



# Erection and Safety Manual

## General Maintenance

| Problem                                                                                                                 | What to Do                                                                                   | Action Item Frequency       |
|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|-----------------------------|
| <b>SERVICE DOORS</b>                                                                                                    |                                                                                              |                             |
| <b>Hinges</b> = Screws coming loose, Hard to Swing                                                                      | Tighten as required, Oil as required                                                         | 1 to 2 times a year         |
| <b>Lockset</b> = Mechanism coming loose, Tumbler/Latch sticking                                                         | Tighten as required, Oil as required                                                         | As Needed                   |
| <b>Threshold</b> = Coming loose, Water Leakage                                                                          | Tighten or replace concrete fastener, Apply additional caulk                                 | As Needed                   |
| <b>Weather Stripping</b> = Coming loose, Water Leakage, Air Leakage                                                     | Replace as required                                                                          | As Needed                   |
| <b>Caulking</b> = Door Header Trim                                                                                      | Clean out old and replace as required                                                        | Every 2 years               |
| <b>OVERHEAD DOORS/OPENINGS</b>                                                                                          |                                                                                              |                             |
| <b>Door Jambs Structural</b> = Base and Head attachment loosening up (Due to Overhead Door movement)                    | Tighten Anchor Bolt Nuts and Nuts for Header to Jamb Connection as required                  | 1 to 2 times a year         |
| <b>Door Jamb Trim</b> = Damage and Dented (Due to door traffic)                                                         | Replace Door Trim                                                                            | As Needed                   |
| <b>Overhead Door Track</b> = Loosening up (Due to Overhead Door operation)                                              | Tighten Overhead Door Track bolts as required                                                | 1 to 2 times a year         |
| <b>Overhead Door</b> = Not operating properly                                                                           | Check Overhead Door Track bolts as required                                                  | 1 to 2 times a year         |
| <b>WINDOWS</b>                                                                                                          |                                                                                              |                             |
| <b>Water Leakage</b> = Check caulking, (Due to movement and cracking of caulk)                                          | Clean out old caulk and replace caulking                                                     | Approximately every 2 years |
| <b>Window Operation</b> = Horizontal Slide, Units drag or crank mechanism catches                                       | Clean dust and dirt out. Use light oil (3 in 1) or clear light grease on tracks or operators | As Needed                   |
| <b>Condensation</b>                                                                                                     | Check seal and possibly re-glaze                                                             | As Needed                   |
| <b>LOUVERS</b>                                                                                                          |                                                                                              |                             |
| <b>Water Leakage</b> = Check caulking (Due to movement and cracking)                                                    | Clean out old caulk and replace caulking                                                     | Approximately every 2 years |
| <b>Louver Fin Operation</b> = Fins will not move or drag                                                                | Clean dust and dirt out. Use light oil or light grease on operators                          | As Needed                   |
| <b>RIDGE VENTS</b>                                                                                                      |                                                                                              |                             |
| <b>Damper Inoperable</b> = Damper chains or cords not on tracks; pulleys not correct alignment; drag or hard to operate | Check chains and/or cords for attachment. Oil or grease damper rod and pulleys.              | As Needed                   |



