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08-06-2017, 02:49 AM Thread Starter post #1 of 24 (permalink)

Oreo
Super Moderator



Join Date: Jan 2017
Location: South Louisiana
Posts: 632
[Garage](#)

Tracy Lewis Performance Signature Catch Can Install 17 Fusion Sport

Oreo and the [Lewis Performance Signature Catch Can Kit](#)



Well this project started back on Tuesday July 11, 2017 at 12:00 noon my time (1:00pm for Tracy). I decided I really needed to go ahead and get the [kit](#) as I have put quite a few miles on the sport and the wife agreed this was something we really needed to get installed. I gave her a in depth explanation and the downside and possible costs of future repairs so it was a no brainer. The only way to actually see if this was going to fit the sport was to get one in hand.

I pinged Tracy on FB messenger and inquired if I placed my order right then would I get it by the weekend. He asked me to call directly and talk to Mike or Karen about placing the order. So I called and talked to Mike. He asked about my car, [motor](#), what kit I wanted etc. I had already decided to go with the [Tracy Lewis Signature Series dual valve](#) system. Then I asked if I could have it for the weekend. Mike told me that they would try but there were several components that needed to be machined so he couldn't promise it would make it for sure. Hey, I knew my request was pushing the envelope but I placed the order and crossed my fingers it would show up.

Friday after lunch I was sitting at my deck working and my wife walked in and stated you have a box. A box? Yeah it's pretty heavy too. Sure enough it was a box from Tracy they got it to me before the weekend. Hot dog let the games begin!

So there are a couple ways to do this but I'm going to try to stay in the normal progression of how the project unfolded. So as noted the box was fairly heavy so I took it out to the shop and opened it up. I know everybody looks at the cost of these catch cans and it puts them off, especially since

there are others making catch cans, inline [filters](#) for less than half the cost. Well I cannot impress upon you enough the quality of this product. It's not some plastic or PVC pipe catch can. It is a finely machined piece of art. Machined aluminum [brackets](#), mount, catch can, removable top and bottom, quality AN fittings and ball [valve](#) plus aluminum check [valves](#) not cheap plastic included a thread tap and cold side breather and adaptor not to mention all the fittings. You can tell Tracy takes pride in his product.



So I went with the standard size can as I was worried that the monster catch can would not fit in my targeted location. Turns out I was right but we will get to that later. I also went with the normal [hose](#) option but you can upgrade to covered [hoses](#) but for me the standard route was good.

So my initial thought was that since I had installed the Steeda CAI, and the available space between the factory air box and the [battery](#) was now gone, I would [mount](#) it on the passenger side firewall by the computer. In doing some research I found people mounting catch cans under car, side frame, grill but no sport installs. I actually, against my daughter's advice, removed the CAI to see if there was room to mount it under there. No room under CAI, no room by [battery](#), no room by wiper box, no room in grill (didn't pull the nose off) so that basically put me right back where I started with mounting it by the computer. This should be out of the way but allow me access to the drain valve.

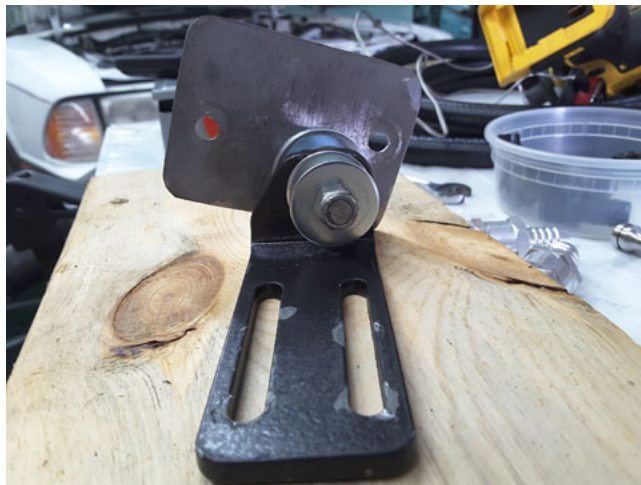
Ford was kind enough to [provide 3](#) possible mounting [bolts](#) that come through the firewall.



