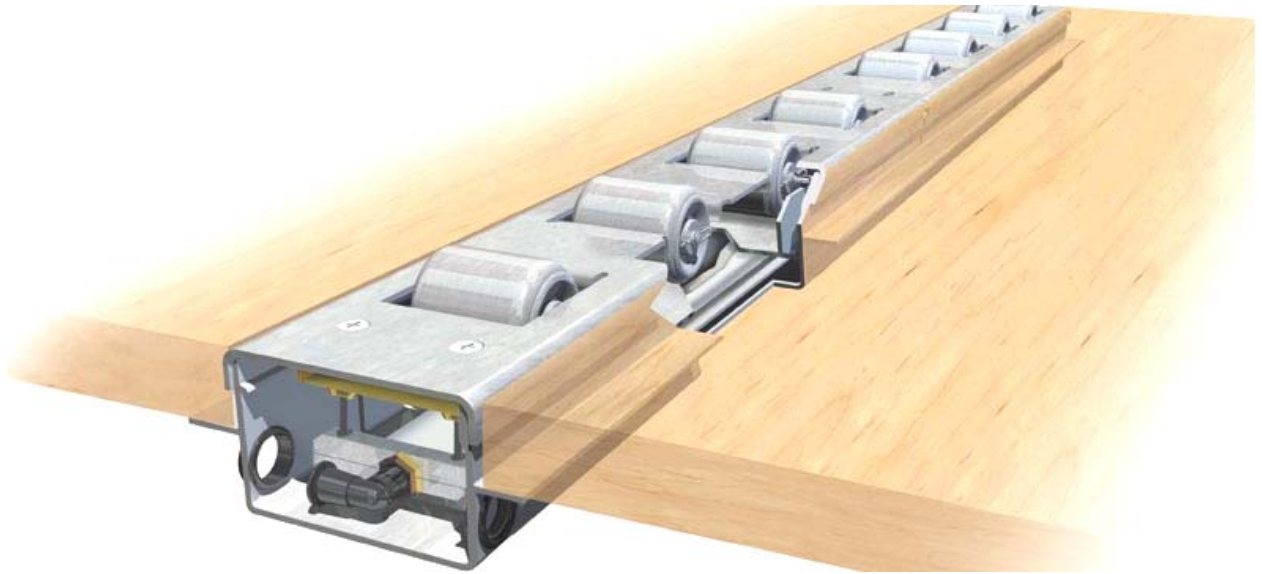


RETRACT-A-ROLL® II



Installation Manual 62040-10



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Chapter 5	32 – 38	1 July 2001
Chapter 6	39 – 49	1 July 2001
Notes	50 – 51	1 July 2001
Back Page	51	1 July 2001

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Table of Contents

	<u>Page</u>
<u>Chapter 1</u> <i>Quick Tour</i>	7
1.1 What is Retract-A-Roll II?	7
1.2 System Overview	8
1.3 Information Resources	10
<u>Chapter 2</u> <i>Planning the Installation</i>	11
2.1 Suggested Installation Sequences	11
2.2 Checking Inventory	11
2.3 Inspecting the Vehicle	13
2.4 Ordering the Installation Kit	13
2.5 Contacting Ancra Customer Support	13
<u>Chapter 3</u> <i>Installing Conveyors and Decals</i>	14
3.1 Preparing Vehicle Interior	14
3.2 Inspecting Floor Height	15
3.3 Inspecting for a Level Surface	15
3.4 Figuring the Conveyor Lane Spacing	16
3.5 Aligning Conveyors	17
3.6 Attaching Conveyors	18
3.7 Installing Structural Support	19
3.8 Installing Pallet Stops	19
3.9 Making Run-Out Channels	20
3.10 Attaching Battens	21
3.11 Painting the Trailer Interior	22
3.12 Installing Warning Decals	22
<u>Chapter 4</u> <i>Installing System Control Kit, Air Tank Kits, Fittings Kit</i>	23
4.1 Recommended Locations	23
4.2 Installing Systems Control Kit	23
4.3 Installing Air Tank Kits	24
4.4 Installing Fittings Kit	25
4.5 Connecting to Vehicle's Air Supply	30
4.6 Inspecting System	30
4.7 Apply Caulking and Undercoating	30

<u>Chapter 5</u>	<i>Inspecting for Proper Installation and Operation</i>	32
5.1	Recommended Inspections	32
5.2	Warnings	32
5.3	Inspecting for Leaks	32
5.4	Inspecting Lane Control	35
5.5	Cover Plate Removal	35
5.6	Inspecting System Clearances	37
5.7	Inspection System Attachment	37
<u>Chapter 6</u>	<i>Illustrated Parts Lists for Installation</i>	39
6.1	Operating and Maintaining the System	39
6.2	Using the Parts Lists	39
<u>Notes</u>		50

List of Figures

	<u>Page</u>
Figure 1-1 Conveyors Installed	7
Figure 1-2 Typical Conveyor	7
Figure 1-3 Roller Operation	7
Figure 1-4 Components	8
Figure 1-5 Typical System	8
Figure 1-6 System Operation	9
Figure 1-7 Resources	10
Figure 2-1 System View	11
Figure 2-2 Installation Kit	13
Figure 3-1 Step Batten Installation	15
Figure 3-2 Center Line	16
Figure 3-3 Examples of Clearances – (6) Lane Systems	17
Figure 3-4 Identifying Conveyors	18
Figure 3-5 Aligning Connectors	18
Figure 3-6 Spacing for Pallet Stops	20
Figure 3-7 Example of Run Out Channels	21
Figure 4-1 Kit Locations	23
Figure 4-2 Control Box Installation Bracket	24
Figure 4-3 Air Tank Mounting Bracket	24
Figure 4-4 Valves and Lanes	25
Figure 4-5 Attaching to Control Box	26
Figure 4-6 Attaching Fittings to Conveyors (Cross-section)	27
Figure 4-7 Using Tube Cutter	28
Figure 4-8 Installing Tubing in Fittings	29
Figure 4-9 Install Fittings	29
Figure 4-10 Caulking Application	31
Figure 5-1 Operating Track Isolation Valves	33
Figure 5-2 Cover Plate Removal	36
Figure 6-1 Typical System	39
Figure 6-2A Retract-A-Roll II 53' System Layout	41
Figure 6-2B Retract-A-Roll II 24' System Layout	43
Figure 6-2C Retract-A-Roll II 22' System Layout	45

List of Figures, cont...

Figure 6-2D	Retract-A-Roll II 26' System Layout	47
Figure 6-3	Air Tank Kit, Part No.: 60169-10	49

List of Tables

	<u>Page</u>	
Table 2-1	Installer-Supplied Equipment	12
Table 3-1	Checklist for Preparing Trailer Interior	14
Table 4-1	Tips for Fittings Kit	27
Table 5-1	Condensed Inspection – Clearances	37
Table 5-2	Condensed Inspection – Attachment	37
Table 6-2A	Parts List for Retract-A-Roll II 53' System	42
Table 6-2B	Parts List for Retract-A-Roll II 24' System	44
Table 6-2C	Parts List for Retract-A-Roll II 22' System	46
Table 6-2D	Parts List for Retract-A-Roll II 26' System	48
Table 6-3	Air Tank Kit, Part No.: 60169-10	49

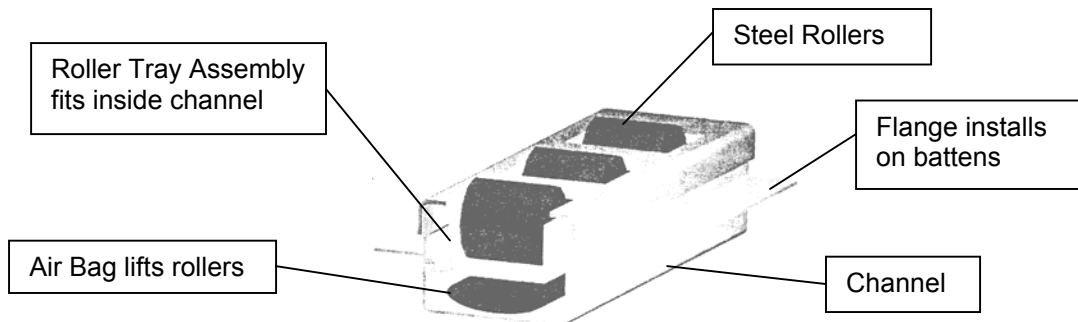
CHAPTER 1 QUICK TOUR

Figure 1-1 – Conveyors Installed



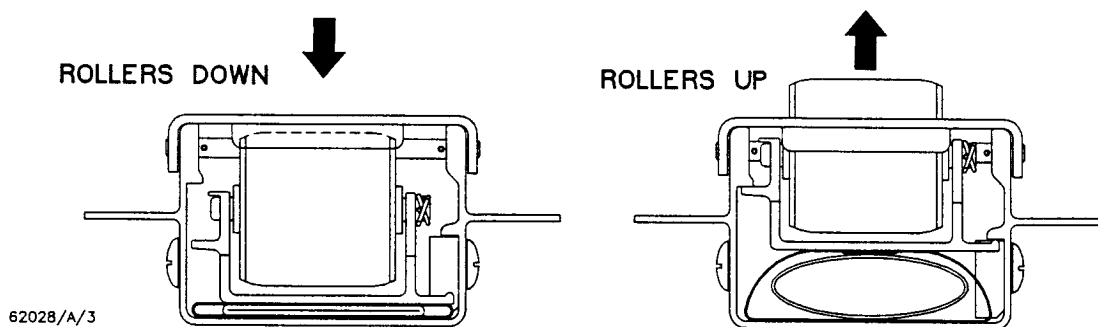
1.1 What is Retract-A-Roll® II?

Figure 1-2 – Typical Conveyor



- Raise the rollers for loading and moving cargo without a forklift.
- Lower the rollers before transport.
- System attaches to the vehicle's air supply.