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| <b>ROOF TOP FLASHING UNITS</b>                                                                                                                   |                                                                                                                                                                                                         |                       |
| <b>Water Leakage</b> = Due to mechanical Unit vibration and roof movement                                                                        | Check sealant, mastic, fasteners. Clean out old mastic/sealant and replace with new. Replace or tighten loose fasteners.                                                                                | Once a year           |
| <b>WALL PANELS – PAINTED SURFACES</b>                                                                                                            |                                                                                                                                                                                                         |                       |
| <b>Dirt Pickup</b> = Winds, Atmosphere                                                                                                           | <b>Light Cleaning</b> = Simple wash with Sweetwater solution                                                                                                                                            | Once a year           |
| <b>Slight Chalking</b> = Strong Sunlight                                                                                                         | <b>Heavy Dirt</b> = In areas where heavy dirt deposit dull the surface, a solution of 1/3 cup mild laundry detergent per gal of water may be used. Soft bristle brush, and clear water rinse to follow. | As Needed             |
| <b>Mildew</b> = High humidity and dirt                                                                                                           | <b>Mildew</b> = 1/3 cup detergent<br>2/3 cup Soilex<br>1 quart Clorox<br>3 quarts water<br>Clean water rinse                                                                                            | As Needed             |
| <b>Grease and Oil</b> = Building use spills                                                                                                      | <b>Grease and Oil</b> = Mineral spirits, Detergent wash, clean water rinse                                                                                                                              | As Needed             |
| <b>BASE OF WALL PANELS</b>                                                                                                                       |                                                                                                                                                                                                         |                       |
| Discolor, Rust, Dirt, Mold, etc. (Due to Backfill too close, fertilizer left on base and base trim, weed spray on base, dirt piled on base trim) | Remove dirt; remove excess backfill; wash fertilizer off with water. Keep spray off panel. (Install 1' to 2' wide wash gravel strip at base)                                                            | As Needed             |
| <b>REPAIR DAMAGE TO ROOF PANELS</b>                                                                                                              |                                                                                                                                                                                                         |                       |
| Dented high ribs and broken seals of panels                                                                                                      | Warn people not to walk on ribs or endlaps and call builder                                                                                                                                             | Each time on the roof |
| Excess "Trash" on panels                                                                                                                         | Always clean up                                                                                                                                                                                         | As Needed             |
| Vent pipes rusting                                                                                                                               | Field paint with approved paint                                                                                                                                                                         | As Needed             |
| Stains from mechanical equipment                                                                                                                 | Field paint with approved paint                                                                                                                                                                         | As Needed             |
| Surface rust from mechanical equipment                                                                                                           | Field paint with approved paint                                                                                                                                                                         | As Needed             |
| Service Equipment, People Traffic                                                                                                                | Warn service equipment people Above items                                                                                                                                                               | As Needed             |
| <b>FASCIA, EAVE, GUTTER, RAKE, CORNER TRIMS</b>                                                                                                  |                                                                                                                                                                                                         |                       |
| Review Trim items for damage                                                                                                                     | Replace items as required                                                                                                                                                                               | As Needed             |
| Gutters and downs                                                                                                                                | Clean out leaves, etc.                                                                                                                                                                                  | 1 to 2 times a year   |



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| <b>ICE AND SNOW BUILD-UP</b>                                                                                                                             |                                                                                                                        |                                                                                   |
| Extreme build-up will happen at roof Height changes, steps in roof, valley gutters and fascia gutter                                                     | Remove excess snow and ice                                                                                             | As Needed                                                                         |
| <b>INSULATION SYSTEM</b>                                                                                                                                 |                                                                                                                        |                                                                                   |
| <b>Condensation</b> = Torn vapor barriers                                                                                                                | Repair with patch tape                                                                                                 | As Needed                                                                         |
| <b>Improper Ventilation</b> -unvented gas heaters                                                                                                        | Contact H.V.A.C. contractor                                                                                            | As Needed                                                                         |
| <b>CRANE SYSTEMS</b>                                                                                                                                     |                                                                                                                        |                                                                                   |
| Loosening of Bolts: Runway hooks bolts and other crane beams and connection.                                                                             | Tighten and check all bolts                                                                                            | Retighten within 30 days after initial installation and every 3 months thereafter |
| <b>PRIMARY FRAMING SHOP PAINT</b>                                                                                                                        |                                                                                                                        |                                                                                   |
| <b>Surfacing Rusting:</b> Shop coat is intended for short-term exposure only during shipping and erection. Minor abrasion is inevitable during handling. | Minor rusting will not affect structural integrity however a rust inhibitive primer needs to be applied.               | As Needed                                                                         |
| <b>Runs, Drips and Blemishes:</b> Shop application is for short-term protection and is not intended to have the appearance of a field applied coat.      | Touch-up with compatible primer or apply finish coat with appropriate preparation. Leave as is or may be field worked. | As Needed                                                                         |



# Erection and Safety Manual

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## General Maintenance

### **PREVENTATIVE MAINTENANCE DETAILS**

#### **STRUCTURAL STEEL**

**Rusting** – Structural steel normally requires no maintenance except in the event of rust. In this case, clean the affected area and re-prime using primer as supplied by GREAT AMERICAN BUILDINGS.

