

## Presentation from Alliance National Rally 2022



## RV Maintenance & Care

ROB BOYER

ALLIANCE RV

O w n e r E m p o w e r m e n t

## Introduction

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O w n e r E m p o w e r m e n t

### Background:

- Retired Air Force 32 years. Aircraft crew chief and FAA A&P, Flight Engineer
- 3rd Rally and been with Alliance full-time for a year

- Married to Yvonne & both of us are retired Air Force and travel with our Boston terrier Kylo & Lando our cat.

## Overview & Goals

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- Have an open discussion about coach care
- Provide information about scheduled and periodic maintenance
- Have a good time...that is after all the whole point!



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## Always Start with Why

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- Safety
- You'll want to protect your investment
- Increase your RVing enjoyment and experience
- Neglect is a cruel teacher



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So, why are we here?

**Safety:**

- Towing these coaches is not something to be taken lightly, so ensuring they are well maintained helps keep you safe.
- Many of the systems in your coach need to be maintained and inspected properly to ensure they operate safely. Think propane, hydraulic & electrical for example.

**Protect your investment:**

These coaches are a substantial investment and the better maintained they are the better they will perform and provide you the enjoyment you got them for.

**Increase enjoyment & experience:**

Much like a marriage...when your coach is happy, you're happy. Happy Coach...Happy Life!

**Neglect is a cruel teacher:**

Much like your vehicle or home, neglect will only bring frustration, empty your bank account and ruin your RVing experience

## Resources

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- Owner's Guides & component owner's manuals
- Alliance RV Owners Forum ([alliancervowners.com](http://alliancervowners.com))
- Facebook Group's
- Fellow Allies & other experienced RVer's
- Your Dealer Service Center & Mobile RV Technicians
- Alliance RV Service & component vendor customer service
- Rallies
- The Internet & YouTube (Alliance RV YouTube Channel)
- Trade Schools
- You and your senses!



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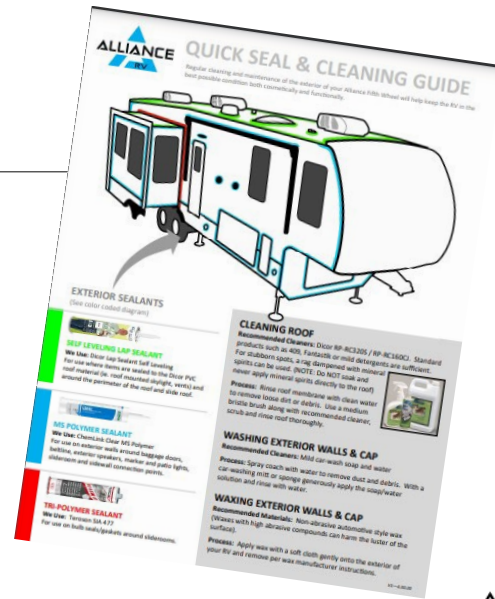
This list is not inclusive.

- Owner's Guide
  - These are written to provide a general informational overview and are not inclusive.
- Component owner's manual
  - Most provided in your black owner's bag. However, not all.
- Alliance RV Owners Forum ([alliancervowners.com](http://alliancervowners.com))
  - A growing wealth of information and discussions.
- Facebook Group's

