Concord American Flagpole - Flagpole O&M Manual – Cam Cleat Flagpole System

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2. Stains and Scratches on Aluminum Flagpoles
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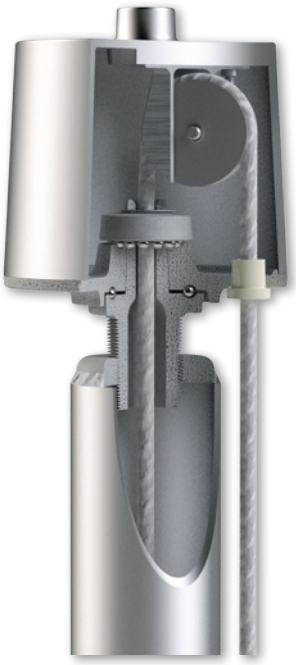
Internal Halyard Revolving Truck



Internal Halyard Revolving Truck Cutaway

Internal Halyard Stationary Truck

CONCORD AMERICAN FLAGPOLE™

Pride. Quality. Tradition.

INSTALLATION INSTRUCTIONS IH-CAM-100

INTERNAL HALYARD FLAGPOLE SYSTEM

GROUND SET and SHOE BASE

WARNING:

To prevent staining the flagpole must be stored in a dry place OR all packaging must be removed immediately after receiving shipment.

FOR QUICK AND PROFESSIONAL INSTALLATIONS
READ ALL INSTRUCTIONS BEFORE PROCEEDING

Lay out all flagpole components. If a part is missing from the attached parts diagram, please contact your American Flagpole Dealer for replacement.

STEP 1 - Remove all wrapping materials and place unwrapped flagpole on cribbing or other wood support on ground (preferably in a covered dry area). If flagpole is **MULTI-SECTION,** carefully lay sections out in proper order, grouping flagpole sections with like match marks. Sections **MUST BE STRAIGHT & LEVEL** while sliding together. Line up match mark numbers, imprinted at each section, for proper fit. Lightly sand away any burrs that may be present on the male section or in the upper section of the joint. A small amount of lubrication *(silicone or dish washing liquid – by others)* may be applied to the male portion of the joint for easier fitting. Start with the bottom sections and work toward the top. Begin sliding the two sections, rolling the flagpole by 180° with every 2 to 3 inches to facilitate an easier fit. If extreme difficulty is found in fitting the first 6 inches together, pull back apart and cool the male section with ice for several minutes. A sledgehammer and block of wood (to protect the flagpole from direct impact) may be necessary on larger poles to complete the assembly of joints. American Flagpole suggests the use of an epoxy adhesive for flagpoles 60' and greater.

STEP 2 - Identify parts and place them along the flagpole according to the parts diagram.

STEP 3A *(REVOLVING TRUCK)* **-** Slide beaded retainer sling assembly *(PART E)* and assemble to end of cam cleat rope assembly with provided shackle. Take the rope halyard *(PART C)*, temporarily remove the Halyard Securing Device *(PART J)*. Open truck *(PART B)* by removing screws. Feed end of cam cleat rope halyard assembly up through nylon fitting in truck housing, up over the pulley inside the truck's hood, and back down through the threaded spindle of the truck assembly. Pull a few feet of the rope halyard through truck and re-assemble truck. **VERIFY HOOD IS REPLACED SUCH THAT INSIDE PULLEY IS DIRECTLY OVER CABLE ENTRANCE**. Feed the rope halyard down through the flagpole until you can pull it out through the cam cleat door near the base of the flagpole *(this may require a fish tape)*.

STEP 3B *(STATIONARY TRUCK)* **-** Slide beaded retainer sling assembly *(PART E)* and assemble to end of cam cleat rope assembly with provided shackle. Take the rope halyard *(PART C),* temporarily remove the Halyard Securing Device *(PART J),* and feed the halyard through the outer pulley of the stationary truck *(PART B)* and over the centering pulley. Feed the rope halyard down through the flagpole until you can pull it out through the cam cleat door near the base of the flagpole *(this may require a fish tape)*.

STEP 4 – Next install the finial ball *(PART A)* by screwing the ball's spindle into truck *(PART B).* **Do not grip ball to tighten, grip spindle/rod with vise grips and tighten.** Tighten all nuts and set screws. An epoxy or Loc-tite type product is recommended on all connections *(supplied by others)*.

