Subject: T-nuts, their care and feeding
Posted by lon on Thu, 25 Jan 2007 18:40:43 GMT
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What is it about t-nuts that I don't understand?I'm doing a build and usinf t-nuts for the first time because I want a removable back and front for not only interior adjustments butalso possible replacement panels with a port cut in.I have these things from Parts Express called Hurricane nuts.The goal was to have these things in pairs on the frame and on the removable back.I got my corrent jole size drilled through both pieces and when I got the t-nuts inserted and tried to screm them down they backed upand loosened a joint. The joint is a small problem to fix and I'm working on the back to catch any of these mistakes before doingthe front.In playing with the bolt and the t-nut, there seemed to be a stopat the end of the nut in the machining. I want the t-nut on the surface of the removable panel to use asa magnet catch for a grille on the front side and a mated nut on the frame to draw down around a seal on the frame that I'll fabricate.This means that I was figuring on one bolt going through the first and the second drawing down tight to the frame.Where has the logic or selection of parts gone wrong here?

Subject: Re: T-nuts, their care and feeding
Posted by Bob Brines on Fri, 26 Jan 2007 13:40:24 GMT
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The PE hurricane nuts are horrible, particularly in MDF. They simply won't hold. Get 3 or 4 pronged t-nut, Any hardware store with a good supply of BOXED fasteners will have them. You can also order them for places like McMasters. If you are really worried about t-nuts tearing out, you can get them with holes instead of prongs and use brads or small nails to secure them.Are you putting the t-nut on the correct side of the panels? I assume that you have furring strips along the sides of the fixed panels. The t-nuts go on the back (inside) of the furring strips. The best way to set a t-nut is to drill the hole (5/16" for a 1/4-20 t-nut). Place the t-nut in the hole from the back and run a hex-head bolt with a washer through the furring strip and the t-nut. Tighten down the bolt with a socket wrench until the t-nut is fully set. Remove the bolt and move on. In a pile furring strip, even MDF, you should not have any problem with the t-nut tearing out unless you severely over torque the mounting screws. Usually you will tear out the head of a Phillips screw way before the t-nut gives.On note about mounting the t-nuts. Make sure that the prongs are straight. Sometimes the prongs will fold up under the t-nut rather than bite into the wood.Bob

Subject: Re: T-nuts, their care and feeding
Posted by lon on Fri, 26 Jan 2007 19:36:26 GMT
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"Hurricane nuts are horrible."_Now_ he tells me.Well this project is a 'mule' a test box of a line

array so I amusing up things I have to do the build.And yes local hardware store has the real kind of t-nuts.On looking more closely at what was happening, when using 2 of thehurricane nuts when one would tighten down it would draw the second one out. So bolting into one of these worked ok for thisjob.The treatment is not what I wanted though. I wanted use up thosehurricane nuts and dump the rest.

Subject: Re: T-nuts, their care and feeding
Posted by Bob Brines on Sat, 27 Jan 2007 13:16:37 GMT
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I don't think I understood exactly how you were using the t-nuts (hurricane nuts).Are you putting one t-nut on the back of the furring strip AND one t-nut on the back of the panel? If so -- no, no no! Just one t-nut per mounting hole, on the back of the furring strip. Assuming a 1/4" bolt, you drill a 1/4" clearance hole through the panel and a 5/16" hole through the furring strip. Drop the bolt thought the panel and thread it into the single t-nut. The panel will tighten down nicely.Bob

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Subject: Re: T-nuts, their care and feeding
Posted by lon on Sat, 27 Jan 2007 16:53:13 GMT
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Yah, I was doing it incorrectly.The goal was to have a flush flat metal surface to attach a grillewith magnets on it. The surface t-nuts would then be maskedwhen the grilles were attached.Only other option I could think of are fender washers. But thosedone sit flush either. The hurricane nuts and t-nuts in generalhave a dimple which would allow a flathead screw to be flush. At leastthat's the way they look.