- Alliance RV Group, Owner's, etc. Please take care when basing decisions of how to operate your equipment based on opinion.
- Fellow Allies
  - This is a great resource...just look around the room!
- Experienced RVer's
  - Regardless of brand, we are all RVer's and share the passion for camping. Take advantage of this as many of the components we use are shared across the brands. We often partner with RVillage to conduct owner empowerment classes and that platform is not exclusive to Alliance.
- Your Dealer
  - While there are varying experiences with dealers across the board. They remain a primary resource for you coaches maintenance.
- Mobile RV Technicians
  - Based on your situation and use a mobile technician may be a great option to perform scheduled maintenance that you can't perform yourself.
- Alliance RV Service
  - Our A-Team staff stands ready to assist! Email or call.
- Component vendor customer service
  - Most of the vendors we use have customer service centers. Lippert is a great example and the Lippert Now app & Owner RV School.
- Rallies
  - Like this session and the vendors that attend there is a wealth of information not only from these formal sessions, but networking with each other!
- The internet & YouTube
  - Everything you read and see on the internet must be real and the truth! Like Facebook, be careful where you get advice from. That said, there are a lot of great channels and sites that have tons of great useful information.
- Trade schools
  - There are formal education resources out there like National Recreational Vehicle Training Academy (NRVTA), Recreational Vehicle Service Academy (RVSA) & Recreational Vehicle Technical Institute (RVTI) that provide paths to certification & owner education.
- You and your senses
  - Look, listen, smell & touch.
  - Does it look right? Perform regular visual inspections during all phases. Set-up, tear down, when stopping for fuel or rest stop.
  - Does that sound normal? Over time you'll learn your coaches' noises and what is normal and what is not.
  - Does that smell normal for the situation? If you're dumping tanks, well then it may smell in the coach. Smell of Ethyl Mercaptan that makes propane gas noticeable. What electrical burning smells like.
  - Does that feel normal? Does your wheel feel hot or an electrical component?
  - You are one of the best indicators if something isn't normal...pay attention.

# Exterior

- Roof
- Sidewalls
- Slide-out Seals



## Owner Empowerment

- **Roof** (Remember safety first when getting on the roof, 13' is a long way down!)
  - PVC roof – It has a lifetime warranty and is very low maintenance.
  - Inspection (minimum semi-annually and whenever you're on the roof)
    - Inspect for cuts, tears or anything protruding through the membrane.
    - Inspect seams and self-leveling lap sealant for air voids and stiffness.
    - If you need to seal an air void, you can prep the area with denatured alcohol (can get at hardware store)
  - Cleaning
    - Give the roof a good rinse
    - For a PVC roof, you can use a household cleaner like Fantastic, Dawn, Murphy Oil soap or other mild detergent (no specialty RV roof cleaners necessary).
    - One of the best things about PVC roofs is that, unlike rubber roofs, they don't require any special UV coating! Just give them a little TLC with soap and water, and you're good to go.
    - Use a medium stiffness brush to scrub the roof.
    - You can spot clean with mineral spirits.
- **Sidewalls** (Fiberglass & Azdell with a painted front cap)
  - Washing

- You can wash your coach like you'd wash your car to get off all the road grime, bugs etc.
- Be very careful if using a pressure washer as too high of pressure can damage the decals
- I use a pole with pad and brush and a bucket with the cleaner & water.
- I wash and rinse my coach in sections and come back and wipe it down to alleviate water spots.
- You can also spot clean or wipe down your coach with quick detailer or ceramic coating spray.
- How often really depends on the conditions
- Waxing
  - Done the same as with an automobile and use automobile grade wax that is non-abrasive.
  - 2-3 times a year is a good schedule, however once again it depends on conditions.
  - You can also ceramic coat your coach and it helps with cleaning just like your vehicle.
- Sealants (Quick seal & cleaning guide on Alliance FB Group in files)
  - Inspect seams for sealant breakdown and voids.
  - We use MS Polymer sealants, not silicone.
  - So, what is a MS (Modified Silicone) Polymer? MS Polymers are flexible adhesives that cure with moisture. They are ideal for applications that require a high degree of resilience and excellent environmental resistance. They also adhere to themselves so you can clean and apply additional sealant over existing applications. Unlike silicone that does not adhere to silicone.
  - If you want/need to order sealant for your coach, you can contact Alliance Parts. You can call to get info you need at 574-226-0140 - option 3, but to order you'll need to send an email request to [parts@alliancerv.com](mailto:parts@alliancerv.com)
- Decals/graphics (Exterior Graphics Care file on Alliance RV Group files)
  - Take care when using a pressure washer above 1200psi and around edges.
  - Generally, you use the same method to clean as the sidewall and can use certain solvents for stubborn spots. Please refer to cleaning guide.
- **Slide-out Seals** (Slide-out Seal - Gasket Cleaning – Maintenance on Alliance RV Group files)
  - What kinds of slide seals are there? Bulb seals: These are compression seals that seal the slide when open and closed. Swipe seals: These provide an additional environmental barrier against water protrusion.
  - The seal material can be cleaned with most household cleaners such as 409 Lysol multi-surface spray. However, there are many chemicals that are not recommended and are listed in the cleaning guide. Additionally, you can use