Figure 1-3 – Roller Operation



1.2 System Overview

Figure 1-4 – Components

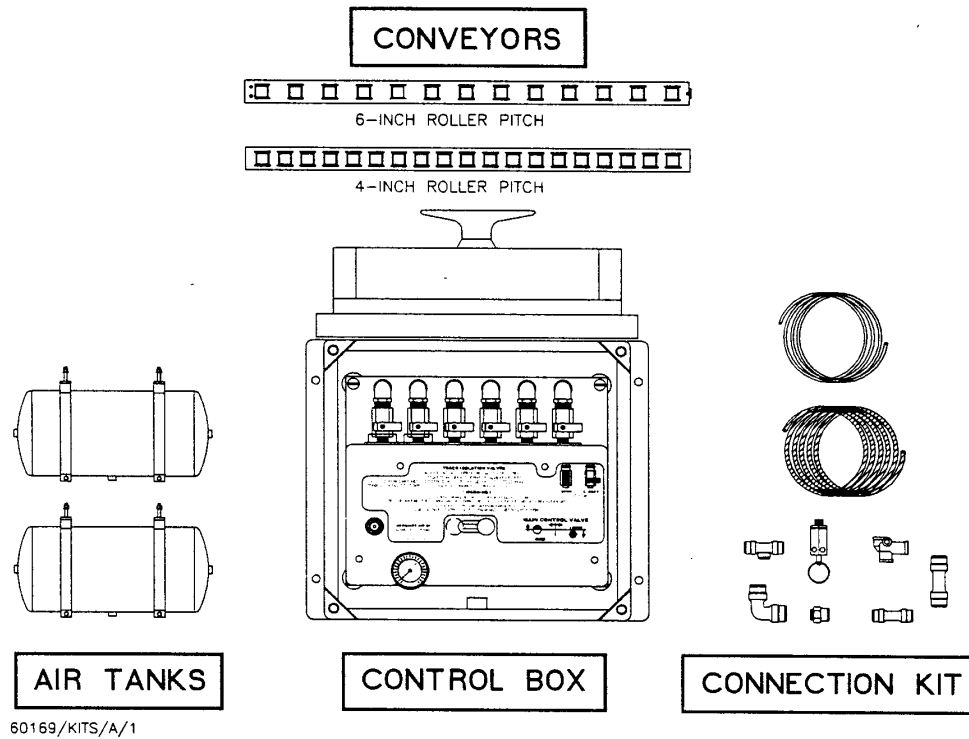


Figure 1-5 – Typical System

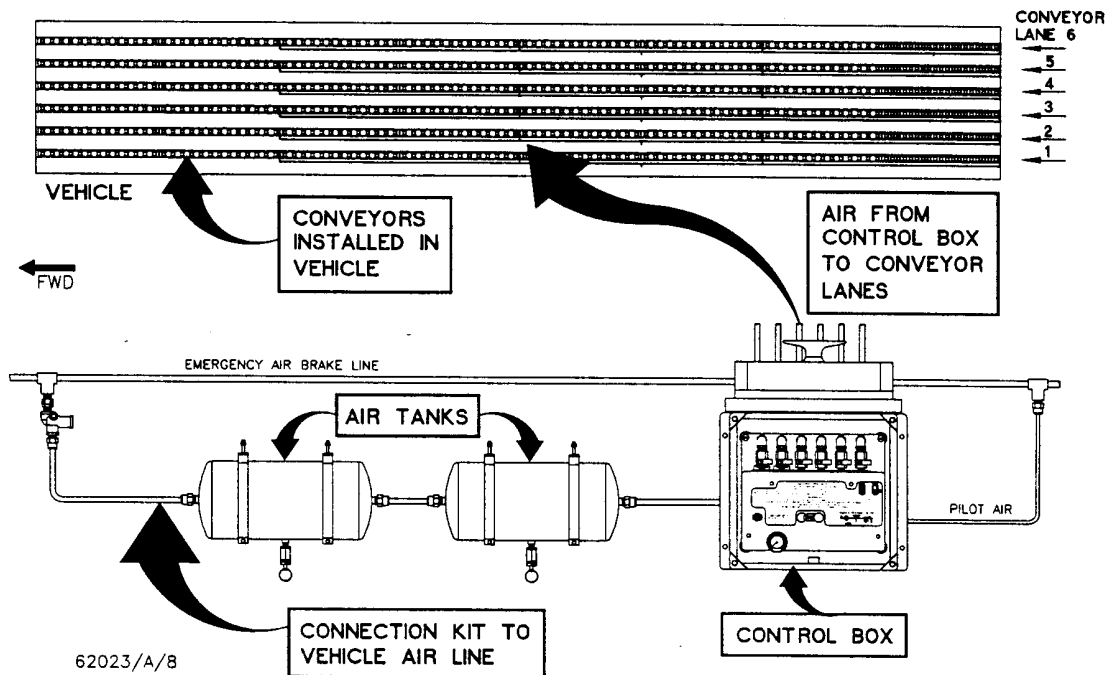
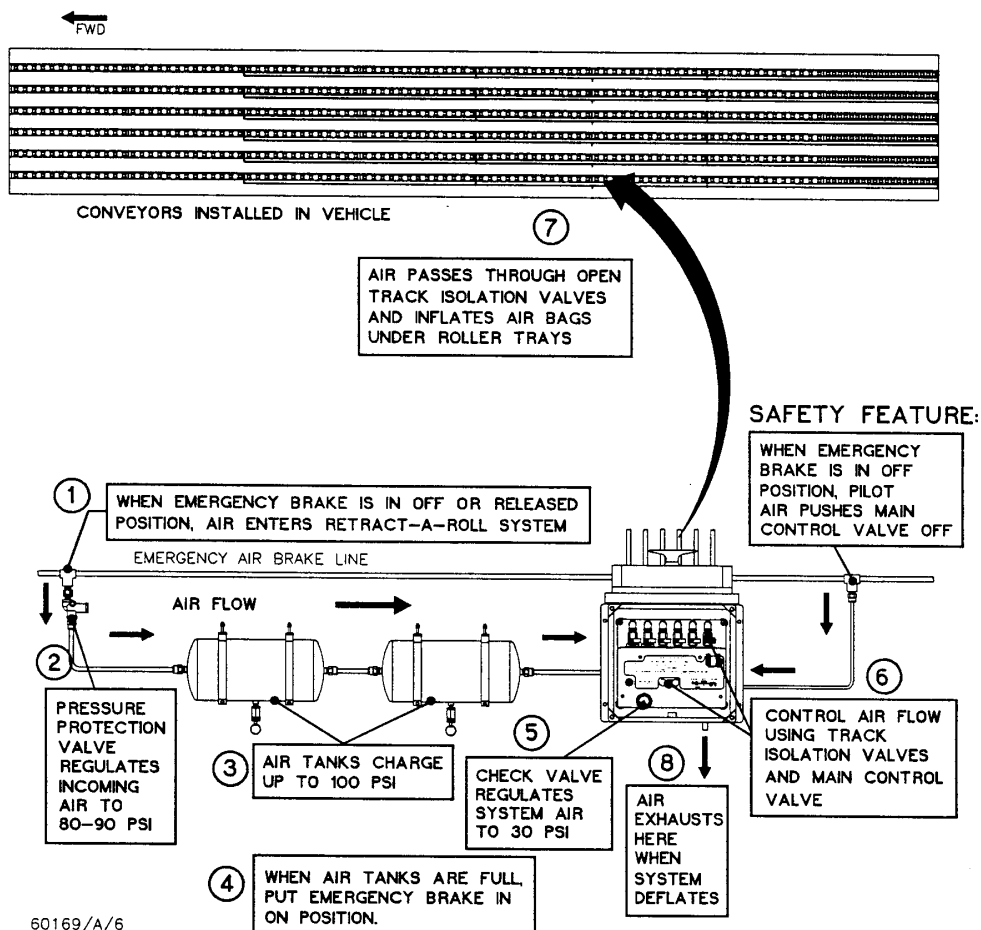


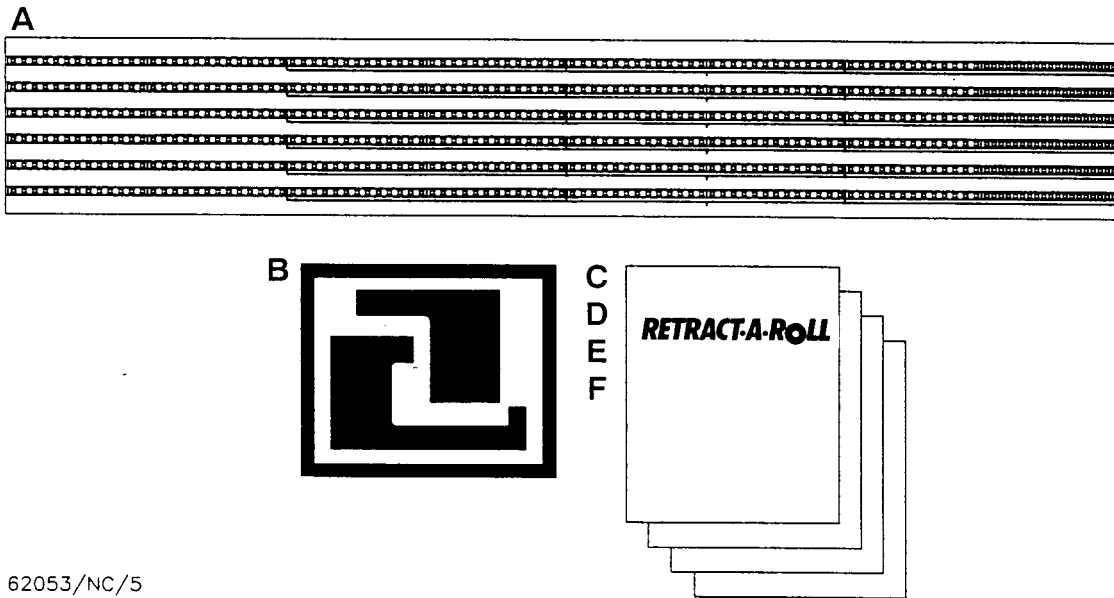
Figure 1-6 – System Operation



1. When the emergency brake is off or released position, air enters the R-A-R system.
2. When pressure is built up, the PPV valve allows air to enter the air tanks.
3. The air tanks charge up to 100 psi.
4. When the air tanks are full, set the emergency brake in the on position.
5. The check valve and regulator inside the control box regulates the air pressure to 30 psi.
6. Begin air flow to operate floor system by using the main control valve inside the control box.
7. Air passes through the open isolation valves and inflates and raises the rollers.
8. When finished, deactivate the system by using the main control valve inside the control box.
9. Air will exhaust under the control box and the system will deflate.

1.3 Information Resources

Figure 1-7 – Resources

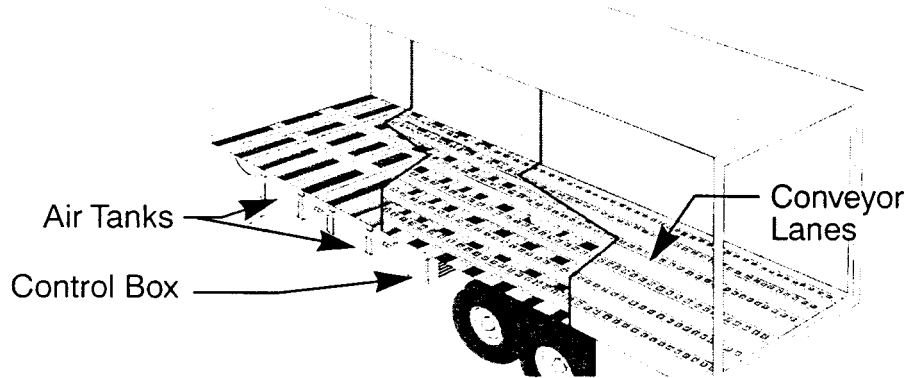


62053/NC/5

- A. Vehicle Floor Assembly Drawing (from Vehicle Manufacturer)
- B. Ancra Customer Service: Toll-free (800) 233-5138 or Local (859) 371-7272, Fax (800) 347-2627.
- C. Retractable-A-Roll® II Warranty Registration Form (62081-10)
- D. Ancra System Engineering Drawing
- E. Ancra Installation Manual (62040-10)
- F. Ancra Operations and Maintenance Manual (Sent to Operator)

CHAPTER 2 PLANNING THE INSTALLATION

Figure 2-1 – System View



Plan a successful installation by following these guidelines.

2.1 Suggested Installation Sequence

Most components can be installed at the same time. Tasks are divided into chapters for readability.

- Chapter 3: Installing Conveyors and Decals.
- Chapter 4: Installing System Control Kit, Air Tank Kits, and Fittings Kit.
- Chapter 5: Inspecting for Proper Installation and Operation.

Before starting work, Supervisors should read instructions all the way through and understand requirements.

2.2 Checking Inventory

Locate the Retract-A-Roll® II System Part Number for each vehicle. Make sure that the proper components are available for each system. Systems are identified in the Illustrated Parts Lists in Chapter 6.

For best results, and to avoid Warranty issues, Ancra recommends installing only new components and fasteners.

When receiving a shipment from Ancra, immediately report damage and discrepancies to Ancra.

Make sure that all Installer-Supplied Equipment is available.

Table 2-1 – Installer-Supplied Equipment

✓	Description	
<input type="checkbox"/>	Drawings	Vehicle Floor Assembly Drawing, from Vehicle Manufacturer, shows Retract-A-Roll® II and Installer-supplied parts.
<input type="checkbox"/>	Installation Kit	Refer to Installation Kit 62066 for applicable plates, battens, ramps, brackets, and screws. (if required).
<input type="checkbox"/>	Sub-Floor	Bridge plates, track end supports. Steel shims (if floor is not level). Battens (wood beams) (if required).
<input type="checkbox"/>	Fasteners	Fasteners (Conveyors to vehicle). Fasteners (Brackets that attach connectors and air lines to vehicle, as required).
<input type="checkbox"/>	Air Supply (Installer Supplied)	(2) “T”-Fittings (connecting to vehicle air supply). (1) Adaptor: “T”-Fitting-to-1/4”-tube. (1) Adaptor: “T”-Fitting-to-Pressure Protection Valve (1/4”). (1) Pressure Gauge: 160psi, 1psi gradients (Leak Test). Pipe Tape (all connectors). Brackets (connectors and air lines to vehicle, as required).
<input type="checkbox"/>	Pallet Stops	Purchase separately from Ancra.
<input type="checkbox"/>	Spacers	Run Out Channels.
<input type="checkbox"/>	Shop Tools	Including air compressor and pneumatic tools, welding equipment, linear measuring and marking tools, pressure measuring tools, table saw for floorboards.
<input type="checkbox"/>	Supplies	Caulking, Tape, Touch-up paint, Undercoat.
<input type="checkbox"/>	Safety	Make sure that all proper safety equipment is provided and safety procedures are followed.

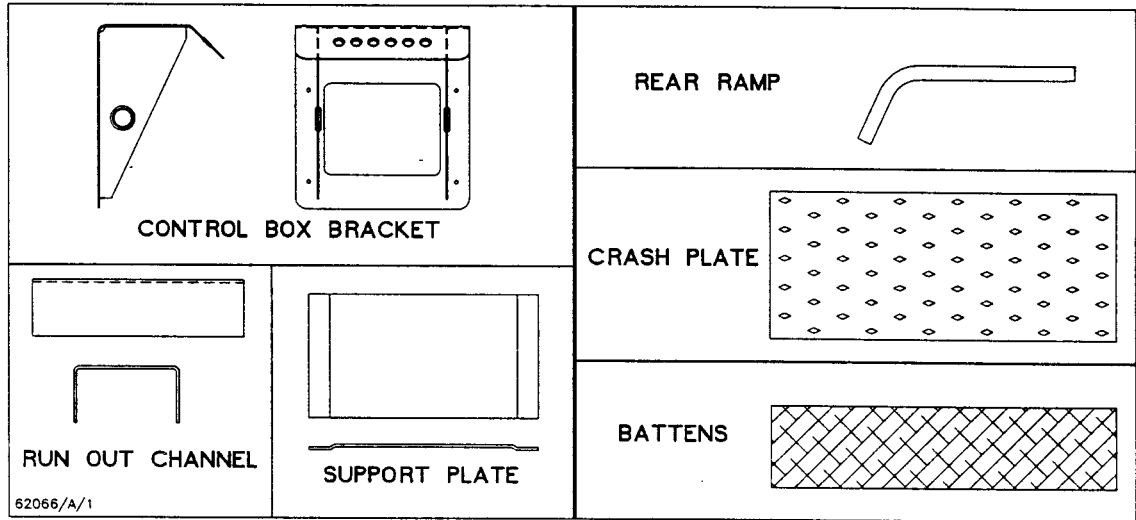
2.3 Inspecting the Vehicle

Before installing Retract-A-Roll® II, carefully inspect the vehicle and auxiliary systems. Make repairs as required. Road-worthiness is the responsibility of the Owner and Vehicle Manufacturer.

2.4 Ordering the Installation Kit

Before installing Retract-A-Roll® II, order the applicable Installation Kit (62066). The Installation Kit is available and can be ordered either in Kit form or separately to facilitate the installation. It can be ordered through your Ancra Material Handling Systems Sales Representative. The Kit includes parts shown in Figure 2-2 on page 13.

Figure 2-2 – Installation Kit



Qty.	Part No.	Description
1	62063	Control Box Mounting Bracket
1	60464	Run Out Channel
1	62062	Rear Ramp
Varies	62061	Support Plate
Varies	60462	Crash Plate
Varies	60465	Battens

The Kit also includes floor screws, 5/16" x 3 1/2" or 5", torx drive, type F, self tapping.

Depending on the configuration of the trailer, the installation may require a Step Batten Kit if the unit has an exposed 5th wheel plate. The Step Batten Kit is available through your Ancra Material Handling Systems Sales Representative.

2.5 Contacting Ancra Customer Service

Ancra Customer Service is available to answer your questions about Retract-A-Roll® II. Call us toll-free at (800) 233-5138 or fax (800) 347-2627. Local (859) 371-7272.

CHAPTER 3 INSTALLING CONVEYORS AND DECALS

CAUTION: Do not remove plastic tape from tops of Conveyors until installation is complete. Tape protects conveyors and roller trays during installation and from installation debris.

RECOMMENDED: Install Mylar tape on the bottom of the main channel to prevent corrosion between the conveyor and the crossmembers.

3.1 Preparing Vehicle Interior

Ancra recommends that the Installer carefully inspects the vehicle interior. Modifications may be necessary for proper fit and support of Retract-A-Roll® II. Table 3-1 below, lists recommendations, however, it is not designed to be a complete list. Road-worthiness is the responsibility of the Owner and Vehicle Manufacturer.

CAUTION: Prior to any welding, protect installed Track and Components from any welding debris that will damage components.

Table 3-1 – Check List for Preparing Vehicle Interior

✓	Recommended Specification *
<input type="checkbox"/>	Structural crossmembers and battens are level with each other and within manufacturer's specifications.
<input type="checkbox"/>	Floor boards and sub-floor build-up, at each module, will not be lower than 2 ¾" (+3/32") – the height of the Conveyors with the rollers in the down position.
<input type="checkbox"/>	Conveyors are attached a minimum of three times per side (each end and center).
<input type="checkbox"/>	Connection Kit is installed and air system is working properly (Chapter 4).
<input type="checkbox"/>	Vehicle sub-floor is continuous, or, undercoating is used (recommended).
<input type="checkbox"/>	Battens are attached to crossmembers.
<input type="checkbox"/>	System arrangement matches drawings.
<input type="checkbox"/>	Clearances around components are consistent with Figures 3-3 and 3-6.
<input type="checkbox"/>	A structural crossmember or support plate is under each end of every Conveyor AND structural crossmembers are spaced under each conveyor at a maximum center-to-center distance of every 12".
<input type="checkbox"/>	Warning Decals (47082-10 and -11) are securely installed on the side wall near the tailgate, approximately 5' above the vehicle floor.