Subject: Re: Just to muddy the waters....
Posted by Bill Epstein on Mon, 29 Jan 2007 09:32:15 GMT
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I've given up on T-nuts. Such a tedious hassle to get them seated properly and then there's always at least one of a set that manages to blow out right away and two more over time.I only use threaded inserts now. Get them at McMaster-Carr. They thread into the hole with a hex driver and stay put. Even when there's almost no "meat" between the hole and the speaker cut-out. Be sure and get them "with flange" or you'll run them right back out when you tighten down the bolt. Don't ask me how I know that!They come in any thread size you could want in quantities of 50 or 100 for a few dollars.The only way to fly.
McMaster-Carr

Subject: Re: Just to muddy the waters....
Posted by Bob Brines on Mon, 29 Jan 2007 16:39:18 GMT
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Yea, these work. They are supplied with all of those cheap spike sets.Of course, these go on the front of the panel, whereas t-nuts go on the back. This fine for mounting drivers, but if you are mounting panels to furring strips, the flange will cause an air gap. You will need to either use a gasket or countersink the flange. When I have used this type of insert, I use the unflanged, drill the clearance hole for the bolt, then redrill for the insert shank to the exact depth required. I have never had a problem pushing the insert through the furring strip.Personally, I prefer the t-nut. As long as I take reasonable care to set the t-nut prior to use, making sure that the prongs haven't folded up under the flange, I've not had a problem with tear-outs. Of course, if you must torque the bolt down with a 1/2" drive t-bar....Bob

Subject: Re: Good point
Posted by Bill Epstein on Mon, 29 Jan 2007 18:01:16 GMT
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The inserts are mostly shallower than the typical 3/4" panels and that would allow the non-flanged. Frankly, I hadn't thought of that.I use my cordless with some hex keys I cut the 'L' off of to drive the 1/4-20 or 10-24 cap head bolts on a fairly low torque setting. Still, there always seems to be at least one hole close enough to the edge of the cut-out that it works loose and then you feel the bolt turning and turning to no purpose! Which also destroys the edge and precludes fixing a new T-nut w/o filling and re-drilling. Next time you tire of installing one more g-d driver think how it helps you maintain your edge:)

Subject: Re: T-nuts, their care and feeding
Posted by gfederys on Fri, 02 Feb 2007 13:53:49 GMT
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Try countersinking the t-nut/fender washer with a Fostner bit. Use either a drill press or a hand drill with one of those adjustable guides on it. Then use the center hole left by the Fostner bit as a guide for the body, (threaded part), of the t-nut or a flathead screw for the fender washer. If you use tight tollerances, that's going to have to be one hell of a grill magnet to pull that out of there. I counersink t-nuts all the time for flush mounting speaker drivers.

Subject: Re: T-nuts, their care and feeding
Posted by lon on Sat, 10 Feb 2007 22:05:05 GMT

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Wasn't back in here for a while.Yes, I have the stuff to countersink and have done that for a tnutbut ran into the backing out probelm using one forward and one backward. These would not draw down.A fender washer has nothing on it to give a flush mount.I would use those socket things made of plastic but I had a badexperience with them. One time I had a set of kit speakersand the the holes must have been drilled incorrectly and thoseplastic inserts did not fit properly. So I wanted to use a surface technique to avoid the headaches.

Subject: Re: T-nuts, their care and feeding
Posted by Bob Brines on Sun, 11 Feb 2007 16:23:44 GMT
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Lon,Just to reiterate the advise from before, you CANNOT use t-nuts on both sides of the panel, only on the back side. Assuming that you hammered down both t-nuts, when you insert the bolts, it will probably not engage the threads on the rear t-nut properly and cause either the front, the back or both t-nuts to lift. If you did not set the t-nuts before inserting the bolt, neither t-nut will draw down.Again, ONLY ONE T-NUT PER HOLE!!!Bob

Subject: Re: T-nuts, their care and feeding
Posted by lon on Sun, 11 Feb 2007 17:41:23 GMT
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What I have now is just a bolt through the front and tnut in the rear. I managed to get the rear one inserted and placed with a bar clamp. I drew down the nut by tightening the clamp because the carcass was together already. The build sounds pretty good-- I tested it with my ears last night. But for permanent placement I need grilles.I think I'm going to try that system that Bill Fitzmaurice talked about using pet screen and snap together parts for making a screen door.Those stiles and rails can be cut to length and width, come in several colors and the pet screen is stretched over the frame. All this stuffis available at the Home Depot. If I have to surface mount the magnetsI'll just have to experiment.