many commercially available slide seal lubrication & conditioning spray. You can also use pledge.

- Doing a visual inspection whenever you operate the slides is a good idea to ensure the swipe seals are in proper position and for condition of the slide material. The rate of the breakdown and deterioration of the seals, sealants and gaskets on your RV is directly tied to the outside environment and the needed maintenance, cleaning and touch up of these crucial components is necessary to ensure proper operation.

## Exterior

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- Awnings



Photo credit Sarah Nelle Ballard



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- **Awnings**
  - **Cleaning-** Video on LCI support <https://youtu.be/5qbBL3I8ohg> and instructions at <https://lci-support-doc.s3.amazonaws.com/maintenance/ccd-0002416.pdf>
    - Periodically clean vinyl or woven acrylic fabric using a mixture of 1/4 cup of dish soap and 5 gallons of warm water. Liberally apply the mixture on the top of the fabric and retract the awning for 5 minutes. This will apply the mixture to the bottom of the fabric as well. Extend the awning and hose off with fresh water. Repeat if necessary. Allow to dry before retracting.
  - **Hole Repair-** Fabric repair kit for pinholes up to 1/8" Awning is available from our parts department. . Document instructions: <https://lci-support-doc.s3.amazonaws.com/technical-information-sheets/awnings/ccd-0003486.pdf>
  - **Be careful in wind and rain**
    - Pro-tip: Be mindful of leaving your coach with the awning left out or when rain is expected. Tipping your awning can help.

# Exterior

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- Pin Box
- 7-Way Plug
- Breakaway plug



## O w n e r E m p o w e r m e n t

- **Pin Box**
  - **Inspection-** Monitor for excessive wear and refer to your owner's guide for maintenance inspection.
  - **Torque-** Periodically check torque values.
  - **Debris-** Check for bird's nest and other critters that may try to take up residence in your pin box.
- **7-Way Plug**
  - Inspect for corrosion build-up and cable condition. You can use an electrical terminal cleaning spray to clean.
- **Breakaway plug**
  - The breakaway switch is a critical safety component of the RV brake system. You'll find this located on or near the fifth wheel pinbox, if the fifth wheel and the tow vehicle become separated during towing, the line will pull the plunger out and immediately activate the trailers brakes. Always make sure your breakaway switch is in working order. To test your breakaway switch, while the RV is still hitched to the tow vehicle, disconnect the tow plug from the vehicle and then pull the breakaway pin out, only to the first stage, and you should hear the brakes engage.



# Exterior

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- Chassis



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## •Chassis

- Clean, address corrosion, inspect
- If traveling on salted roads during the winter months, it is recommended to thoroughly spray off the undercarriage.
- Rust preventative like Fluid Film and other can be used if desired.

