

T75 and T75HD Special Drill-in Lift Plate

The Dayton Superior T75 Drill-in Lift Plate is designed and tested for use as an emergency repair lift plate in special situations where a normal cast-in-place tilt-up face pickup insert is missing, tipped over, improperly located or otherwise unusable.

The lift plate is to be installed so that it is centered over the original insert location. When the lift plate cannot be installed at the original insert location, contact Dayton Superior.

When installing the T75 Drill-in Lift plate, always check to make certain the Lifting Lug is aligned in the direction of the cables. DO NOT apply loads at an angle to the flat side of the lifting lug!

The T75 Drill-in Lift Plate is to be attached to the face of the precast concrete tilt-up wall panel using either four or six properly installed Dayton Superior T13 Coil-Anchors, 3/4" diameter x 6" long drill-in expansion anchors or Bearcat™ Bolt. Minimum edge distance from center line of Coil-Anchor bolts is 12". Edge distances of less than 12" may result in a reduced lifting capacity.

To install the T75 Special Drill-in Lift plate, set the plate in its proper position and mark the hole locations. Drill the required number of holes using a new 3/4" diameter carbide tipped drill bit. Depth of drilled holes must be at least 5-1/2" with all holes drilled at 90 degrees to the surface of the panel.

Just before installation of the Coil-Anchor bolts, clean out all of the drilled holes. Failure to properly clean the holes may result in a reduced lift plate load carrying capacity.

Insert the assembled T13 Coil-Anchor bolts through the holes in the lift plate into properly drilled and cleaned holes. Using a hammer, tap the Coil-Anchor bolts all the way into the holes so that the washer and bolt heads come to rest on the top surface of the lift plate.

Tighten the T13 Coil-Anchor bolts using a 3/4" air impact wrench. The bolts must be checked with a torque wrench to make certain that they have been torqued to 200 ft. lb. Use the crane to place a light load onto the lift plate. Release the load and check all bolts to make certain they are still tightened to 200 ft. lb. Bolts torqued to a lower value will have a reduced load carrying capacity.

Do not attempt to pre-expand the Coil-Anchor Tang. For proper load carrying capacity, the Tang must not be installed more than 1-1/2 turns onto the bolt. Do not attempt to use a standard coil bolt with the Coil-Anchor Tang, as this combination will not develop any load carrying capacity. The Coil-Anchor bolt is a special tapered bolt and is not interchangeable with standard coil bolts.

For Bearcat Bolt installation:

1. Drill a 3/4" hole per the setting chart. For use with the T75 and T75HD lift plate, the bearcat bolts must be installed in full embedment. Shallow embedments are not recommended.
2. Thoroughly clean the drilled hole with compressed air or suction to rid the hole of debris.
3. Insert the Bearcat Bolt through the T75 base plate and into the concrete hole. Drive the anchor down until the integrated washer contacts the base plate.
4. Torque to 200 ft. lbs. to complete the install and ensure a secure connection. The base plate should be firmly in place. Be sure not to over-torque the bolt during installation once in contact with the base plate. Excessive torque could damage the connection.

To remove the Bearcat Bolt, simply back the Bearcat Bolt out with a wrench or impact drive.

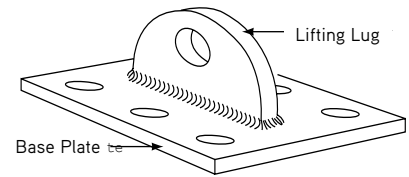
The safe working loads (SWL) of these drill-in expansion anchors and lift plate are shown below. The safe working loads are determined by the number of T13 expansion anchors actually used to attach the lift plate to the tilt-up panel.

Item	Number of T13 Drill-in Expansion Anchors	Tension or Shear Safe Working Load
T75	4 bolts (2 per each side)	8,500 lbs.
T75	6 bolts (3 per each side)	15,000 lbs.
T75HD	8 bolts (2 per each side)	24,000 lbs.

Note: Insert SWL's are based on approximately a 2 to 1 factor of safety. Lift plate develops approximately a mechanical 5 to 1 factor of safety based on a maximum SWL of 15,000 lb for T75 and 24,000 lb for T75HD. The above SWL's are based on the lifting plate being installed so that the raised lifting lug is aligned with the direction of the lifting cables.

In order to develop the safe working loads of the T75 Special Drill-in Lift Plate, the normal weight concrete in the panel must have attained a minimum compressive strength of 2,500 psi. These safe working loads assume the T13 Coil-Anchor expansion anchors or Bearcat Bolts have been properly installed.

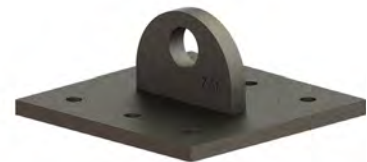
Use only the 6" T13 Coil-Anchor with the T75 Special Drill-In Lift Plate. Do not use the 4-1/2" version.



T75 Special Drill-in Lift Plate



T75HD Special Drill-in Lift Plate



T75 Special Drill-in Lift Plate Typical Application