STEP 5 – With the rope halyard installed in the truck and fed down the center of the flagpole, next feed rope halyard through the cam action cleat *(PART F)* which should be mounted to plate located inside door. Once through this device, pull excess through door, coil, and secure to outside of flagpole with tape.

STEP 6A *(REVOLVING TRUCK)* **-** Attach the truck *(PART B)* with ball by screwing into the threaded top of the flagpole **Do not epoxy spindle of truck.** If truck *(PART B)* is a stationary truck, be sure to secure all set screws.

STEP 6B *(STATIONARY TRUCK)* **-** Mount the truck assembly *(PART B)*. You will find set screws around the outer wall of this device. Once located, slide truck and ball assembly over the top of the flagpole and fasten the set screws tightly against the flagpole. This should set the truck and keep it from moving. Be careful not to catch the rope between the truck and the pole top.

STEP 7 - On the outside of the flagpole, space and/or adjust the snap hooks and neoprene covers *(PART D)* to the proper distance to accommodate your flag size. Please see diagram for snap hook attachment. Attach Counterweight and Beaded Retainer Sling Assembly *(PART E)* with provided shackle.

STEP 8 - Before standing flagpole, slide the flash collar *(PART G)* up from bottom and secure at the location of the cleat holes with tape on underside of flash collar to prevent slipping.

STEP 9 - Stand flagpole into previously installed ground sleeve *(Ground Set Installation)* or onto anchor bolts *(Shoe Base Installation)*. This may require the use of a crane or backhoe for larger flagpoles. Always choke multiple section poles below lowest joint as a safety precaution. Caution: During installation, the flagpole should be assembled as close as possible to the final support point. Professionals experienced in such installations should perform rigging and lifting. During lift, keep clear of the area and reach of the flagpole path. Do not pass flagpole overhead. When installing multi-piece flagpoles, arrange the rigging for the lift in such a way that weight of the flagpole sections is supported from the bottom of the flagpoles so that the flagpole joints are pushed together, not pulled apart, during the lift. Keep clear of power lines.

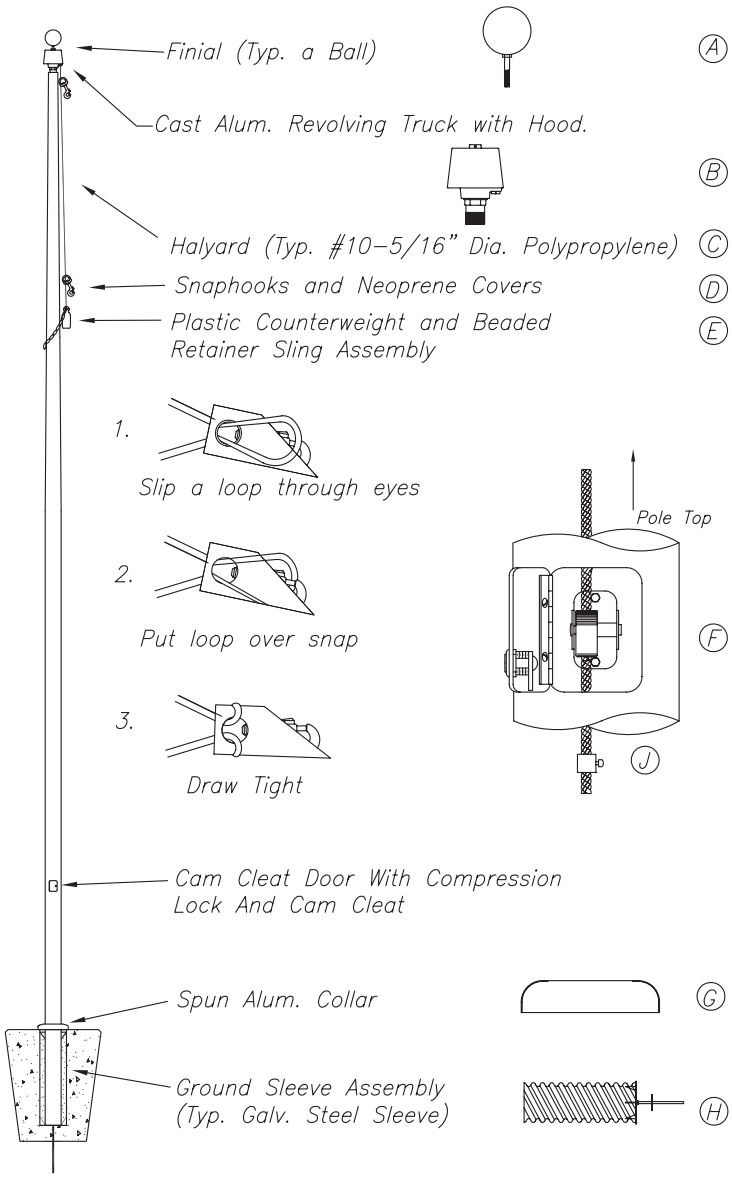
STEP 10A *(GROUND SET)* **-** After inserting flagpole into ground sleeve *(corrugated tube),* plumb flagpole with wooden wedges *(supplied by others)*. Fill space between ground sleeve and flagpole with tamped dry sand. Fill ground sleeve 6" to 8" at a time and tamp as you fill. Fill ground sleeve with sand to about 2" from top. Then cap off with waterproof cement. For PVC ground sleeve, insert flagpole into plastic sleeve, turn to align truck assembly with the wind, plumb flagpole, fill remaining void with dry sand, and top off with thin layer of waterproof cement or caulking.