# Exterior

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- Leveling systems



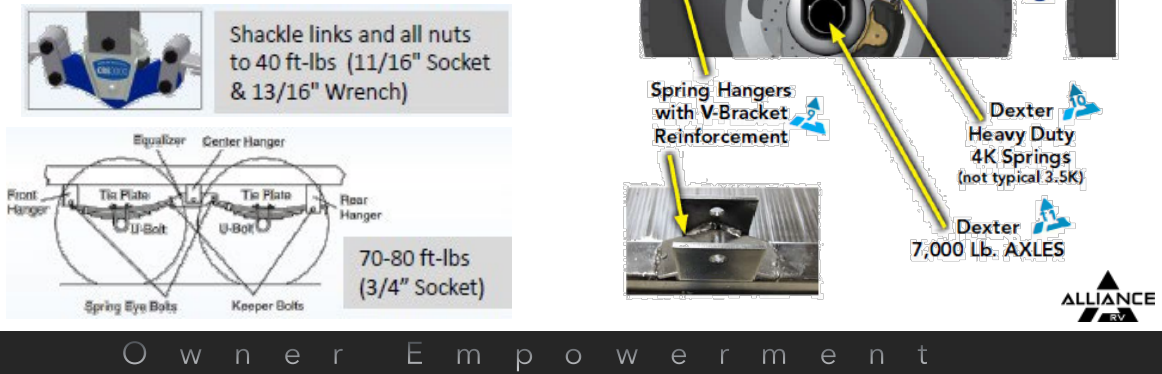
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## •Leveling Systems

- Inspect for hydraulic fluid leaks
- Check hydraulic fluid level with everything retracted (12 mos)
- Change hydraulic fluid every 5 years
- Use of anti-stiction fluid. If you get popping or settling. A quart of “fork-oil” can be added in place of a quart of the ATF fluid and then you cycle the system. This procedure is in the file section of Alliance RV Group FB page.
- Wipe clean and lube landing gear tubes with silicone as needed or every 3 months. I wipe the legs down before retracting each time.

# Exterior

- Suspension

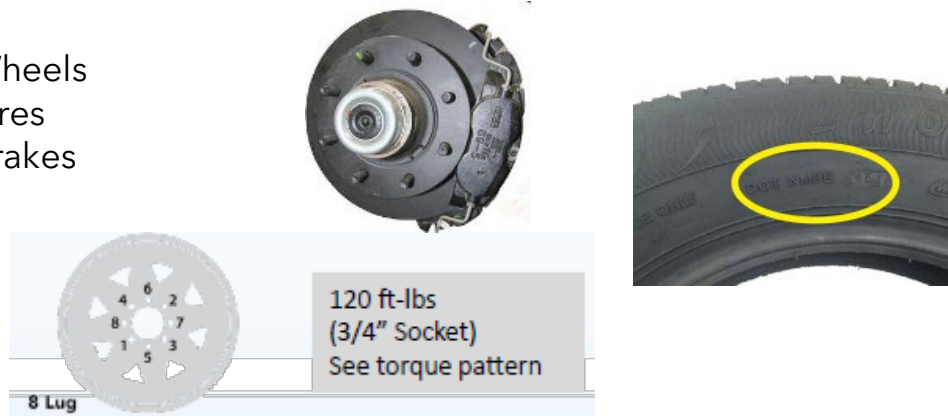


- **Suspension**

- Suspension is a combination of Dexter & Morryde components
- Perform visual inspections before & after travel. In addition, it is a great idea to always look at your running gear when you stop for fuel or just to rest.
- Remember your senses- Does it look, smell, sound & feel right?
- Visually inspect hangers, U-bolts, & equalizers. Check torque values every 6,000 miles or within 50 miles if work was accomplished. Always check torque values WITH weight on the suspension.
- Grease wet-bolts and equalizers every 3,000 miles. May need to come in from under the coach or install 90-degree Zerk fittings.
- Re-pack & inspect wheel bearing every 12,000 miles
- Wheels-Check torque to 120 ft pounds & verify valve stem is tight and has cover.
- Tires-Inflate to 110 psi cold (Get an accurate tire gauge) Consider using a tire pressure monitoring system to check pressure & temperature during travel.
  - Inspect for bulges, cracks & tire wear pattern for signs of issues with tracking due to suspension issues. Swap out tires every 5-6 years based on DOT date.
  - Inspect tires for damage (nails sidewall damage)
  - Be prepared if you get a flat. Do you know how, and can you change your coaches tire? Have a capable jack and cribbing? 20K = 10 tons Jacking on the frame. Roadside assistance?