- Obtain all required approvals.

* The following paragraphs contain details about the check list..

3.2 Inspecting Floor Height

The vehicle floor and sub-floor build-up must not be lower than 2 ¾" (+3/32"), measuring from the top of the structural crossmember to the top of the rollers in the down position. Refer to Figure 3-3 on page 17.

Building the finished floor lower than 2 ¾" will expose the Conveyors to excessive wear and will void the Warranty.

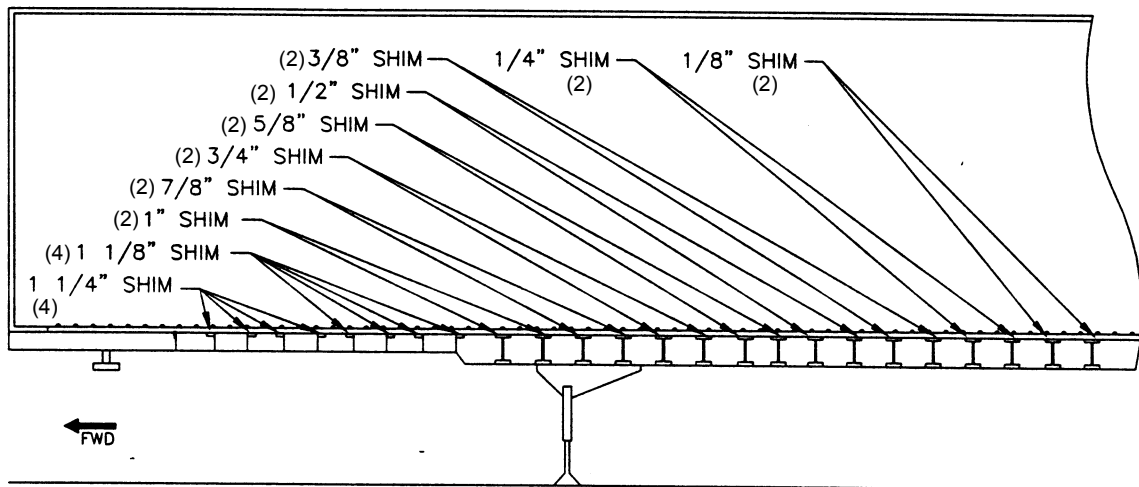
3.3 Inspecting for a Level Surface

Conveyors must be installed on a level surface. Make sure that crossmembers are level with each other and are within manufacturer's specifications.

Weld metal shims to the crossmembers as required to conform to the flatness requirements. Weld in accordance with standard American Welding Society practices and instructions from the Vehicle Manufacturer. Do not attach shims to Conveyors.

Depending on the configuration of the trailer, the installation may require a Step Batten Kit if the unit has an exposed 5th wheel plate. The step Batten Kit is available through your Ancra Material Handling Systems Sales Representative. Refer to Figure 3-1 below.

Figure 3-1 – Step Batten Installation



HOW TO INSTALL STEP BATTEN KIT

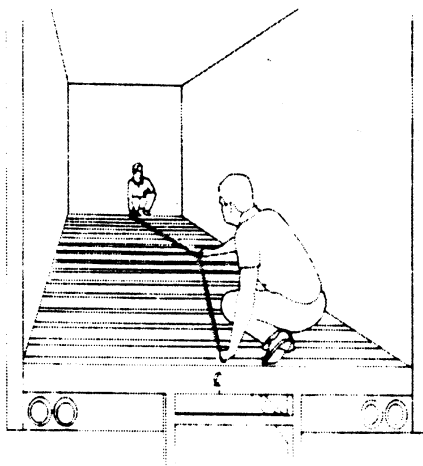
1. The Step Batten Kit includes shims from 1 ¼" thick to 1/8" thick in increments of 1/8" thickness.

2. Starting immediately from the back of the raised 5th wheel plate flange, place the (4) 1 ¼" thick shims on top of each and every flange and/or crossmember for the first (4) positions.
3. After the (4) 1 ¼" shims are positioned, place the (4) 1 1/8" shims on top of each and every flange and/or crossmember for the next (4) positions.
4. After the (4) 1 1/8" shims are positioned, place the remaining shims on top of each and every crossmember (by 2's) starting with the (2) 1" shims and decreasing to the last (2) 1/8" shims. **DO NOT SKIP ANY CROSSMEMBERS.** Refer to Figure 3-1, on page 15, for placements.
5. Secure all Step Battens to flanges and/or crossmembers before proceeding further.
6. Use 3 ½" long floor screws to secure the floor boards starting from the rear of the trailer and working your way towards the front, up to and including the position of the (2) ½" thick Step Battens.
7. Use 5" long floor screws to secure the floor boards starting from and including the position of the (2) 5/8" thick Step Battens and working your way towards the front of the trailer, up to and including over the 5th wheel plate.

The Step Batten Kit includes (4) shims each of 1 ¼" and 1 1/8" thickness, and a quantity of (2) shims each of 1" through 1/8" thickness.

3.4 Figuring the Conveyor Lane Spacing

Figure 3-2 – Center Line



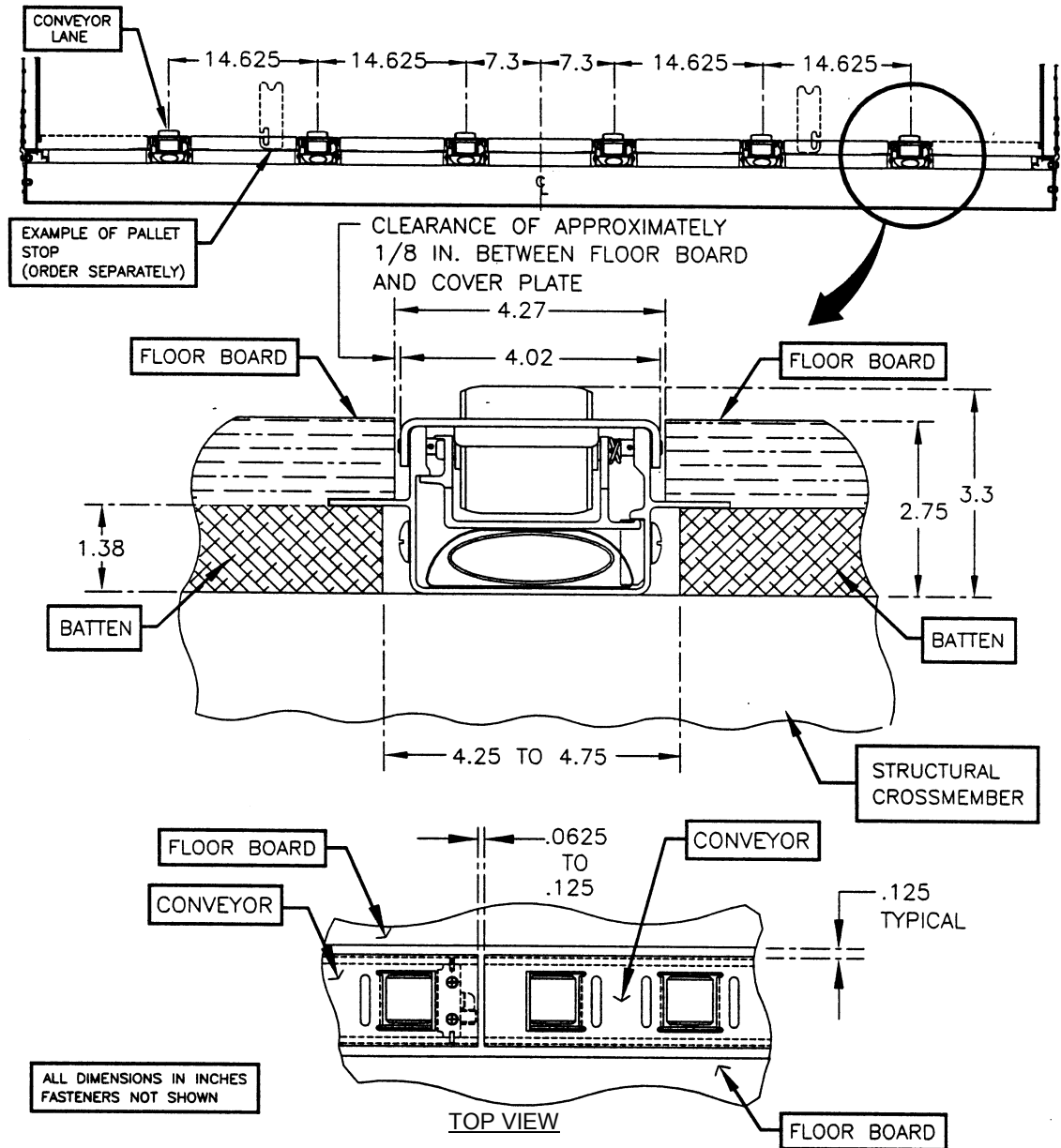
Ancra recommends spacing the Conveyor Lanes to provide even load distribution.

Figure 3-3 on page 17, shows an example of proper lane spacing for a (6) Lane System.

To figuring the lane spacing, measure the inside width of the vehicle at each end of the vehicle. Measure the inside width of the rear door opening and the inside width at the front bulkhead.

Mark the center line by snapping a chalk line. Using the center line, measure and mark the centerline of each conveyor.

Figure 3-3 – Example of Clearances – (6) Lane Systems



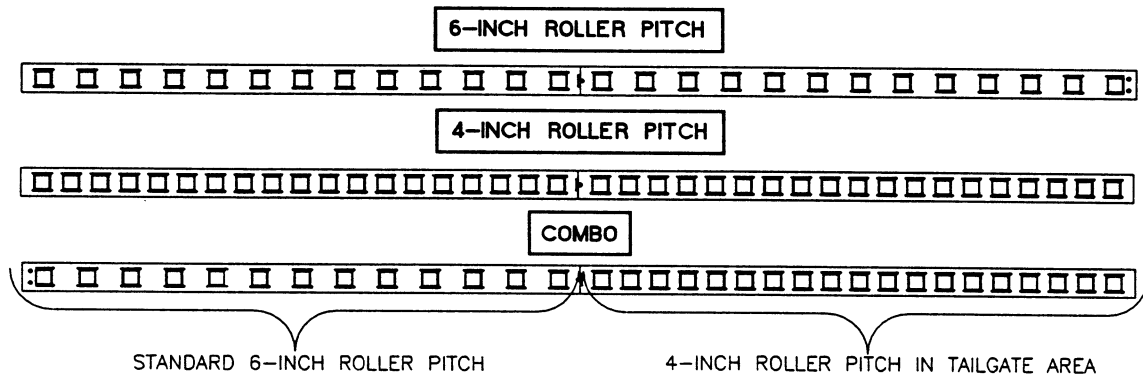
3.5 Aligning Conveyors

After marking the Conveyor Lanes, place Conveyors down the center of each lane.

Start with Conveyors at the tailgate, or rear, of the vehicle and work forward, towards the front.

Place the first Conveyor (Combo) a maximum of 1/4" from the inside edge of the rear sill. The differences between the conveyor types are shown in Figure 3-4 on page 18.

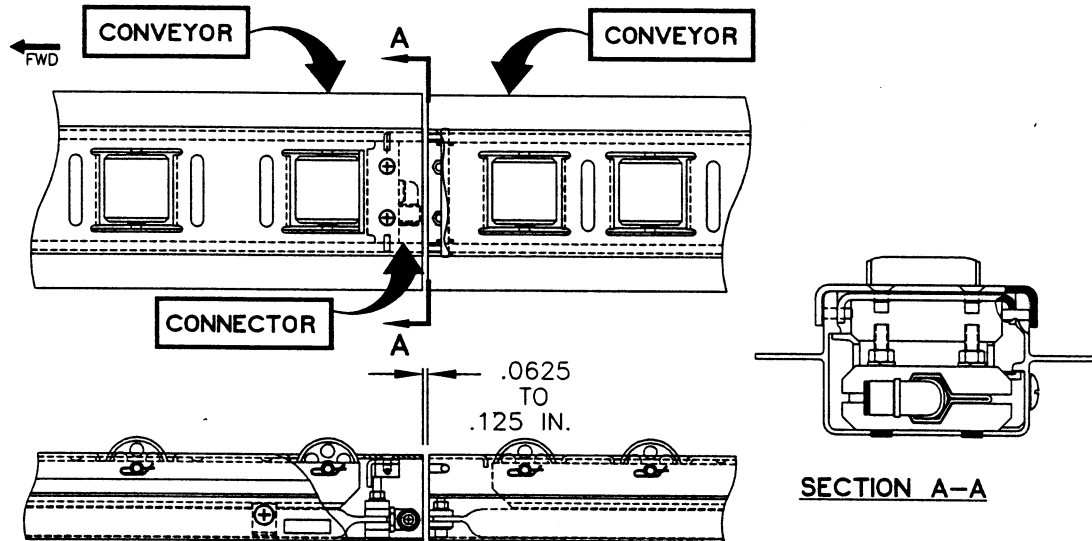
Figure 3-4 – Identifying Conveyors



Push Conveyors together with a gap of 1/16" to 1/8" between Conveyors. The gap allows the coverplates to pivot in and out of the channel when service components inside the assembly during maintenance.

Clearances are show in Figure 3-3 on page 17, Figure 3-5 below, and Figure 3-7 on page 21. As shown in Figure 3-5 on below, make sure that the Conveyors are lined up with connections in the proper direction. The elbow fittings on the air bag assemblies may need to be rotated 180° to allow for proper air connection.

Figure 3-5 – Aligning Connections



3.6 Attaching Conveyors

NOTE: Before attaching the Conveyors, install and inspect the Control Box, Air Tanks, and Connection Kit. Instructions are provided in Chapters 4 and 5.

Place the Conveyors and Run Out Channels (Spacers) on the Crossmembers.

It will be necessary at this time to cut (6) 1 3/8" thick battens per track module in order to fasten the Conveyors to the crossmembers. They will be placed one each side of each Conveyor at each end and in the center.

Fasten the Conveyors a minimum of three times per side (each end and center). Fasteners are provided by the Installer. A tight grip is required between the battens and conveyor flanges. Depending on the plumbing arrangement, a 3/8" gap may be required between the curb side of the Conveyors and the battens in order to run the air lines.

Do not attach the Run Out Channels (Spacers) or Diamond Plate to the Conveyors.

Refer to Figure 3-3 on page 17, Figure 3-5 on page 18, and Figure 3-7 on page 21.

3.7 Installing Structural Support

There must be a structural member under each end of each Conveyor section. And, there must be structural crossmembers spaced under each Conveyor at a maximum center-to-center distance of every 12".

If not present, install a steel bridge plate, track end support, or structural crossmember under Conveyors as required. Make sure that all structural support is flush with the surrounding structure.

