Laminated Porcelain Panel Owner's Manual

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Care & Use of the Tate Access Floor System Laminated with Unglazed Porcelain Tile

Access floor systems are supplied and installed in conformance with the requirements set forth by individual project specifications and approved submittal documents. It is important to clearly understand the design capabilities of the Tate access floor system as installed in specific projects.

Site Conditions

Area to receive and store access floor materials shall be enclosed and maintained at ambient temperatures between 35° to 95° F and relative humidity levels between 20 to 80%. At least 24 hrs. before installation begins, all floor panels shall be stored at ambient temperatures between 50° to 90° F and relative humidity levels between 20% to 80% and shall remain within these environmental limits throughout occupancy.

Performance Criteria

Access floor panels laminated with porcelain tile require a minimum panel rating of a ConCore 1500. Due to the nature of the porcelain, the performance rating of the panels will be as follows:

- Design load – 1000 lbs. when tested on bolted stringer understructure using CISCA test methods (with loads applied through a 1" indentor at the weakest point)
- Ultimate load – 1600 lbs. when tested on bolted stringer understructure using CISCA test methods (with loads applied through a 1" indentor at the weakest point). Ultimate load is the point at which the tile cracks, not failure of the panel
- Dynamic loads:
    - 10 pass using a 3" diameter x 1-13/16" wide rubber wheel – 800 lbs.
    - 10,000 pass using a 6" diameter x 2" wide urethane wheel – 600 lbs.
- Impact loads – Impact loads should always be avoided as they will damage or crack the porcelain

**** The above criteria must be complied with or damage to the tile will occur.*** *Please contact an authorized Tate dealer or call the Tate Technical Hotline at 1-800-231-7788 for procedures to follow when wheel sizes and loads differ from those identified in Tate product specifications.*

Construction Phase

During the construction and move in phase, a minimum of 3/4" plywood must be used to protect the floor, without exception. All materials and equipment used by other trades must be reviewed and approved by the Tate dealer/installer prior to the material or equipment being permitted on the floor.

Equipment Moving Precautions

The access floor must be protected from overloads and circumstances that exceed its specifications. Movement of heavy loads and equipment may require protection of the floor system through the use of plywood or other suitable load-distributing materials. Contact Tate's Technical Services hotline for any instances that exceed recommended loading practices.

Expansion joints and thresholds must be protected with a minimum of 3/4" plywood if any loads are to be rolled over them. Dynamic loads should always be avoided on panels with cutouts or cut panels at doorways or perimeters. If this cannot be avoided, please contact Tate's Technical Hotline to evaluate a safe operating recommendation.

Approved Lifts

No panels may be removed from the access floor system and perimeter panels must be installed before lifts are permitted on the floor. Panels with cutouts must be removed and replaced with full panels. Utility panels such as PVD boxes and Air Diffusers must be removed and replaced with solid panels. The user is responsible for extra panels if needed. The user is responsible to replace any damaged panels or accessories.

Multiple lifts operating on the access floor are not to be any closer to one another than 3 feet or 1 meter.

The weight and load capacity have been calculated to be within the 10,000 pass rolling load capacity of the ConCore 1500 panel with factory laminated porcelain tile on bolted stringer understructure. Popular man-lifts and scissor lifts that may be used:

Approved lifts for CCN1500 panels with bolted stringer understructure:

Skyreach Access Pop-up Scissor Lift (UK)

Hy-Brid HB 1030	Hy-Brid HB 830	Genie DPL-35S
Hy-Brid HP-P 830	Genie (APW) IWP 20S	Hy-Brid HB 1430
Upright UL 25	Genie (APW) IWP 25S	JLG20AM
JLG 25AM	JLG 1230ES	Genie DPL-35S
Genie DPL-30S	JLG 30AM	Skyjack SJ 12
Genie DPL-25S	Genie GR 12 Runabout	

Removal and Reinstallation

An access floor can become misaligned due to mishandling or abuse when working under it. Follow these procedures for removal and replacement of panels and stringers to maintain the system in its original condition.