STEP 10B *(SHOE BASE)* **-** After placing the flagpole on top of the anchor bolts, install flat washer, lock washer, and hex nut. **Tighten nut and verify that all threads are fully engaged.** *NOTE: An installation using "double nuts" is not recommended by American Flagpole.*

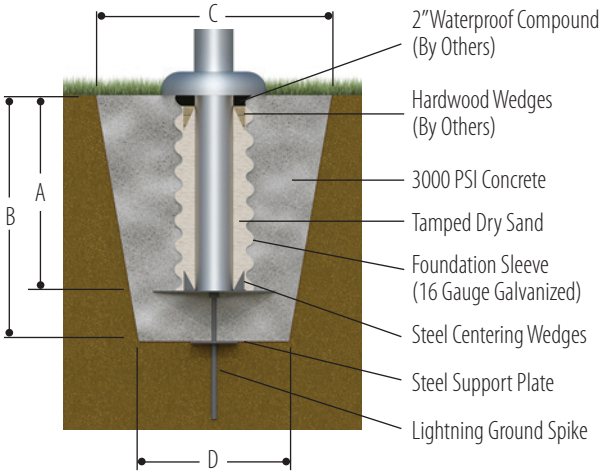
STEP 11A *(GROUND SET)* **-** After waterproof cement has dried slide flash collar *(PART F)* down into position and caulk joint with matching color silicone to seal the space between the flagpole and the flash collar.

STEP 11B *(SHOE BASE)* **-** After the nuts have been tightened, slide flash collar *(PART F)* down into position and caulk joint with matching color silicone to seal the space between the flagpole and the flash collar.

STEP 12 – HALYARD OPERATION: Pull rope halyard *(PART C)* to the right to clear cam operation. Carefully pull or release halyard to raise or lower the flag to the desired height. To secure the halyard, reach into the front on the cam, and lift the cam up. Pull halyard to the left, behind the cam. Release cam, halyard will engage the cleat and hold. Before flag is raised to the top of flagpole, raise Counterweight and Beaded Retainer Sling Assembly *(PART E)* to approximately two feet from top of cam cleat access door, and install the Halyard Securing Device *(PART J)* on the rope assembly, just below the cam cleat assembly, and tighten thumb screw to secure. Excess halyard should be pushed back through the cam cleat door for storage.



GROUND SLEEVE WITH STEEL LIGHTNING SPIKE INSTALLATION

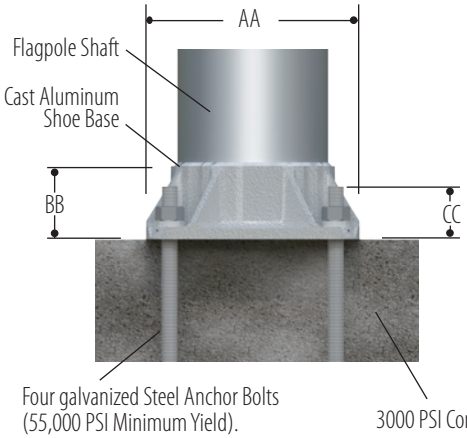


NAAMM's Metal Flagpole Manual offers basic suggestions on foundation measurements in firm, dry soil only using dry tamped sand and 3000 PSI concrete. Soil conditions vary by site. Exact foundation requirements should be verified by a Structural Engineer with knowledge of soil conditions in your locality.