**Loose Bolts** – Structural steel normally requires no maintenance except in instances where the structure is exposed to vibration, such as buildings with an overhead crane. In this instance bolts should be inspected and retightened every 3 months or per OSHA requirements. The success of the crane support system under service loads depends greatly upon the bolts and nuts used in the assembly and the maintenance after installation. It is important that bolts and nuts meeting ASTM Specification A325 be used. The importance of the bolt tightening procedure cannot be overemphasized in prolonging the life of a runway installation.

**Additional Loads** – The roof structure of your building should be designed to the specific load criteria specified by your builder or design professional. Any changes or modifications to your building which add additional loads may adversely affect the building's load capacity. Before hanging any items from your building's framing or adding additional loads to the roof (sprinklers, piping, roof top units, jib cranes, etc.), call GREAT AMERICAN BUILDINGS or consult with a recognized licensed structural engineer. Anything hung from the roof which deforms the purlins or other structural components may seriously impair the structural integrity of the roof.

**Bracing** – The bracing provided to your building is of significant structural importance. All bracing which is in place after the erection of the building should remain in place. Never allow removal of any bracing by any contractor or maintenance personnel. If there are any questions concerning the removal or relocation of any bracing, call GREAT AMERICAN BUILDINGS and ask for Customer Service.

#### **SECONDARY FRAMING**

**Loose Bolts** – Connecting secondary framing should be checked periodically in areas of high vibration, such as an area around an overhead crane, door frame, or around roll-up or sliding doors. Loose bolts should be tightened.

**Secondary Bolts** – (usually 1/2" diameter bolts) Mechanical equipment that would cause stress, vibration or reciprocating movement that is directly supported or tied to the building, may loosen bolts. Under these conditions, bolts should be inspected and retightened as required.

#### **ROOF AND WALL MAINTENANCE**

**Roof and Walls in General** – You should not store material on the roof of your building. Your roof and wall panels should not come in contact with wood, lead, or copper. Wall panels should be kept clean of dirt and soil. Condensation, most likely from an AC unit, should not be allowed to drain onto your roof or wall panels.

**Roof Debris** – At least once a year, clean the roof and gutters of debris, which would trap or pond water on the roof. Wash dirt and debris from the panel surface. Local conditions govern the frequency of these cleanings.



# Erection and Safety Manual

---

## General Maintenance

**Ice and Snow Build-up** – You should be familiar with the roof load specified for your building for snow and live loads. Any significant accumulation of snow and ice may threaten the structural integrity of your roof if it approaches or exceeds the design roof load capacity. In the event of severe winter storms, the accumulation of snow and ice should be carefully monitored and frequent inspections, made to detect any deflection of the roof system, damming or clogging of gutter systems, ponding or unusual drift conditions, if necessary.

Excessive ice and snow should be removed from the roof areas. The removal of ice and snow should be performed by experienced personnel in consultation with GREAT AMERICAN BUILDINGS' customer service department or qualified design professional, in order to avoid damage to the roof or the structure. Appropriate precautions should be taken to minimize the risk of injury on the roof during hazardous conditions. Excessive ice and snow removal is particularly important in gutter areas (eaves and valleys) and in areas of the roof sheltered from the wind (behind facades, step roof conditions, etc.)

If any evidence of structural distress is noticed, contact, GREAT AMERICAN BUILDINGS, your Erector or consult with a recognized licensed structural engineer for assistance in avoiding damage or catastrophic failure of the roof system.