Well one is actually a screw thread but the other two are normal 6mm coarse thread [bolts](#). It became all too clear that using one of these [bolts](#) to mount the catch can was not going to work. The solid design of this can means there is a little weight to it and I was worried about the bolt breaking off plus I needed the [bracket](#) about 1" to the left of the actual bolt. So this was the first hiccup in the process. I knew I was going where no sport owner had gone before ([afaiik](#)) so after looking at it I decided that if I fabricated a

plate that would mount to two firewall bolts, I could mount the catch can bracket to the plate and would be stable enough to support the catch can. Looking around the shop I had a piece of 16ga metal that I cut into a 2"x2.5" plate, rounded the corners, marked the bolt pattern, drilled the holes and test fitted the plate. Looked great so I then mounted the bracket to the plate and test fit it. This is where the second hick up occurred. The fire wall is angled and leans forward. This caused the catch can mounting bracket to slope forward and would result in the catch can leaning forward. Well that isn't going to work. So I stepped up on the bolt hole size in the plate, used a back washer and locking nut on bottom of plate to hold it out away from the firewall while tightening up the top nut all the way to the fire wall. While this helped to straighten the plate it still has a forward tilt.

With the basic plate design worked out a trip to the hardware store resulted in the acquiring of a 1/4 bolt, 6 washers, nylon locking nut and 2 nylon spacers 1/4 ID x 5/8 OD x 3/8L, a couple locking nuts 6mm coarse, a couple nylon 6mm nuts and a few more washers. The idea is to cut the two nylon spacers ends off at an angle to allow the catch can bracket to mount at an upward angle from the plate surface thus leveling the bracket. After a couple trial and error testing I was able to get an angle that looked useable. I assembled everything, checked the mount in the car, painted her up and ready to install...





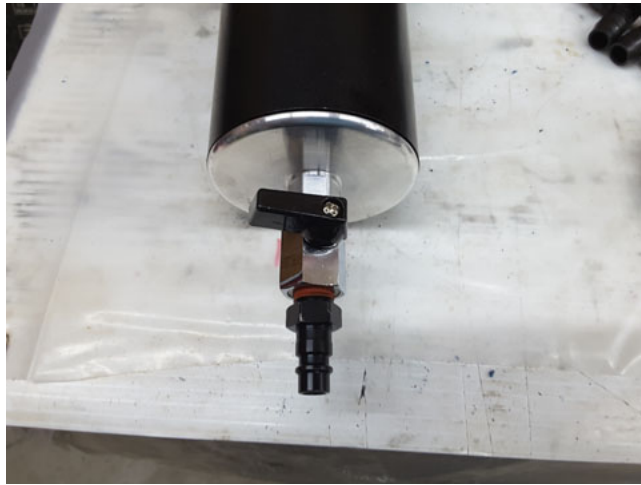
Hmmmm, something is off. Well crap the catch can [bracket](#) was $\frac{1}{4}$ " to high and the [bracket](#) needed to be moved about $\frac{5}{8}$ " toward the [computer](#) to allow the can to mount. Hick up three just showed up. Moving the mounting bracket away from the mounting [bolt](#) on the 16ga plate resulted in no support due to the lack of rigidity in the mounting plate. Mounting plate version 2.0 corrects this issue and will allow for a solid support system.

The mounting bracket is now 2" x 3" and made with a piece of $\frac{1}{8}$ " aluminum flat bar from Home Depot. This allowed me to move the mounting holes in the [plate](#) toward the driver's side by about $\frac{3}{8}$ " while maintaining rigidity and allowing me to [mount](#) the catch can [bracket](#) in the proper location. Mocked up, tested and painted with POR15 black to help it blend in under the hood. The mount the complete mount assembly I placed a nylon 6mm nut on the bottom stud and threaded it on until I could put a washer on the bolt, followed by the mount and still have enough threads to tighten down a nylon nut to hold in place. The top bolt has a washer and nylon nut tighten all the way to the firewall. This setup is solid as a rock and ready to [mount](#) the catch can.





