familiarize participants with inspection of telescopic box and formed boom, lattice boom, lattice jib and telescopic fly attachments. Participants are also given the opportunity for hands-on learning of proper welding techniques for lattice boom, jib and/or telescopic fly repair.

This class **does not** provide welding certification.

Topics covered include:

- Boom Repair Manual
- Lattice Boom Inspection
- Telescopic Boom Inspection
- Lattice Boom Repair/Welding

Additional Training, Cont.

All Terrain Crane (ATC)

Operator/Technician Orientation

Target Audience: Crane Owners/Crane Operators

Class Size: Minimum 5/Maximum 10

Duration: 2-3 days

Prerequisite: Company must be receiving an ATC.

The ATC class is intended to familiarize operators, oilers and technicians with carrier and upper operations and practices that are unique to Link-Belt ATC cranes. At the end of the course students should be able to properly set the crane up for a job, break the crane down and prepare it for travel after a job.

Topics covered include:

- Intarder Operation
- Suspension Operation
- Rear Steer Operation
- Outrigger Operation
- Crane Rating Manual Familiarization
- Latching Boom Familiarization
- Pulse Familiarization
- Electronic Crane Controls
- Fly Erection
- Emergency Mode Operation
- Engine Regeneration



Travel and Lodging

Traveling to Link-Belt

DRIVING

Link-Belt Cranes is located in Lexington, Kentucky. Drivers can get to Lexington via Interstate 75 from the north or south and Interstate 64 from the west or east.

FLYING

The Blue Grass Airport is located within Lexington and is serviced by Allegiant Air, American Airlines, Delta Air Lines, United Airlines and US Airways. For more information about the Blue Grass Airport please visit <http://www.bluegrassairport.com>.

LODGING IN LEXINGTON

Link-Belt has partnered with a local hotel to provide rooms for our students. The student's employer is responsible for the hotel cost. Link-Belt will contact the hotel to reserve rooms and send the confirmation number to each student.

TRANSPORTATION

Students are responsible for their own transportation while they are attending training. Link-Belt will provide a shuttle service for the class on evenings when hospitality events and dinners are scheduled.



Link-Belt Cranes

2651 Palumbo Drive

Lexington, Kentucky 40509

Training Phone: (859) 264-6285

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