Weld support to chassis in accordance with standard American Welding Society practices and instructions from the Vehicle Manufacturer. Do not attach support to Conveyors.

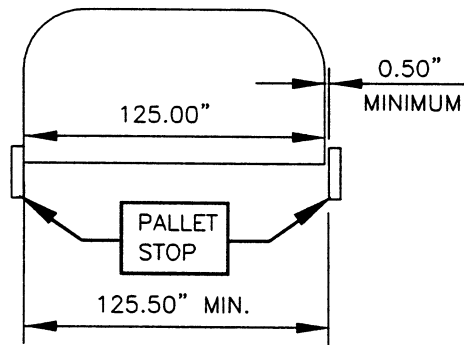
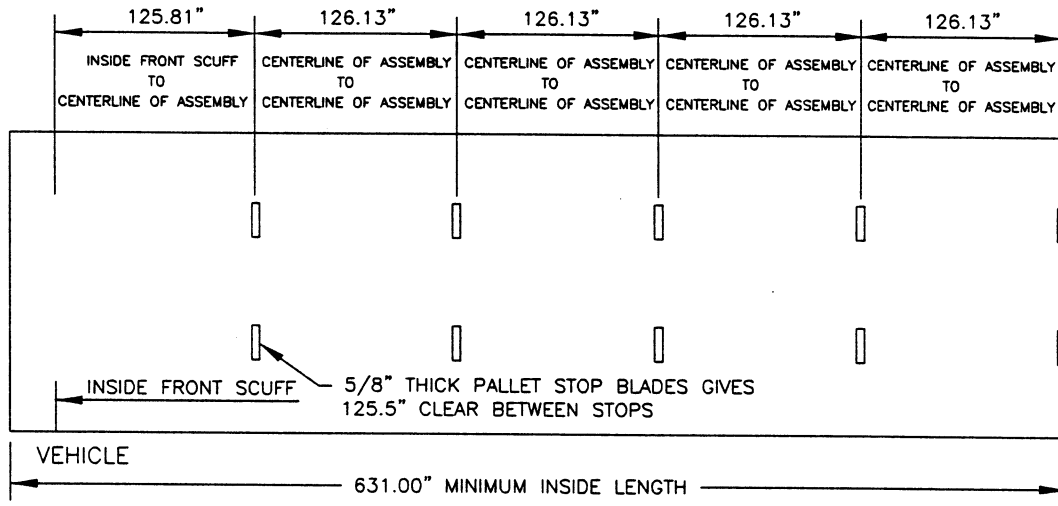
3.8 Installing Pallet Stops

Pallet stops are provided separately, and are available through your Ancra Material Handling Systems Sales Representative. Refer to Figure 3-6 on page 20, for a guide to spacing the Pallet Stops.

Fillet-weld Pallet stops to structural crossmembers or installed Bridge Plates per American Welding Society standards and instructions from the Vehicle Manufacturer.

After installing the floor boards, seal off any openings around the Pallet Stop by applying caulking between the floor boards, Conveyors, and Pallet Stops to prevent weather and road splash or debris from entering the trailer.

Figure 3-6 – Spacing for Pallet Stops



SIDE VIEW

TYPICAL AIRFREIGHT CONTAINER/STOP

HOW TO CALCULATE PALLET STOP SPACING

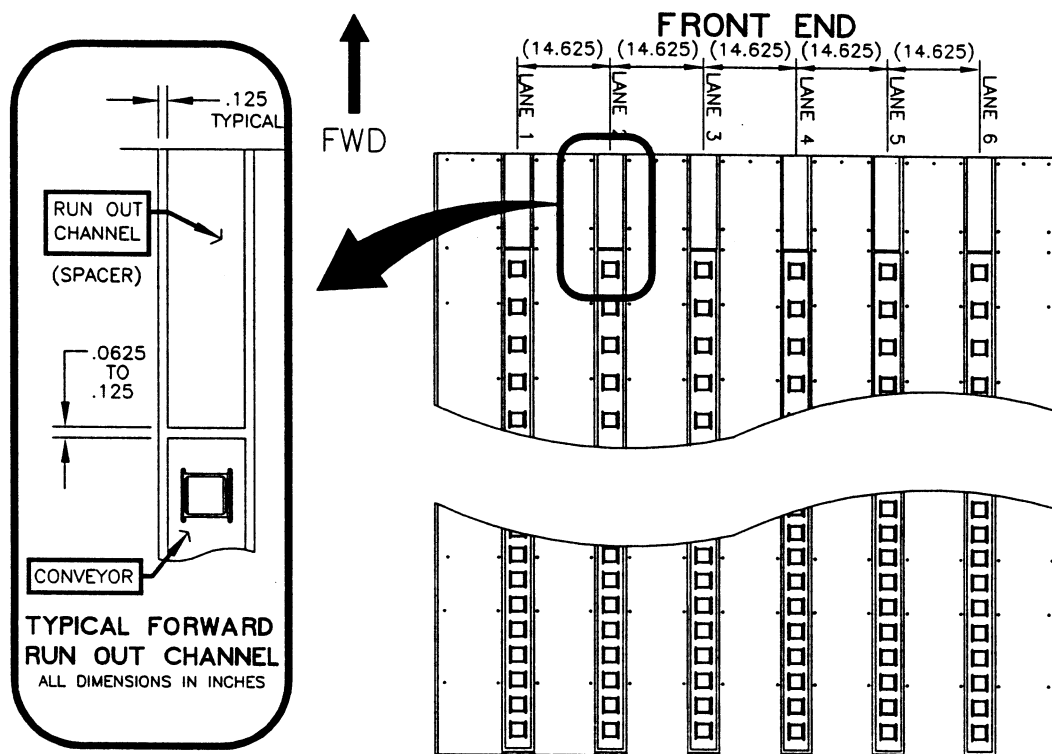
1. MEASURE THE INSIDE OF THE VEHICLE, FROM THE INSIDE OF THE FRONT SCUFF TO THE INSIDE OF THE REAR DOOR. (631" MINIMUM REQUIRED FOR FIVE CONTAINERS AND FIVE PALLET STOPS)
2. 125.00" AIR CONTAINER LENGTH
 + .50 SPACE
 + .625 PALLET STOP BLADE THICKNESS
 126.125 EACH
 X 5 CONTAINERS
 630.625"
 + .375 CLEARANCE BETWEEN REAR EDGE OF REAR STOP AND INSIDE OF REAR DOOR
3. IF THE TRAILER HAS LESS THAN 631" USEABLE INSIDE CLEARANCE, THE DISTANCE BETWEEN CONTAINERS AND PALLET STOPS MAY BE REDUCED FROM 1/2" TO 1/4" IF NECESSARY.

3.9 Making Run Out Channels

Run Out Channels (Spacers) protect the ends of the Conveyors from dirt and damage. Determine the size of Run Out Channel by measuring the distance at the front of each Lane, from the end of each Conveyor to the bulkhead.

Run Out Channels are provided in the Installation Kit. Examples are shown in Figure 3-7 on page 21.

Figure 3-7 – Example of Run Out Channels



3.10 Attaching Battens

Ankra recommends installing Battens (short pieces of wood) under the flanges of the Conveyors at every crossmember to support the floor boards. Battens and floor screws are provided in the Installation Kit.

The length of each Batten will depend on the Conveyor Lane spacing used. Measure the distance from Conveyor to Conveyor (underneath the flange or wing). Take that measurement and subtract 3/8" for the air line tubing (depending on plumbing arrangement) to acquire the proper Batten length.

Attach the battens to the structural crossmembers of the vehicle. The Battens can be attached by any means so that they do not fall out or spin during the drilling and installation of the floor screws. Nailing or caulking the Battens in place are some acceptable forms of attachment. Battens and clearances are shown in Figure 3-3 on page 17. Make sure that the battens will not exceed the floor height requirements in paragraph 3.2 on page 15.

Depending on the configuration of the trailer, the installation may require a Step Batten Kit if the unit has an exposed 5th wheel plate. The step Batten Kit is available through your Ancra Material Handling Systems Sales Representative. Refer to paragraph 3.3 on page 15.

3.11 Painting the Vehicle Interior

Before painting the vehicle interior, make sure that the Conveyors are completely covered. Paint will damage the rollers and may void Warranty.

3.12 Installing Warning Decals

After painting the vehicle interior, install the Warning Decals on the side wall near the tailgate, approximately 5' up from the vehicle floor, or at eye level. Before installation, make sure that the sidewall is clean and dry.

It may be necessary to apply the Decals to a thin clean piece of aluminum and attach it to the sidewall of the trailer.

Normal position is on the road side rear of the vehicle.

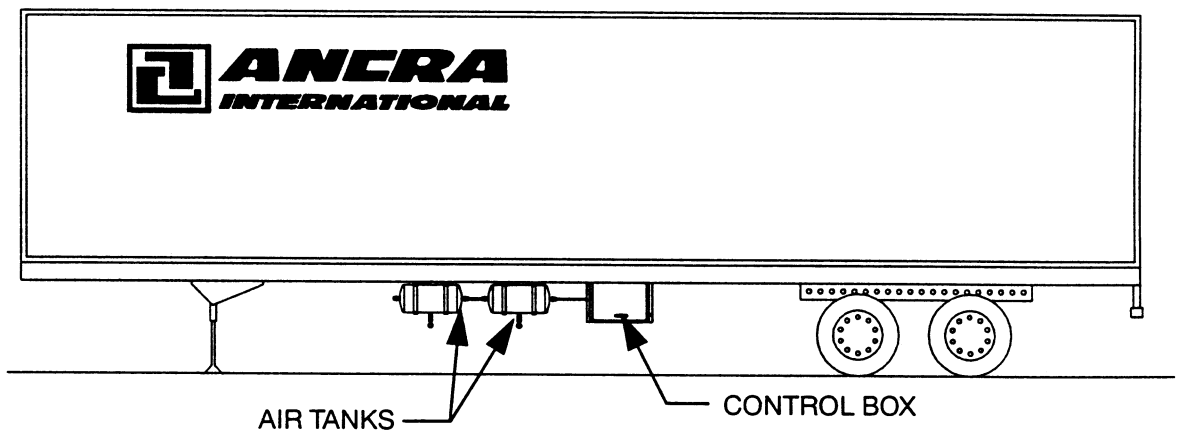
Make sure that the decals are securely attached.

CHAPTER 4 INSTALLING SYSTEM CONTROL KIT, AIR TANK KITS, CONNECTION KIT.

4.1 Recommended Locations

Ancra recommends installing the System Control Kit (Control Box) and Air Tank Kits on the Driver's side of the vehicle, forward of the wheels, at the locations shown in Figure 4-1 below.

Figure 4-1 – Kit Locations



PICTORIAL REFERENCE

Common location of the Control Box and Control Box Mounting Bracket is the first pair of crossmembers aft of the center side marker light.

Common location of the Air Tanks, and Air Tank Kits are the first pair of crossmembers forward of the center side marker light for the first tank. Skip a pair of crossmembers, then install the second Air Tank forward of the first tank, as shown in Figure 4-1 above.

4.2 Installing System Control Kit

The System Control Kit (Control Box) attaches to an optional Bracket (62063). Refer to Figure 4-2 on page 24. The bracket must attach to a minimum of two structural crossmembers. The Bracket should be recessed underneath the trailer approximately 14" from the sidewall to the surface of the Bracket. This will allow some protection to the Control Box from side impact.

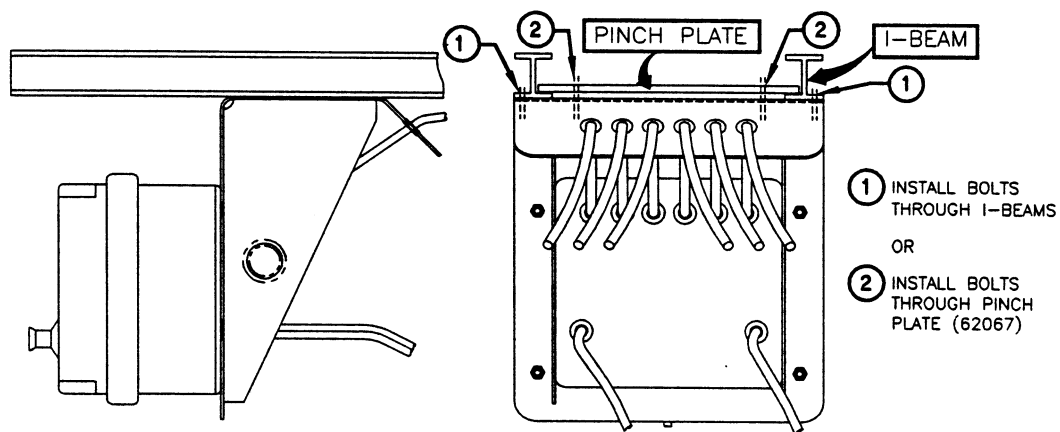
Ancra suggests that the Installer build protection for the Control Box from wheel water spray and road debris.

Install the mounting bracket assembly to the crossmembers in accordance with instructions from the Vehicle Manufacturer. Install the Bracket by either utilizing the Pinch Plates provide as part of the Installation Kit or by welding the bracket in place. Weld the bracket assembly to crossmembers in accordance with American Welding Society standards and instructions from the Trailer Manufacturer.

Make sure that the bracket is securely attached.

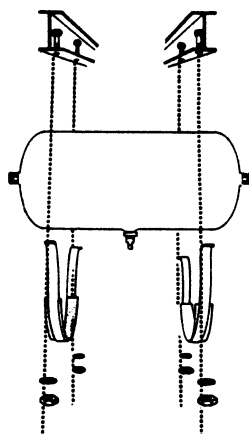
Install the Control Box so the lid opens **UP**. Fasteners are provided in the applicable Installation Kit. (62063).

Figure 4-2 - Control Box Installation Bracket



4.3 Installing Air Tank Kits

Figure 4-3 - Air Tank Mounting



Using hardware provided with the Air Tank Kits, fasten the Air Tanks to a minimum of two structural crossmembers as show in Figure 4-3 to the left. The air tank drain should be facing down to allow proper operation and maintenance of the system. Make sure that the tanks are securely attached.

4.4 Installing Fittings Kit

Layout the air tubing from the Conveyors to the Control Box. System arrangements are shown in Chapter 6.

Before attaching, make sure that each track isolation valve in the Control Box will connect to the proper Conveyor Lane. Normal assignments are from left to right for both the Control Box isolation valves and Conveyor Lanes. From left to right 1, 2, 3, 4, 5, 6. The recommended arrangement is shown in Figure 4-4 below.