The bottom of the catch can has a threaded ball valve used for draining the can. I happen to have a high flow industrial male air fitting that worked great for this. A little nylon tape on threads and it was ready for the drain hose. The enclosed drain hose fit tight on the fitting but I added a black zip tie to help crimp the hose in place. It's not going anywhere any time soon.



During this whole process rain, other projects, rim repair, trying to figure out the oddity that reared its head during my second dyno testing session has kept the catch can install on the back burner. But while I was doing an oil change after my Little Rock, AR road trip I was able to get the catch can mounted and found a safe drain hose route that doesn't interfere with exhaust, steering, transaxle. I pull the underbody engine shield off the car while changing the oil which gave me a clear line of site for the routing. I found there you can run the drain hose along the back passenger side of the firewall, and tuck it behind the hydraulic line for the steering. This allows the end of the drain tube to hang out of one of the factory shield holes so you

can drain it without having to remove the shield. To hold the hose in place I used a simple zip tie.





[Wildcat Birdie](#), [Donjohnk](#), [bigblueshock](#) and [1 others](#) like this.

2017 Fusion Sport Oxford White, 401A, Driver Assist Pkg, Steeda Strut Tower Brace, [Hood Strut Kit](#), Rear Sway bar, CAI Kit, Throttle Body Spacer, [Tracy Lewis Performance Signature Series Dual Valve Catch Can](#)

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Last edited by Ore; 01-02-2018 at 08:22 PM.

Quote

Quick Reply

08-06-2017, 02:49 AM

Thread Starter

post #2 of 24 (permalink)

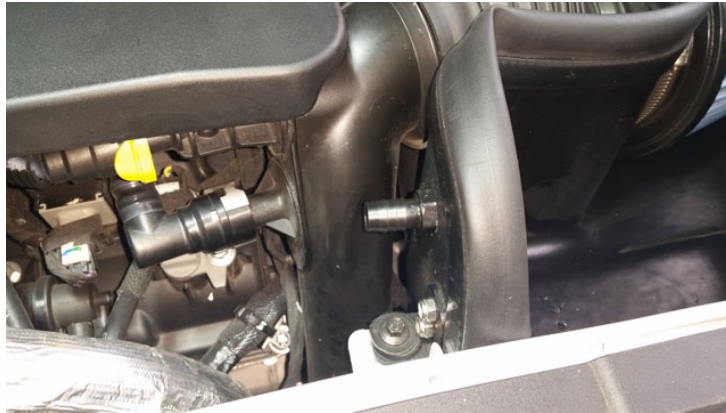
Oreo

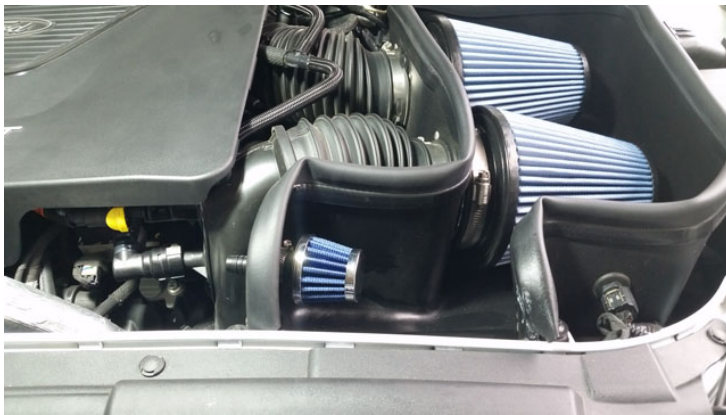
Super Moderator



Join Date: Jan 2017
Location: South Louisiana
Posts: 632
[Garage](#)