TOOLS FOR REMOVING PANELS AND STRINGERS

The following tools are required to remove panels and stringers from your floor.

1. Battery powered screw gun
2. #3 Philips replacement tips for screw gun
3. Panel lifter (available through your Tate dealer)

Do not use screwdrivers, pliers or other tools to pry or lift panels.

GENERAL PRECAUTIONS

1. Be cautious not to inadvertently rotate pedestal heads and change height settings when panels are removed. Although pedestal heads have anti-rotation mechanisms, it is still possible to bump heads out of alignment.
2. Do not attempt to carry a panel by the lifter – the suction could break and allow the panel to fall from your hand.
3. After removing cut panels installed at walls and around columns, reinstall them exactly where they came from. Interchanging panels that were precisely cut for perimeter locations can cause interior panels to be tight or loose in the floor and also cause the floor to be out-of-square.

REMOVING FLOOR PANELS

It is good practice to remove panels only where immediate access is required and reinstall them as your work progresses. When a number of panels must be removed, do not take out more than six adjacent panels at once OR remove only every other panel in a row.

The first panel taken out must be pulled with lifters. Adjacent panels can be removed with the lifters or by reaching underneath them and pushing upward. Kneeling on the floor while removing and replacing panels may avoid back strain.

Due to the weight of the panels, it is recommended that when it is necessary to remove or reinstall panels, 2 double cup lifters are used. Lifters should be used on opposite sides of the panel. One lifter should be used to carefully lift one side of the panel out of the grid at an angle. The panel can then be lifted out using both lifters, being careful not to drag or bump the edge band on the panel being lifted, or adjacent panels. Never drop or slam a panel on adjacent panels or damage to the porcelain will occur

REINSTALLING FLOOR PANELS

All but the last panel reinstalled can be seated on the understructure without a lifter. To reinstall a panel, sit one edge on the understructure and lower the other side as if closing a door, being careful not to bump or drag the adjacent panel and edge band. To reinstall a panel using a lifter, attach the lifter near an edge and lower that side into place. Never drop a panel into place.

Panel Cutting Procedures

Factory Cuts

Whenever possible, cutouts should be ordered from the factory to ensure proper fit of electrical boxes, grilles, grommets or other access floor accessories. It will also save time and expense at the job site. Interior cuts not done in the factory will need to be waterjet cut. When field cuts can't be avoided such as perimeter cuts, the following guidelines should be followed.

Safety Requirements for Panel Cutting

- Work in a well-lighted area
- Be sure tools are properly grounded and dry.
- Use common sense to avoid personal injury. Always use safety equipment including:
    - Ear protection
    - Safety glasses and full face shield (clear plastic)
    - Long sleeve shirt or sleeve protectors
    - Lightweight work gloves for protection from sharp metal edges and hot saw dust)
    - Steel toe safety shoes or boots

Straight and Curved Cuts

Cutting straight cuts is a 2 part process. Layout your cut line and start by cutting through the porcelain only using a wet cut bridge saw with an @ 8" diamond blade (such as Pearl Abrasives) rotating at @ 3,260 RPM. Then use a bi-metal bandsaw blade (such as Lenox Classic M42) with 14 teeth per inch to cut through the ConCore panel.
http://pearlabrasive.com/Pages/ItemClass_Catalog.aspx?search_val=porcelain&search_type=Product&class=&advanced=0

http://www.lenoxtools.com/pages/classic-bi-metal-band-saw-blades.aspx

For cutting curved cuts that can't be avoided in the field, use a bandsaw blade with a tungsten carbide blade, with a continuous grit or gulleted blade (such as Lenox Master Grit). Cut very slowly though both the porcelain and the panel at the same time. For tight corners and shapes, use an angle grinder (such as Hilti 4.5" grinder) with a 4" to 4-1/2" porcelain cutting blade (such as Eco Diamond Contractor Series) rotating at @ 10,000 RPM. Rates of feed should be judged by the person doing the cutting, but it will be relatively slow. 5 minutes to get through the porcelain alone is not uncommon.