**Roof Traffic** – Roof traffic is a leading cause of roof leaks. If routine traffic is unavoidable, have your erector install a walkway designed for use with your roof panel. When walking on the roof is required:

1. Avoid stepping on the ridge caps
2. Avoid stepping on lap joints in roof panels and flashing
3. Avoid walking near roof curbs or other roof penetrations
4. Avoid stepping on panel ribs between purlins
5. Do not step in or on gutters or the gutter hanging system
6. Do not step on or near translucent light panel

**Foliage** – While bushes and trees enhance the appearance of any building, their contact with the wall panel can produce scratches in the paint surface which will eventually cause problems. Keep bushes and trees trimmed back from the panel surfaces.

**Yearly Joint Check** – Once a year, check joints in the metal for proper seal or loose fasteners. Should repair be required, have your erector remove fasteners, take the connection apart, clean out existing sealant, install new tape mastic and/or butyl sealant to form a continuous gasket and reattach the connection using new and/or larger 20-year screws as necessary. Take care to ensure the new gasket is in the old screw line or to the weather side of the screws. On those areas where taking the connection apart is not feasible or cost effective, have your builder wash the affected area, replace loose fasteners and coat the joint with H.E.R. 202 FG Elastomeric compound available from ITW, following application guidelines.

### **PANEL FINISHES**

Always test your process in a small inconspicuous area before large-scale use.

**Routine Washing** – Galvalume or painted roofing or siding should be washed with soap and water as necessary to maintain appearance. A 5% solution of commonly used commercial and industrial detergents will not harm your panel



# Erection and Safety Manual

---

## General Maintenance

surface. Always rinse thoroughly with water. Do not use wire brushes, steel wool, sandpaper, abrasives or similar cleaning tools which will mechanically abrade the coating surface. Use a cloth, sponge or soft bristle brush for application. Cleaning should be done in the shade or on a mild cloudy day.

**Rust** – Once a year inspect the panels for rust. Should any rust or rust stains be found, determine the source, such as steel filings from drilling, and remove them. The rust stain can generally be cleaned off with one of the following: soap and water, mineral spirits, Soft Scrub, or a mild polishing compound as used on a car finish.

**Paint Scratches** – Scratches to the paint should be brush touched (artist brush) with touch-up paint supplied by the OEM paint supplier. If the scratched area has not rusted, the paint may be applied without surface preparation. If the area is rusted, remove the rust, prime the affected area, and touch brush with color matched touch-up paint supplied with the building. Primer and additional touch-up paint is normally available from GREAT AMERICAN BUILDINGS or the paint supplier who is warranting the panel performance.

**Mildew Removal** – Mildew can be expected in areas of high humidity. Mildew is more of an appearance problem than an actual threat to the paint finish. Mildew can be removed by using a basic solution of the following:

1/3 cup of detergent  
2/3 cup trisodium phosphate  
1 quart sodium hypochloride, 5% solution  
3 quarts of water  
Rinse with clean water immediately after use.

**Non Water Soluble Deposits on Long Life Finishes** – Use mineral spirits to remove non water soluble deposits (tar, grease, oil, paint, graffiti, etc.) from the panel surface.

**Non Water Soluble Deposits on Kynar Finishes** – Solvents that may be used to remove these items from Kynar panel finish include:

**Alcohols** - No permanent effect on Kynar Finishes

- Isopropyl (Rubbing) Alcohol
- Methanol (Wood Alcohol) – Note: Methanol is toxic
- Denatured Alcohol (Ethanol)

**Petroleum Solvents** – No permanent effect on Kynar Finishes

- VM&P Naphtha
- Mineral Spirits
- Turpentine (Wood or Gum Spirits)

**Aromatic and Other** – Use with caution on Kynar finishes

- Xylol (Xylene)
- Toluol (Toluene)

Limit contact time to 5 minute maximum and test before using.

**Ketones, Esters, Lacquer Thinner** – Use very cautiously on a Kynar surface. Limit contact time to 1 minute maximum and test before using. GREAT AMERICAN BUILDINGS is not responsible for damage caused by unrestricted use.