So now that I have the can mounted I have to start looking into the other need to complete the install. The biggest one was the clean [air filter](#) side normally [mounts](#) a fitting in the upper [airbox](#) cover post filter to allow the [engine](#) to draw air from the air box. Since I have the CAI installed there is NO upper cover to mount the air feed. After a little digging around and looking at this I decided to do a simple easy mod to allow the clean air side to breath cool clean filtered air from the CAI and not hot air from the [engine](#) bay. I decided I would mount a straight threaded nipple enclosed with the kit into the front upper side of the CAI airbox. I drilled a 1/2" hole then used a step bit to increase the size until I was able to just get the Once the fitting was threaded into the box I would use a Spector Performance Breather Filter (3996) from Autozone on the threaded end of the nipple that would be thru the box and exposed on the back side. The filter rubber bushing is designed to mount on up to a 1/2" inch tube but our nipple is bigger than that so I took my 1/2" drill bit and gently drilled out the inside of the rubber [filter](#) bushing. The bushing is removable and allowed me to hold it while I drilled it out. With the bushing enlarged and reinstalled in the filter I can now thread it onto the back side of the fitting and hold it in place with the provided [hose](#) clamp.





Ok before anybody starts yelling about blocking air flow I confirmed the [filter](#) is above the inlet for the fresh air and is NOT blocking air flow. Now all I have to do is slide the [hose](#) on the nipple and route it to the clean air filter oil fill breather on the [motor](#).



Now let's tackle the clean side first. Remove the current clean air side [tube](#). Simply disconnect the two connector's one on the [valve cover](#) the other on the front side [turbo](#) inlet pipe. You will notice there is a MAP sensor on this [tube](#). Carefully remove it from its mounting clips by gently spreading the sensor side clips and remove sensor (be careful not to damage the sensor). Set the factory tube aside in case I want to reverse the install at some point. Also included in the kit is a black nipple cover. Place this on the valve cover nipple where the connector came off. This connection is no longer needed as we will be feeding clean air to the engine from the breather filler cap.



There are a couple ways to remount this [MAP sensor](#) in the catch can layout. Tracy's video shows him rerouting it on the dirty side of the [engine](#) (there was NO clean air breather installed on that video) and I was going to [mount](#) it back in the clean side run like it was initially but decided to follow Tracy's instructions to the letter. Why reengineer something that is proven to work.

So what do we do with the turbo intake tube nipple? This now gets connected to one of the outside barb connectors on the catch can. I started this run from the catch can end cutting a short 4"-5" piece of hose and installing one of the check valves into the end of the hose. If you look at the check [valves](#) there is an air flow indicator on the valve. Check the valve by blowing on each end of valve to confirm air flow direction. The valve needs to be installed so the air is flowing away the catch can. In the case air should flow from the open hose end to the open barb on the valve. Now install this hose on to one of the left outer catch can barb (a little WD40 on the barbs helps). From here route the hose back to the [turbo](#) inlet barb and install one of the factory style 90 degree [connectors](#) included in the [kit](#) and connect to the open nipple. You can route this hose any way you like but I routed mine under the throttle body, along the valve cover under the wiring loom and finally to the turbo down tube. I found it easier to work with the full length hose when doing this as I could pull a couple extra feet forward allowing me to install the 90 degree [connector](#) then feed the hose back until I could connect the connector on the down tube nipple. Now make sure you have enough slack, cut hose to length and push on the open check valve barb. Success we now have the first suction run completed. We are done on the front side.





Now we remove the dirty side hose connected to the back valve [cover](#) and the intake [manifold](#). Set this hose aside so we can revert back to factory later if needed. Now we will hook up the dirty side valve cover nipple to the center barb on the catch can. To do this simply install a 90 degree fitting on one end of the hose and route it to the center barb on the can.