Figure 4-4 – Valves and Lanes

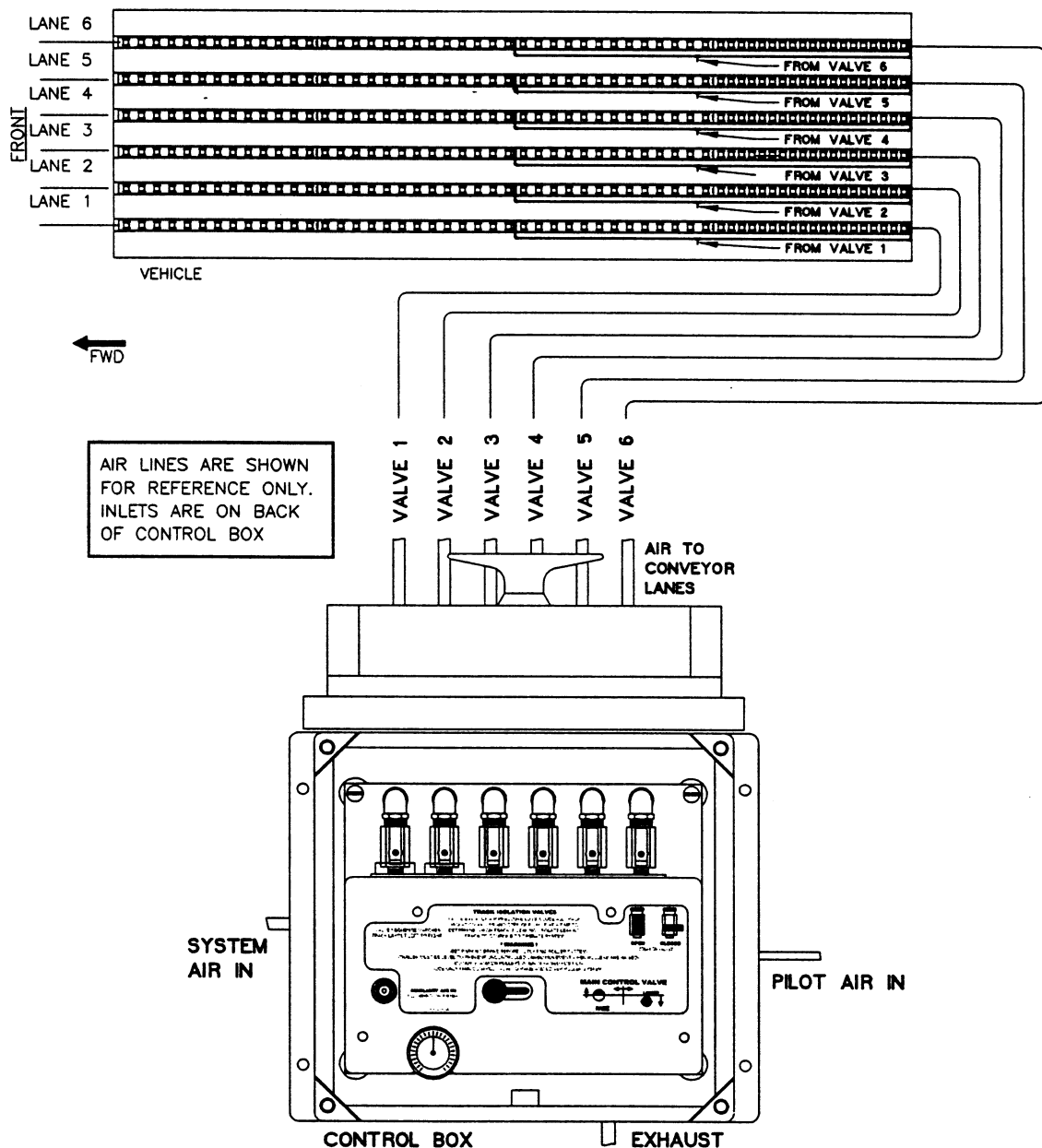


Figure 4-5 below, shows attachment locations on the System Control Kit.

Figure 4-5 - Attaching to Control Box

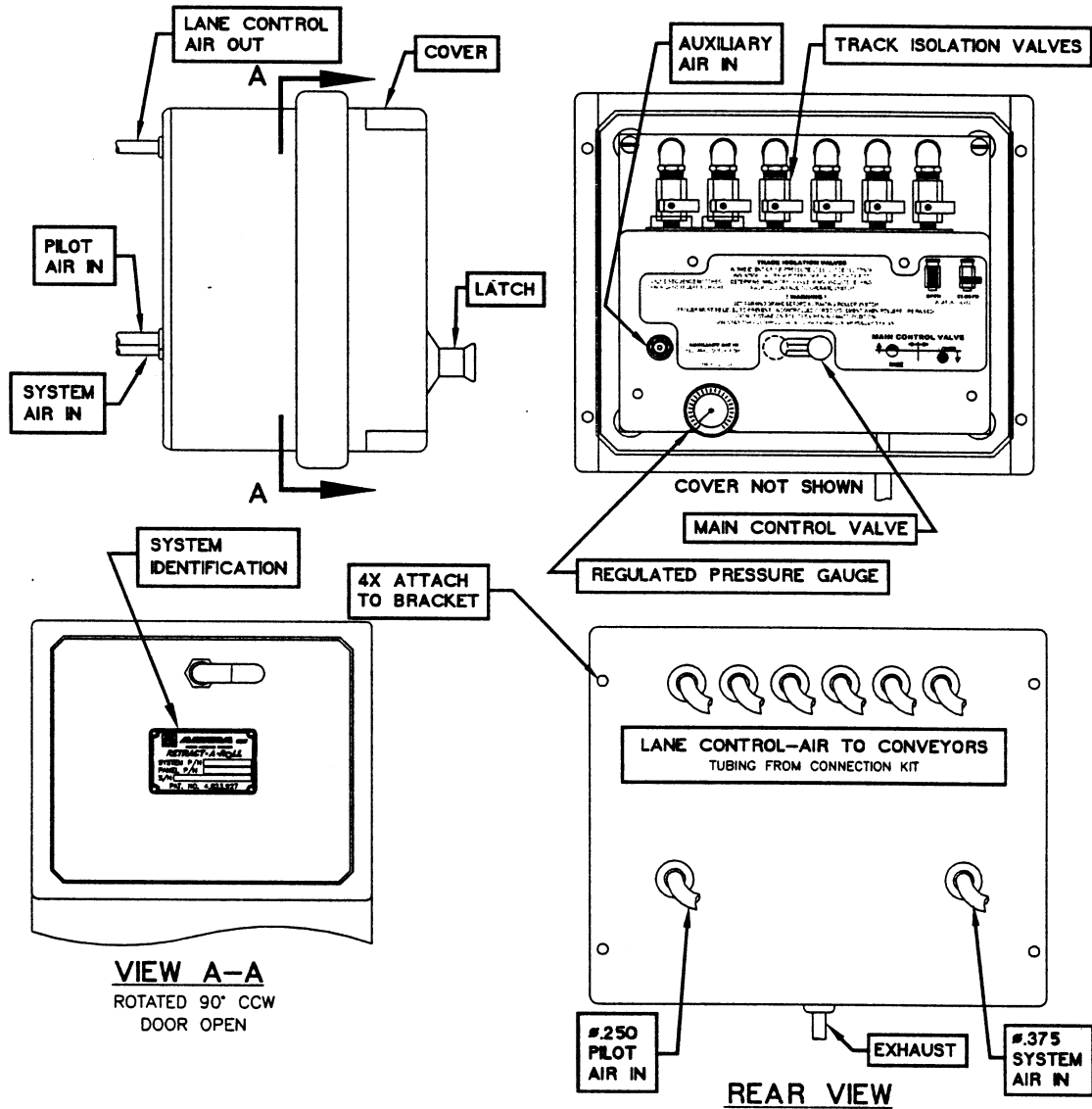
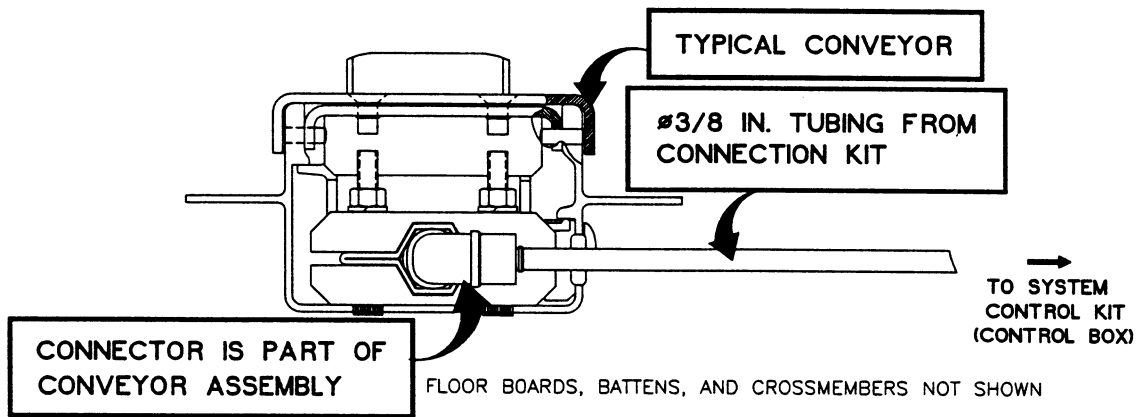


Figure 4-6 on page 27, shows typical attachment of fittings to Conveyors.

Make sure that Conveyors are positioned with the connector facing the proper direction. Refer to Figure 3-5 on page 18.

Figure 4-6 – Attaching Fittings to Conveyors (Cross-section)



Components of the Connection Kit are shown in Figure 4-9 on page 29.

NOTE: Part Numbers are provided in Chapter 6.

Before installing fittings, review the installation tips in Table 4-1 below.

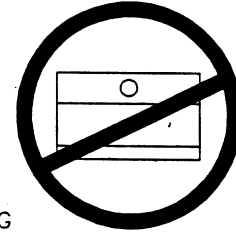
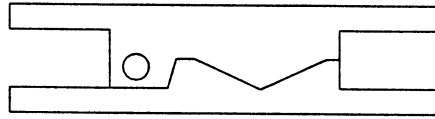
Table 4-1 – Tips for Fittings Kit

✓	Recommended Procedure
<input type="checkbox"/>	Before installing, make sure that tubing and fittings have nothing inside them.
<input type="checkbox"/>	To prevent leaks, use a tube cutter to make a clean, square cut. DO NOT USE a razor blade knife or a straight edge knife. A tube cutter is provided in the Fittings Kit. Refer to Figure 4-7 on page 28.
<input type="checkbox"/>	To prevent leaks, make sure that all tubing is fully installed into fittings. Refer to Figure 4-8 on page 28.
<input type="checkbox"/>	All tubing must be secured to vehicle. Do not let it droop down or swing. Clips and fasteners are provided by the Installer
<input type="checkbox"/>	Make sure that all connections are secure. Use pipe tape to seal threaded pneumatic fittings. Pipe tape is provided by the Installer.
<input type="checkbox"/>	To prevent leaks or slow operation of the system, DO NOT ALLOW KINKS OR SHARP BENDS in tubing.

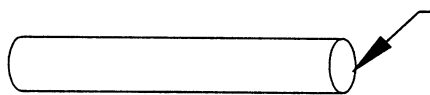
Figure 4-7 – Using Tube Cutter

USE TUBE CUTTER ONLY

CRITICAL
TO
PREVENT
LEAKS



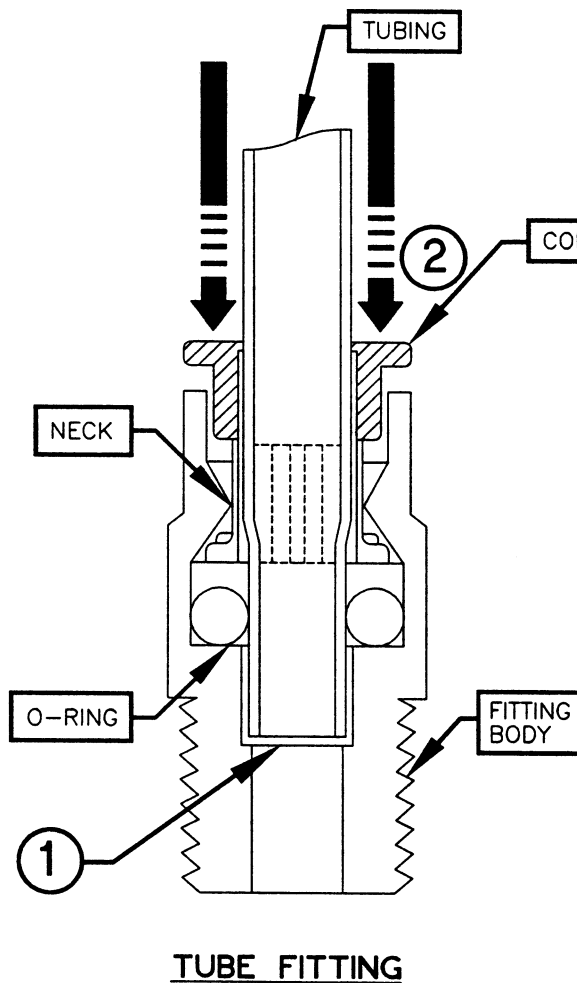
DO NOT USE STRAIGHT EDGE BLADE TO CUT TUBING



TUBE MUST HAVE SQUARE EDGE.
NO BEVELS, CHIPS, OR SCARS.

TUBE CUTTER PROVIDED
IN CONNECTION KIT

Figure 4-8 – Installing Tubing in Fittings



① INSTALL TUBING

FIRMLY PUSH TUBING ALL THE WAY INTO FITTING. PUSH TUBING IN PAST NARROW NECK (YOU WILL FEEL IT RESIST). PUSH TUBING UNTIL IT REACHES END OF FITTING. APPROX. 3/4 INCH OF TUBING ENTERS FITTING.