# Exterior

- Wheels
- Tires
- Brakes



O w n e r E m p o w e r m e n t

- **Tires, Wheels & Brakes**

- Perform visual inspections before & after travel. In addition, it is a great idea to always look at your running gear when you stop for fuel or just to rest.
- Remember your senses- Does it look, smell, sound & feel right?
- Wheels-Check torque to 120 ft pounds & verify valve stem is tight and has cover.
- Tires-Inflate to 110 psi cold (Get an accurate tire gauge) Consider using a tire pressure monitoring system to check pressure & temperature during travel.
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  - Inspect tires for damage (nails sidewall damage)
  - Be prepared if you get a flat. Do you know how, and can you change your coaches tire? Have a capable jack and cribbing? 20K = 10 tons Jacking on the frame. Roadside assistance?
- Brakes-Most of the coaches have electric drum style brakes. You should ALWAYS test your brakes after hooking up. Recommend that you check adjustment every three months. You could need to adjust your gain or change out the brake pads just like an automobile. Inspect that the wires are still connected to the brakes and that they are engaging. The best thing is to have them inspected at a minimum when getting your wheel bearing checked.

- Disk brakes- Inspect for leakage and check fluid level. The reservoir is located in the front cargo compartments.
- Lastly, after your coach has sat in one place for a longer period of time, you should burnish your brakes before hitting high speeds. What happens is rust will accumulate on the brake surface and your brakes will lose some of their effectiveness. After starting your tow, roll-out on a street 2-3 times up to about 25 mph and use your gain levels to come to an abrupt stop. This will help to get the rust off so if you have an immediate need to emergency brake after starting your trip your brakes will be up to the task.
- Bottom-line is refer to the manufactures owner manual for recommended scheduled maintenance.  
<https://alliancervowners.com/resources/dexter-running-gear-operation-and-maintenance-manual.24/>

## Interior

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- Floors
- Countertops
- Sinks
- Appliances



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### •Floors

- Cleaning-You clean our coach's floor essentially the same as you'd clean a home linoleum floor. For cleaning scuffs off you can use a sponge and multi-surface cleaner such as Fantastic.

### •Epoxy countertop surfaces

Cleaning-Although the epoxy is a very durable, long lasting coating care should be taken and occasional maintenance is recommended. We recommend that a nonabrasive silicone spray wax be used periodically coat the countertops. Like any fine furniture, the

use of coasters or place mats are recommended for any objects with a rough or unpolished finish. Ceramic or abrasive item, if dragged on the surface will cause light scratching, this is not covered under the warranty, but can be buffed out by a professional if needed.

Plates over 155 degrees should not be placed directly onto the surface, discoloration or damage due to excessive heat is not covered under the limited warranty. Do not use highly abrasive cleaners or devices to scrub the surface such as steel wool, or hard bristle brushes. If you encounter a 'hard to clean' spot, try using 70% isopropyl alcohol. This removes the majority of all dirt from epoxy and will leave the surface clean and ready for use.

•**Solid Surface countertop**

Cleaning-Everyday cleaning requires only a damp cloth (microfiber works well) and a mild detergent solution or all-purpose countertop cleaner, rinse with clear water and buff dry.

•**Sinks**

- Stainless Steel Sink Care by Prue Liberty posted in Alliance RV Group. For everyday cleaning of stainless-steel sinks, use a soft washcloth, dish soap, and warm water. Wipe the sink in the direction of the polish marks or the fine lines in the sink. Use a soft, dry towel such as a hand towel to dry the surface of the sink.
- Tough Stains, Grease, Dirt & Grime-Spray warm water all over the sink area including the sink basin. Sprinkle an even amount of baking soda on the stainless-steel sink. Leave for 15 minutes. Scrub the baking soda into the sink using a light no scratch scrubbing pad. Rinse off the baking soda with cold water. Wipe the sink dry with a cloth towel.