Before you cut the length make sure you have enough slack to loop the hose without crimping it. I decided to run this hose toward the passenger side of the car looping to the center barb on the catch can. Lube the center barb with WD40 and push the hose in place.

Now remember that [MAP sensor](#) we have from the clean side? We need to get this back in the [system](#) to prevent codes. To do this we are going to cut the hose we just installed about 3" from the 90 degree fitting and install the provided T-connector. Once installed you want the T point to the front of the car. Now we cut a length of hose long enough to allow us to reach the MAP sensor. Tracy's video shows him installing the MAP sensor directly into the end of the hose. Welcome to kick up number four. The MAP sensor on the F-150 must be bigger than the one on our sports. Remember that clean side hose with the [MAP sensor](#) mount? Yep I grabbed it, took a razor, and gently cut the tubing on both ends of the mount and removed the [hoses](#). Now I took the MAP sensor

mount and installed it into the end of the hose on our T. From here you simply install a cap on the other end of the mount. As I didn't have a cap I pushed on a short piece of hose and shoved a barb cap in the end creating a temp plug/cap. Dirty side done!



This leaves us with just the final [vacuum hose](#) from the intake [manifold](#) to

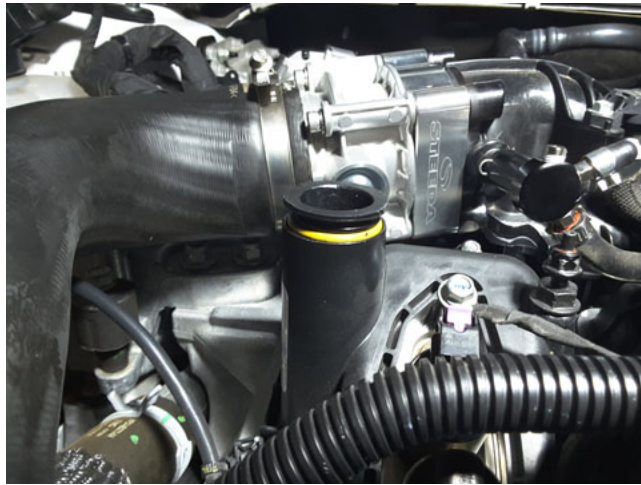
the right catch can barb. Again we cut a 4-5" piece of hose, check the air flow of the check valve to make sure it flows air from the catch can and install it in one end of the hose. Now install the hose to the catch can with a little WD-40 on the barb. Now I routed my nose a little different, I loosened the AN nut on the right barb and aligned the barb with the firewall pointing towards the driver's side of car. I then installed the 90 degree [connector](#) from the kit, installed it on intake manifold pointing towards drivers side of car and looped hose to the check valve insuring no pinch or kink. Cut to length and push hose on check valve barb.



I guess I should mention I test fit the [engine](#) cover between each hose install to ensure I didn't have an obstruction or any sort. Man I love this drive by [wire](#) system no linkages or moving parts to get in the way.

As I stated at the beginning the kit includes the clean side breather that replaces the factory [oil](#) cap. Install is easy BUT this is a two piece item and I recommend separating them before install. The breather has an oil filler neck adaptor that you need to screw into the [oil](#) filler neck completely before installing the breather. Once the adaptor is installed the breather simply pushes into place.





Now we are going to route the [clean air hose](#) from the barbed adaptor we installed in the CAI to the breather cap barb. Lube both barbs with WD-40, install hose on the CAI barb then route the hose along the front of the car to the clean side breather. Make sure you leave enough slack in hose to allow a clean bend to the breather. This will give you enough slack to remove the breather and set it on the front air inlet cover when adding oil.



Project done. Catch can installed.

ike, Wildcat Birdie, lye and 5 others like this.