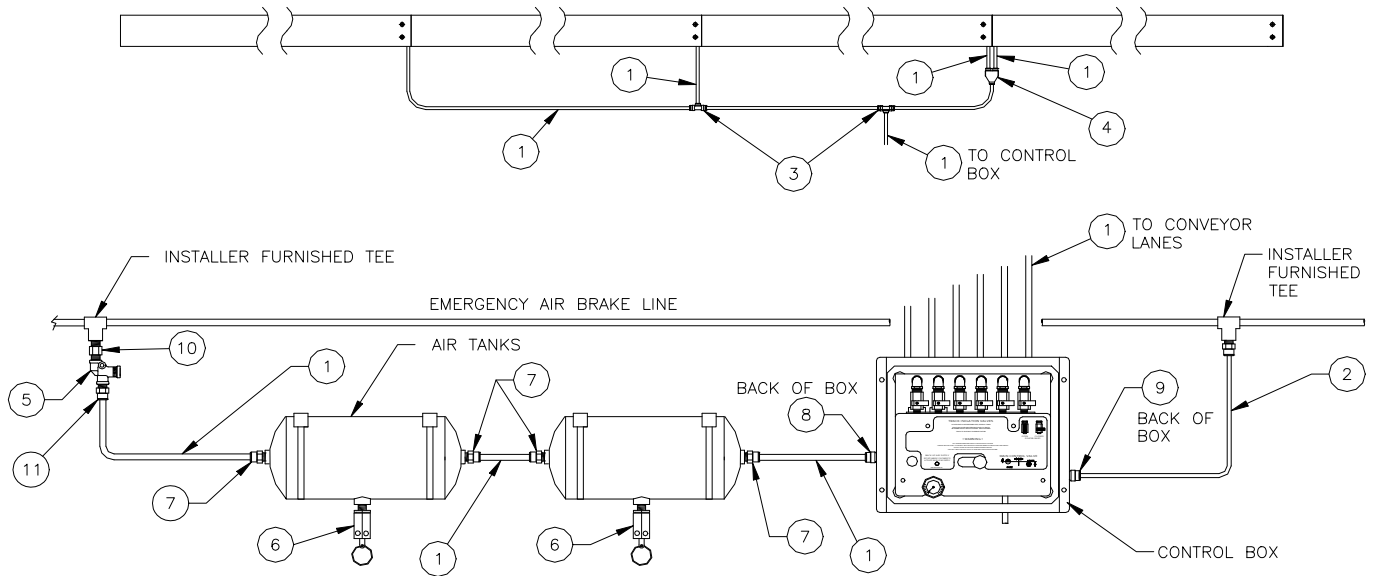
INSPECTION FOR CORRECT INSTALLATION

1. FIRMLY PULL TUBING. TUBING STAYS IN FITTING.
2. TRY TO MOVE TUBING IN ALL DIRECTIONS. TUBING DOES NOT WOBBLE OR MOVE IN FITTING.

② REMOVE TUBING

PUSH COLLET RING AND PULL TUBING OUT OF FITTING BODY.

Figure 4-9 – Installing Fittings



<u>Item</u>	<u>Description</u>	<u>Item</u>	<u>Description</u>
1	Tubing, 3/8" Ø	8	Fitting, Tube-to-Tube, - 3/8" Ø
2	Tubing, 1/4" Ø	9	Fitting, Tube-to-Tube, - 1/4" Ø
3	Fitting, Tube-to-Tube, "T" - 3/8" Ø	10*	Adaptor, "T"-to-Pressure Protection Valve
4	Fitting, Tube-to-Tube, "Y" - 3/8" Ø	11	Adaptor, Pipe-to-Tube – 1/4" NPT to 3/8" Tube
5	Valve, Pressure Protection, 1/4 NPT	12	Tube Cutter (Not Shown)
6	Valve, Drain Air Tank	13*	Connector (2), "T" to Vehicle Air Supply
7	Adaptor, Pipe-to-Tube – 3/8" NPT to 3/8" Tube	14*	Gauge, to 160psi, 1psi gradients

Part Numbers listed in Chapter 6

* Furnished by Installer

4.5 Connecting to Vehicle's air Supply

WARNING



Before starting work, make sure that the Emergency Brake System is disconnected.

WARNING



Perform work in accordance with all local, state, and Federal regulations. Road-worthiness is the responsibility of the Owner / Operator.

Connect the Retract-A-Roll®II system to the Emergency Brake Line using fittings provided by the Installer. Attach the appropriate “T”-connectors and an adaptor attaching the “T”-connector to the pressure protection valve. Installation locations are shown on Figure 4-9 on page 29.

4.6 Inspecting System

Before installing the floor boards, Ancra recommends inspecting the Retract-A-Roll®II system. Perform the inspections in Chapter 5.

4.7 Applying Caulking and Undercoating

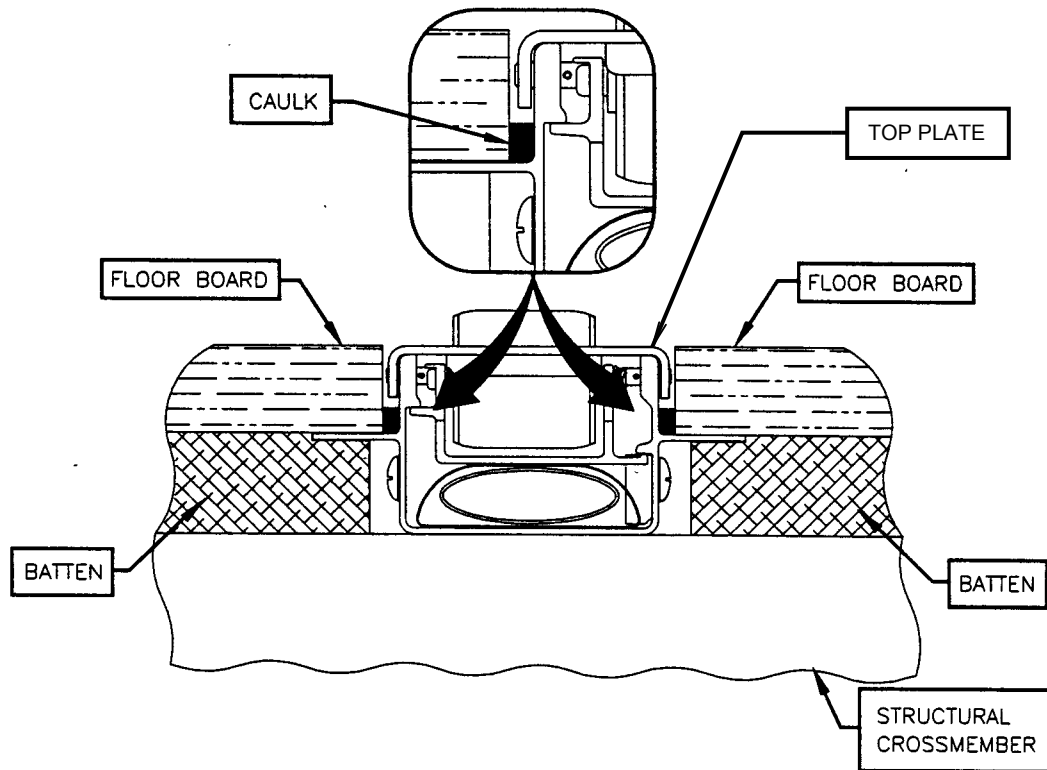
Ancra recommends applying caulking and undercoating to the Retract-A-Roll®II system. Make sure that the bottom of the floor boards and battens are undercoated. Caulking, undercoating, and touch-up paint are all supplied by the Installer.

Apply a 3/16” bead of caulking along the wing or flange of the Conveyors from front to rear then lay the floor board down. Apply caulking around the Pallet Stops to seal off from road splash.

DO NOT apply caulking to the top plates. See Figure 4-10 on page 31.

After the floor boards are in place and screwed down to each crossmember, apply undercoating to the entire bottom of the vehicle. Provide protection to the Control Box and Air Tanks prior to undercoating application.

Figure 4-10 Caulking Application



CHAPTER 5 INSPECTING FOR PROPER INSTALLATION AND OPERATION

5.1 Recommended Inspections

This chapter contains inspections for leaks, lane control, clearances, and attachment.

To protect coverage under the Warranty, consult Ancra Customer Service before repairing or replacing a defective component.

5.2 Warnings

The following Warnings apply when operating the Retract-A-Roll® II system:



Set parking brake before actuating system



Vehicle must be level to prevent uncontrolled cargo movement when rollers are raised.



Do not drive or operate forklift or similar equipment on rollers in the raised position



Close and secure lid of Control Box before moving vehicle.



Do not walk on rollers when in the raised position.



Use only main control valve (joystick) to raise and lower roller system.



Lower rollers before moving vehicle.

5.3 Inspecting for Leaks

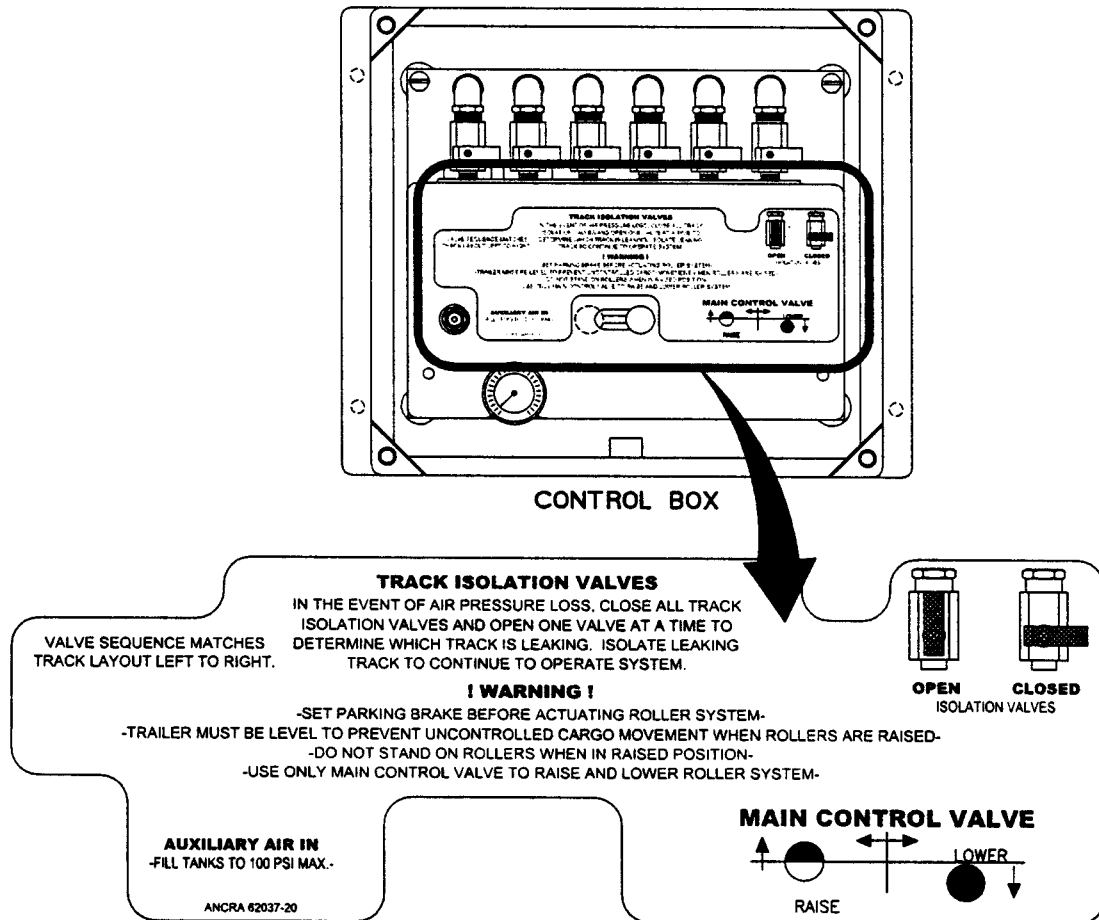
Ancra requires the Installer to perform a Leak Test. An example is provided below. Begin with the Air Tank system Inspection.

AIR TANK SYSTEM INSPECTION

Before Tractor/Vehicle hook up:

1. Make sure that the main control valve on the Control Panel is to the **RIGHT SIDE** or lowered (off) position. See Figure 5-1 on page 33.
2. Make sure that the track isolation valves are **OPEN**. Valve operation is also shown in Figure 5-1 on page 33.

Figure 5-1 – Operating Track Isolation Valves



3. Attach air compressor to the auxiliary air inlet on the Control Panel. Fill Air Tanks to 100psi (+/- 5psi). The inlet is shown on Figure 4-5 on page 26.
4. Attach a hand-held gauge to the auxiliary air inlet on the Control Panel. The gauge must be rated to at least 160 psi with gradients of 1 psi. The gauge is provided by the Installer.
5. A pressure differential of 10% or less in a 12 hour period is acceptable. If within a 10% factor, check block in Ancra Warranty Registration and drop all vehicle rollers.
6. If greater than 10% factor, isolate, fix leak, and re-test unit.

NOTE: *The subject duration of the test is solely dependent on the accuracy of the test equipment. The pressure loss must be equivalent of a 10% loss or less over a 12 hour period. For example, a 1 hour test at 30psi would require a loss of .25psi or less.*

If pressure drop is greater than 10%:

Leak check all connections between the pressure protection valve and the Control Box. Apply a soapy spray or leak detecting solution. Make adjustments or replace defective fittings as necessary.

If pressure drop is less than 10%:

7. Inflate roller system by moving the main control valve to the **LEFT SIDE** or raised (on) position.
8. Look inside vehicle. Inspect that all rollers raised to approximately ½” above the top plates / floor.
9. Drain both air tanks by pulling drain valves at the bottom of the Air Tanks.
10. Check that regulated pressure gauge within the Control Panel reads 30psi (+/- 5psi). Monitor the regulated pressure gauge at 12 hours and note any pressure drop.

If pressure drop is greater than 10%, perform the Conveyor Lane Inspection:

11. Move the main control valve to the **RIGHT SIDE** or lowered (off) position. This exhausts air from all lanes.
12. Fill Air Tanks using an air compressor attached to the auxiliary inlet on the Control Panel.
13. Isolate Conveyor Lane 1 by turning the track isolation valve (on the Control Panel) for Lane 1 to the **OPEN** position and turning the track isolation valves for Lanes 2 through 6 to the **CLOSED** position. This exhausts air from Lanes 2 through 6.
14. Move the main control valve to the **LEFT SIDE** or raised (on) position and DRAIN the Air Tanks by pulling the drain control valves at the bottom of the Air Tanks.
15. Monitor air pressure on the regulated pressure gauge within the Control Panel for 15 minutes and note any pressure drop.
16. If pressure continues to drop, check all connections between the track isolation valve for Lane 1 and air bag assemblies in the Conveyors using soapy spray water or leak detecting solution.
17. If no air pressure drop is noted in Conveyor Lane 1, continue lane isolation for Lanes 2 through 6, using steps 11, 12, 13, and 14, until leak is found. Make adjustments and replace defective components as necessary.

18. Repeat the above steps until the pressure drop is less than 10%. If pressure drop is less than 10%, perform the Emergency System Shutoff Inspection.

EMERGENCY SYSTEM SHUTOFF INSPECTION

19. Make sure that all track isolation valves are **OPEN**.
20. Hook up the Tractor air brake system to the Vehicle. Allow the Air Tanks to fill.
21. Set the parking brake within the tractor cab to simulate that the vehicle is parked.
22. On the Control Panel, move the main control valve to the **LEFT SIDE** or raised (on) position.
23. Look inside the vehicle. Inspect that all rollers rise to approximately ½" above the floor.
24. Release the parking brake within the vehicle cab to simulate that the vehicle is moving.
25. Look inside the vehicle. Inspect that all rollers retract below the floor.

5.4 Inspecting Lane Control

This inspection makes sure that each track isolation valve on the Control Panel is attached to the proper Conveyor Lane inside the vehicle.