•**Appliances**

- Clean and maintain as you would your residential appliances. Refer to owner's manual.

# Systems

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- Air Conditioning
- Furnace
- Maxxair Fans



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## Air conditioners

- Inspect/cleaning condenser coils on roof
- Clean inside filters
- Check four mounting screws for tightness
- Check for aluminum tape security on ducts

## Furnace

- Maintain clear return air pathway
- Reduced return air can cause overheating/fire
- Visually inspect external exhaust vent for blockage (annual) per Airxcel/Suburban
- Cleaning the main burner (annual)
- Don't wait until you need it to test it!

## Maxxair fans

- Clean screens & blades
- Use of covers on roof

# Systems

- Plumbing
- Water Heater
- Water Pump
- Holding Tanks



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Open compartment divider that covers the area behind the Nautilus panel and have a look with a flashlight – furnace, water heater area

- Evidence of water leaks
- Unusual odors
  - Plumbing / water / sewer
    - Overall freshwater system
      - Regularly inspect for leaks
      - Sanitizing freshwater tank and water system
      - Use and changing water filter(s)
      - Consider small PEX kit for leaks
    - Water heater (I do when I sanitize/winterize)
      - Anode rod condition (1-1/16" socket + Teflon plumbers tape)
      - Suburban Magnesium anode rod #232767
      - Suburban Aluminum anode rod #232768
        - Only use if magnesium rod does not last one year
      - Flush sediments from tank
      - Keep air intake clear



- Water pump
  - Clean screen filter
  - Mitigate vibration - sound isolation material
- Sewer
  - Verify all tank valve and sensor LED operation & label (one time)
  - Look for leaks, sagging underbelly, puddles, odors
  - Flush black tank regularly using the integral spray port to prevent buildup and sensor operation
  - Treat your black tank regularly (Types of tank treatments)
  - Greys can be back-flushed if sensors are in error

## Systems

- Electrical



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- Electrical
  - 12VDC
    - Battery fluid level (if lead acid battery(s))
    - Fuse locations and spare fuses
  - 120VAC
    - Condition of main power cable
    - Use of EMS/surge suppressor

- Know your GFCI outlet and what is tied to it
- On-Board Generator
  - Oil Change schedule
  - Exercise 2 hours each month under load

## Systems

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- Propane



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### Propane

- Understand the operation of your automatic changeover regulator
- Inspect tanks and lines periodically
  - Unusual smell
  - Cracks, etc.
- Visually check light on leak detector
- Detector has a service life ~5 years, some automatically go into alarm (mine says Dec 2025) Have a qualified service person fix any issues

# Tools &Supplies

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- Cleaning supplies
- Waxing supplies
- Lubrication
  - Plumber's silicone grease
  - CRC Power Lube with PTFE
  - Silicone spray (squeak exterminator)
- Adhesives
- Lemon Pledge



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# Tools &Supplies

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- Hand tools
- General purpose tool kit with screwdrivers, pliers, etc.
- Quality 1/2" drive torque wrench with extensions & sockets
- Water heater anode socket 1 -1/16"
- Alliance Lug nut socket \_\_\_\_\_
- <Your truck> lug nut socket \_\_\_\_\_
- #2 Robertson (square drive) screwdriver / bit
- Small digital level



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## Tools &Supplies

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- PEX
- Fuse assortment
- Multimeter
- 120VAC circuit tester
- Duct tape
- Nylon wire ties
- Electrical tape
- Eternabond® tape
- Scrimshaw (underbelly) tape
- Telescopic ladder



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## Conclusion

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- Importance of maintain your coach
- Ask for assistance if needed!

***Thanks for Attending!***



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