Ground Set

Exposed Mounting Height	A	B	C	D
20'-0"	2'-0"	2'-6"	30"	24"
25'-0"	2'-6"	3'-0"	36"	24"
30'-0"	3'-0"	3'-6"	36"	24"
35'-0"	3'-6"	4'-0"	36"	30"
40'-0"	4'-0"	4'-6"	45"	36"
45'-0"	4'-6"	5'-0"	45"	36"
50'-0"	5'-0"	5'-6"	50"	42"
60'-0"	6'-0"	6'-6"	60"	48"
70'-0"	7'-0"	7'-6"	60"	48"
80'-0"	8'-0"	8'-6"	72"	48"

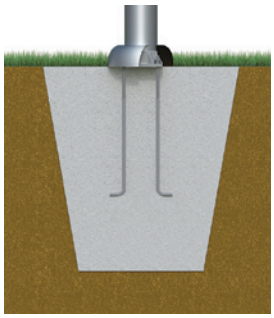
SHOE BASE FOUNDATION INSTALLATION



Shoe Base

Butt Diameter	AA Base Square	BB Base Height	CC Bolt Projection	Bolt Diameter	Bolt Circle Diameter
4"	7-1/2"	3"	2"	3/4"	6-1/2" - 8"
5"	7-1/2"	3"	2"	3/4"	7 1/2"-8"
6"	9-3/4"	3-1/2"	2-3/4"	1"	9"-10"
7"	10-1/2"	3-11/16"	2-3/4"	1"	10"-11"
8"	11-1/4"	3-15/16"	2-3/4"	1"	11"-12"
10"	14"	4-7/8"	3-1/4"	1"	14"-15"
12"	17"	8"	3-3/4"	1-1/4"	16"-18"

Shoe Base Foundation Installation



Stains and Scratches on Aluminum Poles

Types of Staining:

1. Dirt, grass, or other natural debris that may collect on the pole while it is installed or waiting to be installed.

2. Chemicals, paint, and other markings that may spill onto the pole or be thrown onto the pole. This may be noticed as streaks or marks on the shaft's surface.

3. Water staining that occurs due to water being in contact with the shaft and having no way to evaporate in a timely fashion. Dark spots or streaks will begin to present themselves over time. This is most often seen when wrapped poles are left outside or not unwrapped immediately after delivery. This is typically described as a 'black mark', 'dark colored streak(s)', or 'dark splotches' along the shaft's length or circumference.

4. Scratches from improper handling on the job site or by the transportation company.

Cleaning of Mild Dirt or Debris:

A garden hose, with low to moderate pressure can be used to wash off most dirt and debris that may be on the pole. If it still does not come off of the shaft, the use of a wet cloth should be tried. If necessary, a mild soap or detergent may be used (items such as Go Jo hand cleaner or liquid soaps). We must warn that the cleaning of any surface that is anodized or painted should be done with great care and that it should be tested on a small 'test' area where the finish will not be seen. Direct Buried poles can be tested in the area which will below ground level. Rinse away any remaining soap to prevent future reactions with the metal.

Cleaning and Removal of Water Stains:

The following are options to try in removing water stains from shafts in the order of least reactive to most reactive. Please follow safety procedures and do not let chemicals come in contact with skin or other body parts. If you do come in contact with the chemical, you must follow the directions on the container or contact a doctor immediately for advice. If chemicals are ingested contact your local poison control hotline immediately. Please dispose of chemicals carefully in correlation with all local and federal guidelines after use.

1. Run a stream of warm or cold water over the stained area using low to moderate pressure from a water hose. Use of a soft cloth may be used to gently rub the affected spot.

2. Mild liquid soaps can be used to aid in removal of the stain. If the pole is painted or anodized, a small spot should be tested first to verify the finish will not be damaged by the product being used.

3. The solution of Lemon oil and Pumice or Pumice Hand Cleaner with soft rags can remove some stains. Attention: For the following options, always test a spot before proceeding due to the chemical nature of these products. They can cause damage to anodized or painted finishes if not used carefully. For Anodized poles, soap and water is typically sufficient to clean any dirt or stains and the following options are not suggested.

4. Household cleaners such as 409, Lysol, or Texize can be applied with a soft cloth and applied in a circular motion. It is best to rub around the shaft, in the same direction as the sanding marks, to prevent scratches or scarring.