Subject: Re: T-nuts, their care and feeding
Posted by Bob Brines on Mon, 12 Feb 2007 18:58:01 GMT
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I find that the best way to seat t-nuts is to get a hex head bolt of the right size, place a washer on

the outside of the panel and thread the bolt through the t-nut. now tighten down the bolt with a socket wrench or an end wrench until the t-nut is seated. This also guarantees the the t-nut will be square with the hole.Bob

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Subject: Re: T-nuts, their care and feeding
Posted by Jeffery L on Fri, 28 Dec 2007 13:08:19 GMT
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I glue my T-nuts in with a urethane based adhesive or glue. It looks like hurricane nuts would work well.Personally, I don't like the way T-nuts work, the design seems so flawed. Hurricane nuts look better, but I wouldn't use them with out a little adhesive on them. It's a real pain in the butt when one of them looses grip and you can't get it out.Those threaded inserts are pretty cool. They work well in plywood and solid woods. They are crap in MDF or particle board, especially close to an edge. I just don't like the idea of something that threads into the wood to thread a bolt into it.

Subject: Re: T-nuts, their care and feeding
Posted by badman on Thu, 03 Jun 2010 21:22:14 GMT
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Hurricane nuts work fine, so long as you coat the hole with glue prior to insertion (wood glue, or even white glue, work fine). You have to clean the threads when you do so. And don't hamfist it! If there's resistance when screwing in, back up and make sure you're properly aligned.

Subject: Re: T-nuts, their care and feeding
Posted by Wayne Parham on Fri, 04 Jun 2010 00:27:06 GMT
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That's exactly how I do it too. I've done thousands of T-Nuts (literally) and I find it is really important to put a little glue on them. Nothing worse than trying to remove a T-Nut that is spinning in the wood.

There's a real trick to using these things properly. It's not so difficult, but important that they be done right. What works for me is to put a dab of poly glue on the outside of the T-Nut where it contacts the wood. Only used just a tad because it expands, a thin film is all that is needed. Then get a screw and washer, run them in and tighten down to pull the T-Nut in place. Tap the T-Nut ever so lightly to get it started, and hold it to prevent spinning, which would bend the tangs. But even if they do bend slightly, it's fine as long as the penetrate the wood. The glue is what really holds them in.

Do NOT tap them in place with a hammer, as most people think they should be installed. Nine times out of ten, the tangs just fold up underneath and don't penetrate the wood. The impact will often make them hold enough to stay in place while the screw is run down, and tightening pulls them into the wood enough to prevent spinning. But coming out is another story. They'll spin behind you and if you aren't lucky enough to get them to hold just enough to eventually unthread the screw, you'll be drilling them out, tearing up your driver and cabinet in the process.

Another tip: Don't use the same screw over and over again. It is tempting to do, but don't. After a few times, the screw has worn and/or stretched threads enough that it will damage T-Nuts. I like to use each screw once, and then leave it in place to be used later to install the driver.

Subject: Re: T-nuts, their care and feeding
Posted by badman on Fri, 04 Jun 2010 04:11:10 GMT
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re: Screw thread distortion:

Just one more reason to use stainless every time. I always use stainless hardware and the only time I regret it is when I have to drill it out or the like.

Subject: Re: T-nuts, their care and feeding
Posted by badman on Fri, 04 Jun 2010 14:40:02 GMT
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badman wrote on Thu, 03 June 2010 21:11re: Screw thread distortion:

Just one more reason to use stainless every time. I always use stainless hardware and the only time I regret it is when I have to drill it out or the like.

Oops, you mean when someone uses a screw for pulling the nut into the wood. I agree, re-use of the same one would be an issue, particularly with softer screw materials.