Proper lane control is shown in Figure 4-4 on page 25. Remember that normal assignments are from left to right for both the Control Box isolation valves and Conveyor Lanes. From left to right 1, 2, 3, 4, 5, 6.

Perform the Leak Test before performing this test.

1. Turn Lane 1 track isolation valve on the Control Panel to the **OPEN** position, all others **CLOSED**.
2. Move the main control valve to the **LEFT SIDE** or raised (on) position.
3. Inspect inside the vehicle to make sure that Lane 1 is inflated.
4. Continue with Lanes 2 through 6.

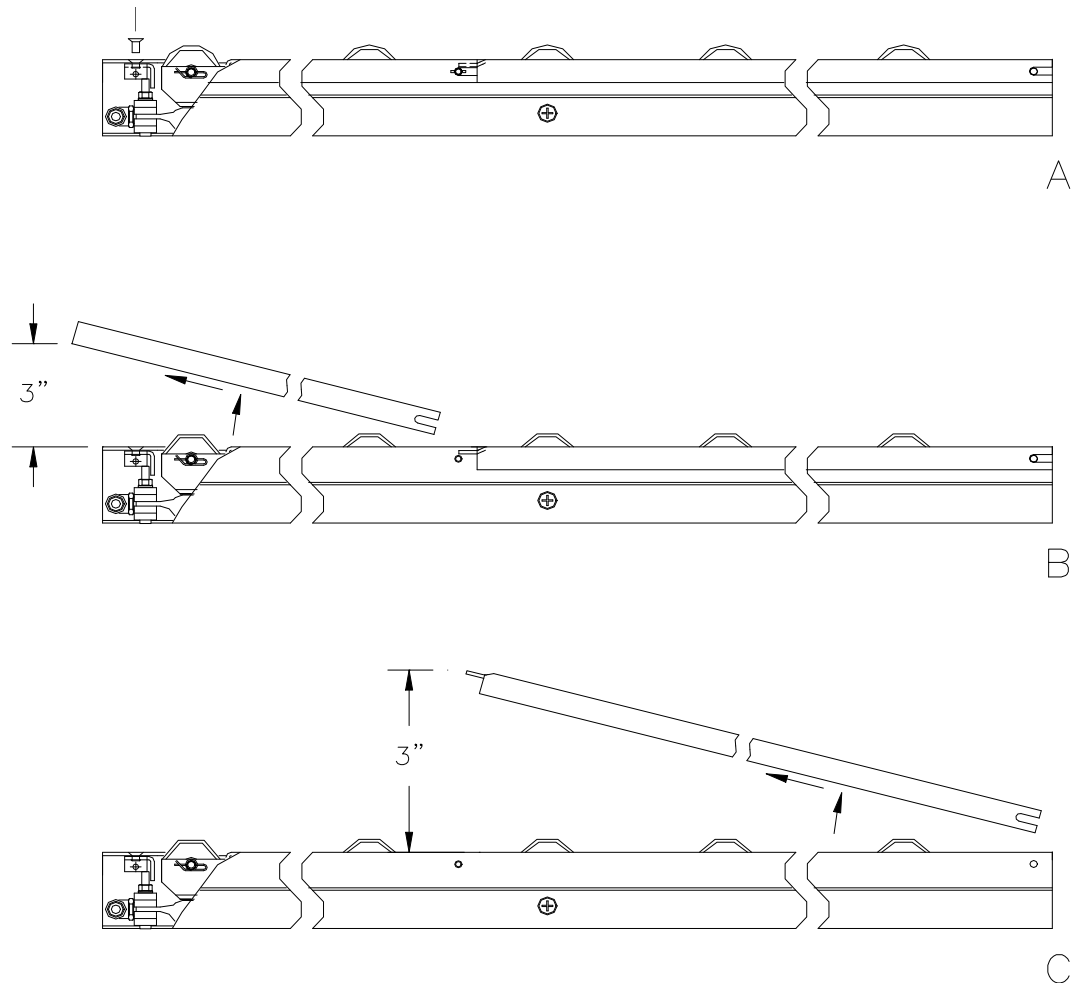
5.5 Cover Plate Removal

Should the need arise to remove the Cover Plates to verify the air bag connection, please refer to Figure 5-2 on page 36 for the proper instructions. Damage may occur by too much lift.

1. Remove two (2) flat head screws from the screw end Cover Plate. (Fig. A)

2. Lift screw end Cover Plate (**Approx. 3"**) and pull back to free it from the retaining pin at the middle of the conveyor assembly. (Fig. B)
3. Lift tab end Cover Plate (**Approx. 3"**) and pull back to free it from the retaining pin at the far end of the conveyor assembly. (Fig. C)

Figure 5-2 – Cover Plate Removal



To Replace Cover Plates:

Reverse the above steps. Make sure each top plate is properly seated on retaining pins, and make sure tab end on rear plate is under the front plate after installation. Tighten the Cover Plate screws to 50-70 in/lbs.

NOTE: The Cover Plates have a slight camber to improve installed strength. It may be necessary to depress the top surface during installation.

5.6 Inspecting System Clearances

Make sure that the conveyors are installed within the proper clearances.

Table 5-1 on page 36 covers the areas to inspect. Refer to details in Figure 3-3 on page 17, Figure 3-5 on page 18, and Figure 3-7 on page 21. Refer also to instructions in Chapters 3 and 4.

Table 5-1 – Condensed Inspection -- Clearances

✓	Recommended Areas to Inspect
<input type="checkbox"/>	Floor is level.
<input type="checkbox"/>	Floor boards and sub-floor build-up are not lower than 2 3/4" (+ 3/32"), measuring from top of structural crossmember to top of roller in the down position.
<input type="checkbox"/>	Conveyor Lanes are properly spaced. Center of each lane is aligned with vehicle center line.
<input type="checkbox"/>	Proper clearances are present around Run Out Channels.
<input type="checkbox"/>	Proper clearances are around edges of Conveyors for cover plates to pivot and floor boards to flex.
<input type="checkbox"/>	Air tubing and fittings are not so tightly pulled that connectors may disconnect. No kinks or sharp bends are present in the tubing.
<input type="checkbox"/>	Long segments of tubing are bracketed to vehicle.

5.7 Inspecting System Attachment

Table 5-2 below, covers the highlights. Refer to instructions in Chapters 3 and 4.

Table 5-2 – Condensed Inspection -- Attachment

✓	Recommended Areas to Inspect
<input type="checkbox"/>	Conveyors are attached (3) times per side (each end and center).
<input type="checkbox"/>	Both ends of every Conveyor have bridge plates or structural support.
<input type="checkbox"/>	Maximum of 12" between structural crossmembers, center-to-center.
<input type="checkbox"/>	Control Box and Air Tanks are securely attached to vehicle crossmembers.

- All visible valves, fittings, and air tubing are in order.
 - System is securely attached to the Vehicle's air supply.
-



Your Retract-A-Roll® II system is installed. Please complete and return the Warranty Registration Form immediately.

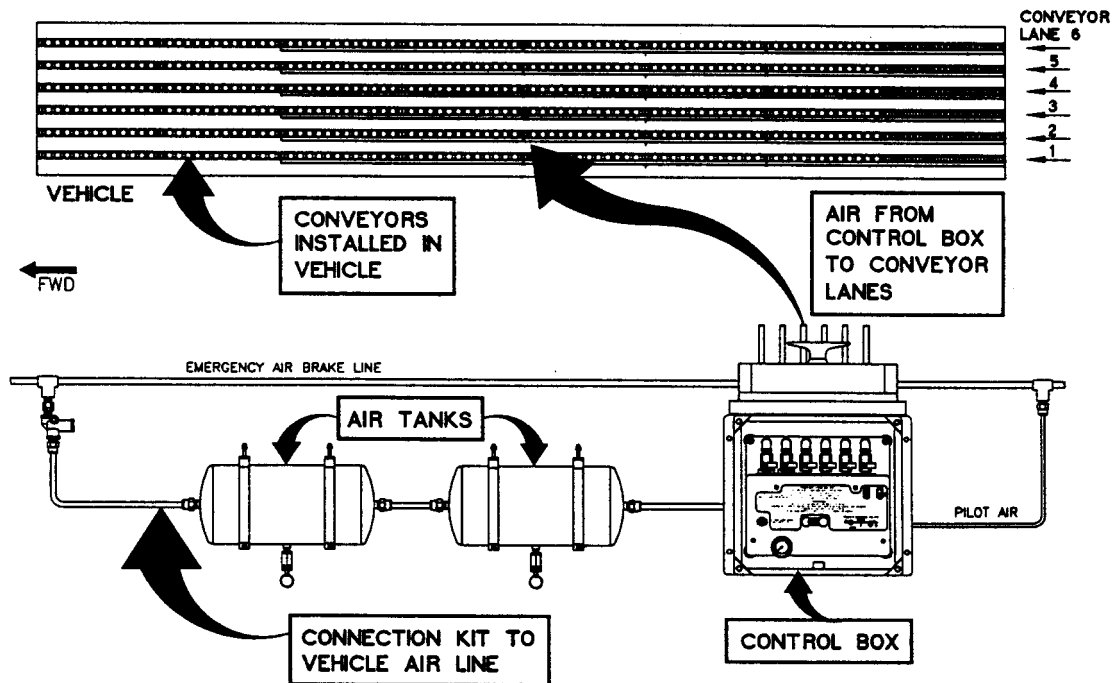
Refer to the Operations and Maintenance Manual for tips on using and maintaining the system.

CHAPTER 6 ILLUSTRATED PARTS LISTS FOR
INSTALLATION

6.1 Operating and Maintaining the System

NOTE: The parts lists in this Installation Guide cover only the information required to install components. If you require detailed parts, refer to the Operations and Maintenance Manual.

Figure 6-1 – Typical System



Ankra Customer Service is available for ordering parts and answering your questions about Retractable-A-Roll® II. Call us toll-free at (800) 233-5138 or locally at (859) 371-7272. Fax (800) 347-2627.

6.2 Using the Parts Lists

NOTE: Parts lists are provided for part identification and system arrangement only.

Identify the item number assigned to the illustrated part. Locate the item number in the parts list for descriptions.

In the parts list, a “ • ” (dot) shows that the part is part of the assembly part number listed above each “ • ” (dot).

Quantities specified in the Quantity column are the total number of each part required in the assembly defined in that parts list only.

For example, the quantities in the Air Tank parts list (Figure 6-3 on page 43), are for one Air Tank Kit. The Retract-A-Roll II System layout (Figure 6-2 on page 41) references the system parts list (Table 6-2 on page 42). The system parts list requires two (2) Air Tanks.

Parenthesis note quantities if system is supplied with one air tank in lieu of two.

The Conveyor Channel Assemblies and System Control Kit are provided without attaching fasteners, therefore they are not listed separately. Attaching fasteners are provided in the Connection Kit or by the Installer.

Turn to the installation instructions in Chapters 3 and 4 for more information.

Figure 6-2-A - System, 52' (5) Lanes for a 53' Vehicle - 62053-40-5L System

Front of Trailer

Rear of Trailer

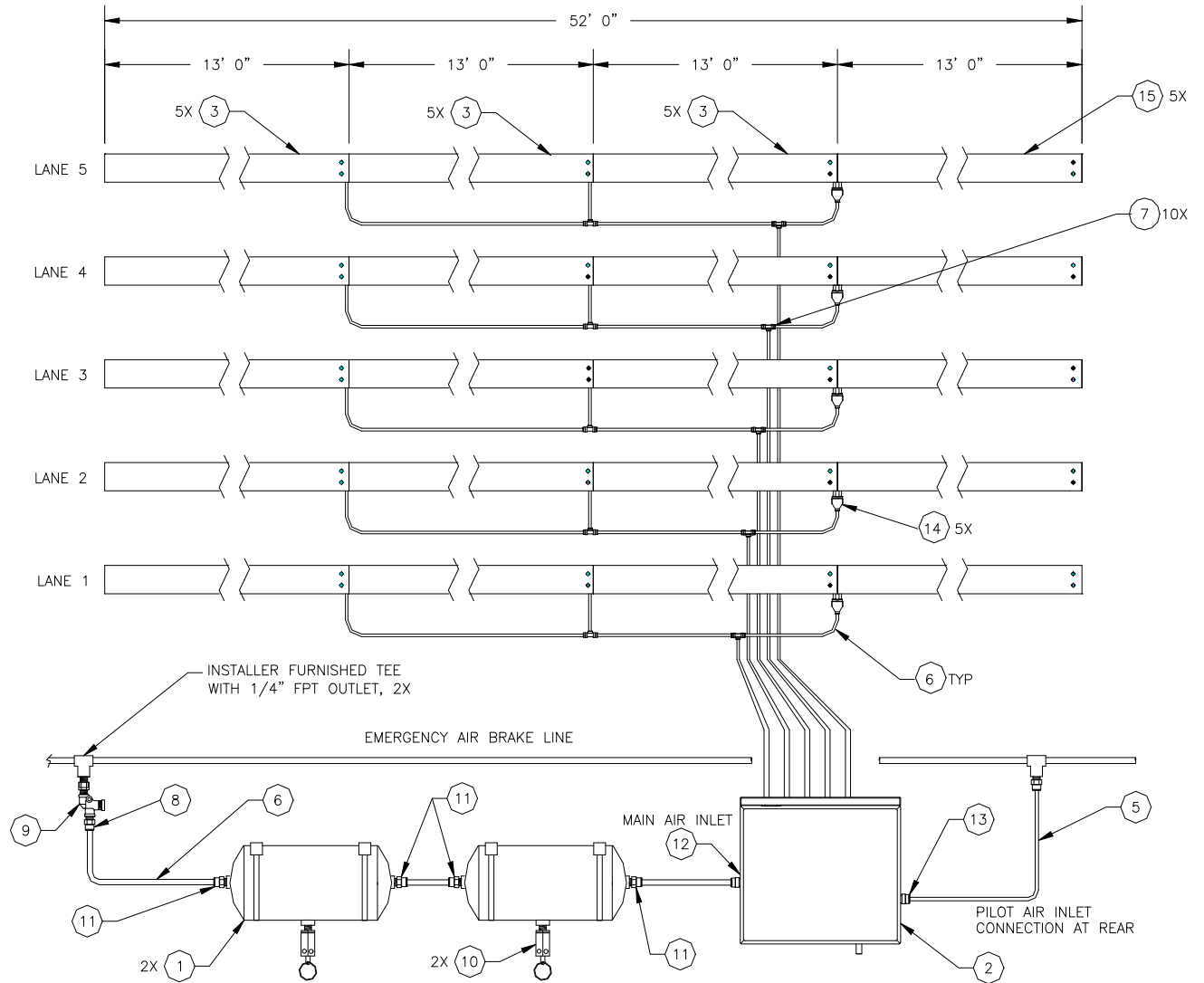


Table 6-2-A – Parts List, 52' (5) Lanes for a 53' Vehicle – 62053-40-5L System

ITEM	PART NO.	DESCRIPTION	QTY.
1	60169-10	AIR TANK KIT	2
2	62011-10	SYSTEM CONTROL KIT	1
3	62022-20	CHANNEL ASSEMBLY 6" PITCH	15
4	-	-	-
5	47049-10	TUBING, 1/4 DIA.	A/R
6	47049-11	TUBING, 3/8 DIA.	A/R
7	47065-10	FITTING, TEE TUBE	10
8	47061-13	ADAPTER, PIPE TO TUBE – 1/4" NPT	1
9	47058-13	VALVE, PRESSURE PROTECTION	1
10	47230-10	VALVE, DRAIN - AIR TANK	2
11	47061-14	ADAPTER, PIPE TO TUBE – 3/8" NPT	4
12	62034-10	FITTING, TUBE TO TUBE, 3/8 DIA.	1
13	62034-11	FITTING, TUBE TO TUBE, 1/4 DIA.	1
14	49267-10	FITTING, TUBE TO TUBE "Y"	5
15	62022-210	CHANNEL ASSEMBLY, COMBO	5