5. Naval Jelly, Zepalum Sodium Hydroxide, or Diluted Drano (50/50 concentration with water) can be used and applied in the same manner as #3, making sure to rinse clean when complete.

6. Aluminum Alloy Wheel Cleaner purchased at most retail stores handling automotive supplies. This cleaner should be sprayed directly onto the stained area per the bottle's instructions. A soft cloth should be used to clean the area, in the direction of the sanding marks. In severe cases, the use of a stainless steel wire brush can be used in the direction of the original sanding marks. Depending on the severity of the stain, the process may need to be repeated several times to eliminate the entire stain. If steel bristles are used, rust may set up over time causing the appearance of a stain.

Stains and Scratches on Aluminum Poles

7. **Ox-Out 536** is a strong chemical cleaner made by Chemclean Corporation, Jamaica, NY, (800) 538-2436 and available through CAFP *(Item No. CLN-9935).* This chemical should be applied directly to stained areas of the pole with soft cloth or sponge, allowed to react and rinsed away with water. The stains will initially whiten from use of this chemical but oxidation of the pole with time will blend in the whitened areas.

Notes to remember:
Aluminum can be exposed to almost any solvent for a short period of time without any adverse effects. If a cleaner contains oil or wax, a dry cloth should be used to help remove.

Heat accelerates chemical reactions. Cleaners may become overactive or may evaporate too quickly in hot temperatures. It may also create streaks leaving an improper finish. Cold temperatures inhibit the chemical process. Try to clean on a mild day in shaded areas.

Spot testing – place solution on unobtrusive portion of the finish (the part below ground or side away from normal view) in the concentration, manner, and time you plan to use on the pole. Rinse clean, let dry, and inspect. Check painted or anodized poles for softening/dissolution of color in grain.

NEVER mix chemicals for your own safety.

Do not let chemicals come in contact with other materials or yourself.

Cleaning and Removal or Other Types of Stains:
In rare instances a chemical or paint can be spilled onto a shaft when at the job site. In this instance, the options given above for water staining should be attempted.
If these do not work, you may also wish to try the following *(using same guidelines as above for your safety).*

These include:

1. Paint Thinner/Remover

2. Sanding the affected areas as described below.

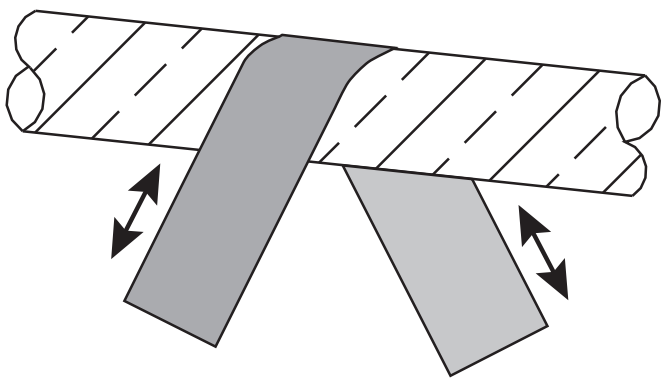
Remember: No chemical treatment or sanding should be tried on any pole with a painted or anodized finish. Only those with a directionally sanded finish should be considered for these options.

Visible Scratches To Directionally Sanded Surfaces:
If scratch marks are present from shipping or from handling on the job site, the following procedures can be used to attempt a repair on the shaft's finish. Again, we would warn that these sanding procedures should not be attempted on anodized or painted shaft assemblies.

1. Use an aluminum oxide sanding belt, 80 grit or higher, such as is used with portable electric belt sanders. These are available through most hardware stores.

2. Take the belt and break at one point along the loop to have one long single piece.

3. Pull the belt back and forth *(similar to a shoe shining motion)* over the stained area of the pole in the same direction as the existing sanding lines on the pole. If care is used in the process, a satin finish equal to the original factory finish can be achieve. See below drawing for motion indicated.



Halyard Maintenance

The rate of halyard wear depends on several factors including flag size, wind conditions, climate and usage. For these reason we recommend monthly inspections of the halyard for wear. Worn halyard should be replaced before complete failure so that it can be used to pull the new halyard through the truck.

Polyester and nylon rope halyard should be replaced if there are signs of fraying, tearing, or other visible damage. Stainless steel cable halyard should be replaced if there are any signs of kinking, fraying or other visible damage.

Note: For internal halyard flagpoles with winch, see Winch Operation, Care and Maintenance, and Wire Cable Replacement Instructions for Internal Halyard Flagpoles.