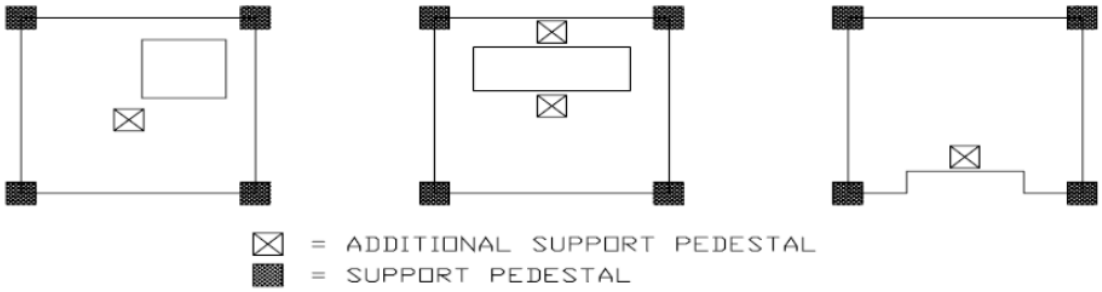
http://www.lenoxtools.com/pages/master-grit-carbide-band-saw-blades.aspx

https://www.us.hilti.com/cutting%2c-sawing-%26-grinding/cutting-%26-grinding/angle-grinder/r3832

http://abottini.com/?wpsc_product_category=contractor-series-blades

Supporting a Cut Panel

To prevent the porcelain on panels with cutouts from cracking, an effective solution is to use additional pedestal supports. Guidelines for the number and location of additional supports are outlined below:



Initial Pre-Occupancy Cleaning & Preparation Guidelines

Initial care can be carried out with a damp microfiber mop or a scrubber drier. For either option, the first step is to sweep and vacuum any loose dust, dirt or debris from the floor. It is important not use excessive water or flood the floor.

Microfiber floor mop
Use a slightly damp mop with a high proportion of microfibers (at least 50%). For lightly textured floor tiles, use a deep-pile microfiber mop. If desired, add a small amount of mild detergent or vinegar to the water. Make sure that the cleaning product is suitable for unglazed floor tiles.

http://www.uline.com/BL_8823/Microfiber-Wet-Mops

Scrubber drier machines
Wash the floor with water and detergents suitable for ceramic surfaces. Add a small amount of mild detergent or vinegar to the water in the machine. The cleaning product should be low-lather so that it can be used in scrubber drier machines and suitable for use on unglazed floor tiles. For smooth tiles, use at most a red scrubbing disc. Minimal water should be used

The surface of porcelain is basically non-absorbent and does not require the use of wax and/or similar products, which, conversely, should never be used. It should be pointed out that porcelain is resistant to any chemicals with the exception of hydrofluoric acid, a very aggressive agent for ceramic products that should never be used. Once cleaning is completed, isolate the cleaned floor until it has completely dried.

http://www.clarkeus.com/products/autoscrubbers/vantage14.aspx

Regular Maintenance

Regular vacuuming or wiping prevents the accumulation of dust and dirt. The floor will need to be cleaned regularly to remove more tenacious dirt. Prior to cleaning, first remove loose dirt by vacuuming or sweeping. Use a slightly damp mop with a high proportion of microfibers (at least 50%). For lightly textured floor tiles, use a deep-pile microfiber mop. If desired, add a small amount of mild detergent or vinegar to the water. Make sure that the cleaning product is suitable for unglazed floor tiles.

Additional Resources

Additional information and general guidelines for access floors can be found on Tate's web-site
http://www.tateinc.com/pdf/owners_manual.pdf

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