Figure 6-2-B - System, 23' (6) Lanes for a 24' Vehicle - 62124-40 System

Front of Trailer

Rear of Trailer

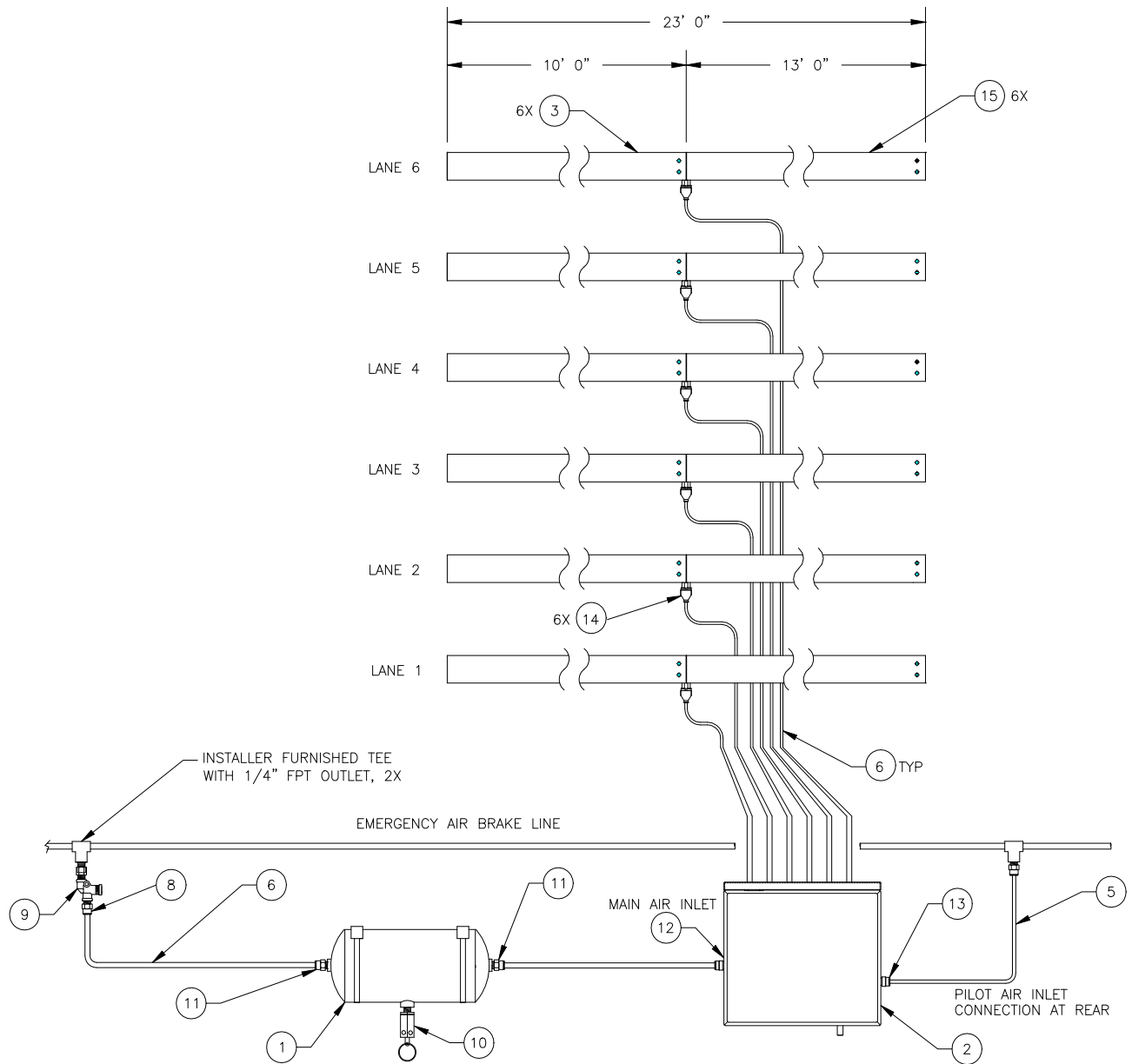


Table 6-2-B – Parts List, 23' (6) Lanes for a 24' Vehicle – 62124-40 System

ITEM	PART NO.	DESCRIPTION	QTY.
1	60169-10	AIR TANK KIT	1
2	62011-10	SYSTEM CONTROL KIT	1
3	62022-23	CHANNEL ASSEMBLY 6" PITCH	6
4	-	-	-
5	47049-10	TUBING, 1/4 DIA.	A/R
6	47049-11	TUBING, 3/8 DIA.	A/R
7	-	-	-
8	47061-13	ADAPTER, PIPE TO TUBE – 1/4" NPT	1
9	47058-13	VALVE, PRESSURE PROTECTION	1
10	47230-10	VALVE, DRAIN - AIR TANK	1
11	47061-14	ADAPTER, PIPE TO TUBE – 3/8" NPT	2
12	62034-10	FITTING, TUBE TO TUBE, 3/8 DIA.	1
13	62034-11	FITTING, TUBE TO TUBE, 1/4 DIA.	1
14	49267-10	FITTING, TUBE TO TUBE "Y"	6
15	62022-210	CHANNEL ASSEMBLY, COMBO	6

Figure 6-2-C - System, 21' (6) Lanes for a 22' Vehicle - 62122-40 System

Front of Trailer

Rear of Trailer

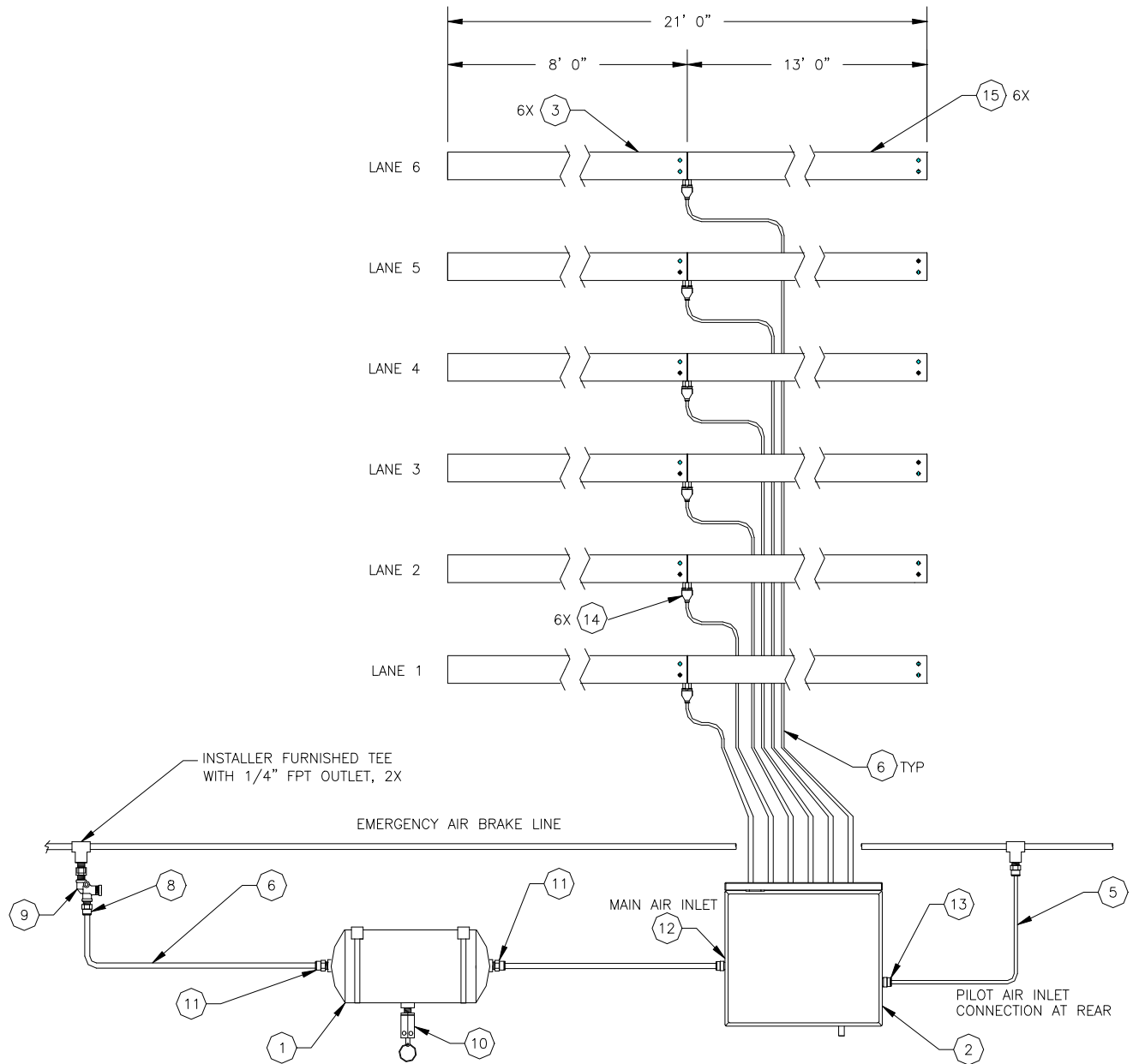


Table 6-2-C – Parts List, 21' (6) Lanes for a 22' Vehicle – 62122-40 System

ITEM	PART NO.	DESCRIPTION	QTY.
1	60169-10	AIR TANK KIT	1
2	62011-10	SYSTEM CONTROL KIT	1
3	62022-22	CHANNEL ASSEMBLY 6" PITCH	6
4	-	-	-
5	47049-10	TUBING, 1/4 DIA.	A/R
6	47049-11	TUBING, 3/8 DIA.	A/R
7	-	-	-
8	47061-13	ADAPTER, PIPE TO TUBE – 1/4" NPT	1
9	47058-13	VALVE, PRESSURE PROTECTION	1
10	47230-10	VALVE, DRAIN - AIR TANK	1
11	47061-14	ADAPTER, PIPE TO TUBE – 3/8" NPT	2
12	62034-10	FITTING, TUBE TO TUBE, 3/8 DIA.	1
13	62034-11	FITTING, TUBE TO TUBE, 1/4 DIA.	1
14	49267-10	FITTING, TUBE TO TUBE "Y"	6
15	62022-210	CHANNEL ASSEMBLY, COMBO	6

Table 6-2-D – Parts List, 26' (6) Lanes for a 28' Vehicle – 62028-40 System

ITEM	PART NO.	DESCRIPTION	QTY.
1	60169-10	AIR TANK KIT	2 (1)
2	62011-10	SYSTEM CONTROL KIT	1
3	62022-20	CHANNEL ASSEMBLY 6" PITCH	6
4	-	-	-
5	47049-10	TUBING, 1/4 DIA.	A/R
6	47049-11	TUBING, 3/8 DIA.	A/R
7	-	-	-
8	47061-13	ADAPTER, PIPE TO TUBE – 1/4" NPT	1
9	47058-13	VALVE, PRESSURE PROTECTION	1
10	47230-10	VALVE, DRAIN - AIR TANK	2 (1)
11	47061-14	ADAPTER, PIPE TO TUBE – 3/8" NPT	4 (2)
12	62034-10	FITTING, TUBE TO TUBE, 3/8 DIA.	1
13	62034-11	FITTING, TUBE TO TUBE, 1/4 DIA.	1
14	49267-10	FITTING, TUBE TO TUBE "Y"	6
15	62022-210	CHANNEL ASSEMBLY, COMBO	6

Figure 6-3 – Air Tank Kit, PN 60169-10

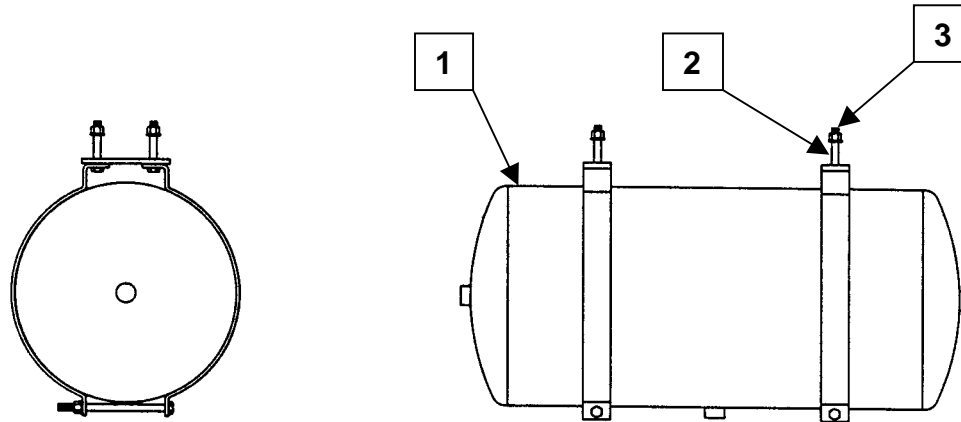


Table 6-3 – Parts List for Air Tank Kit, PN 60169-10

ITEM	PART NO.	DESCRIPTION	Qty. Per Kit
1	47068-11	Mounting Kit with Air Tank	1
	•	“C” – Brackets	4
	•	3/8” Hex Bolt	2
	•	3/8” Lock Washer	2
	•	3/8” Hex Nut	2
	•	Rubber Bushing	2
2	1118AAC1220	Bolt, 3/8-16 x 1 1/4” Long	4
3	1351BAC12SL	Nut, Hex, Self-Locking, 3/8-16	4

NOTES

NOTES



Ancra Material Handling	Ancra Corporate Headquarters
Systems Division	4880 West Rosecrans Avenue
2685 Circleport Drive	Hawthorne, CA 90250 USA
Erlanger, KY 41018 USA	
(800) 233-5138 – Toll-Free	(800) 973-5092 – Toll-Free
(859) 371-7272 – Local	(310) 973-5000 – Local
(800) 347-2627 – Fax	(310) 973-3448 – Fax