2017 Fusion Sport Oxford White, 401A, Driver Assist Pkg, Steeda Strut Tower Brace, Hood Strut Kit, Rear Sway bar, CAI Kit, Throttle Body Spacer, Tracy Lewis Performance Signature Series Dual Valve Catch Can

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Quote

Quick Reply

08-06-2017, 09:44 AM

post #3 of 24 (permalink)

Vert

Senior Member



Join Date: Sep 2016
Posts: 973
Garage

Nice in-depth write up and clean install.
Have you talked to Torrie to see if you'll need any tune adjustments since it could throw off your air\fuel mixture?
If you have any difficulty getting to the peacock drain, you can relocate it to the bottom of the drain hose as long as you [clamp](#) both ends of the hose.

Donjohnk and Oreo like this.

Quote

Quick Reply

08-06-2017, 10:55 AM

Thread Starter

post #4 of 24 (permalink)

Oreo

Super Moderator



Join Date: Jan 2017
Location: South Louisiana
Posts: 632
Garage

Quote:
Originally Posted by **Vert**

*Nice in-depth write up and clean install.
Have you talked to Torrie to see if you'll need any tune adjustments since it could throw off your air\fuel mixture?
If you have any difficulty getting to the peacock drain, you can relocate it to the bottom of the drain hose as long as you [clamp](#) both ends of the hose.*

Not yet. I hope to start the tune adventure again next week she is all stock as of now.

mramx390 likes this.

2017 Fusion Sport Oxford White, 401A, Driver Assist Pkg, Steeda Strut Tower Brace, [Hood](#) Strut Kit, Rear Sway bar, CAI Kit, Throttle Body Spacer, [Tracy Lewis](#) Performance Signature Series Dual Valve Catch Can

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Quote

Quick Reply

08-06-2017, 12:02 PM

Thread Starter

post #5 of 24 ([permalink](#))

Oreo

Super Moderator



Join Date: Jan 2017
Location: South Louisiana
Posts: 632
[Garage](#)

This guy makes some great detailed videos and this is the best video explanation I have seen on why we need a catch can on our cars.

YouTube (Short URL)

The Biggest Problem with Ford's Ecoboost Engine & How to ...



[cockerdogs](#) likes this.

2017 Fusion Sport Oxford White, 401A, Driver Assist Pkg, Steeda Strut Tower Brace, [Hood](#) Strut Kit, Rear Sway bar, CAI Kit, [Throttle](#) Body Spacer, Tracy Lewis Performance Signature Series Dual Valve Catch Can

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Quote

Quick Reply

08-06-2017, 09:55 PM

post #6 of 24 ([permalink](#))

QuickSilver

Member



Join Date: Jun 2017
Location: NH
Posts: 80
[Garage](#)

Thanks for being the 2017 FFS guinea pig on this. After a few hundred miles please empty the catch can in a clear [container](#) and show us how much was caught and what it looks like.

[Flew](#), [cockerdogs](#) and [mramx390](#) like this.

2017 Shadow Black with 401A, Adaptive Cruise, Driver Assist

Quote

Quick Reply

08-06-2017, 11:00 PM

post #7 of 24 ([permalink](#))

cockerdogs

Senior Member

Join Date: Nov 2016
Posts: 305

Cost & Parts list

Please post a parts list alongside with vendor [parts](#) # and cost. Thanks, cockerdogs

[Flew](#) likes this.

Quote

Quick Reply

08-08-2017, 01:08 PM

post #8 of 24 ([permalink](#))

Cobra99

Member

I'm a big [fan](#) of catch cans and have them on a few of my vehicles. So here is my .02

Join Date: Oct 2016
Posts: 68

First I want to warn people about Tracy Lewis and his reputation with RX. If you do any research you will quickly find out what he had done to the Mustang and GM guys, Just look and come to your conclusions. Oh and the RX controversy, well again do a little digging and it will give you hours of reading pleasure 😊.

Onto this kit. This seems to be very overpriced and the kit seems cheap. No when I mean cheap for a \$350 US kit, it only has PCV hose and plastic fittings etc....No Aluminum AN fittings, No braid hoses etc... I can't comment on the catch can themselves since I don't have one in front of me. Now reading about how much it catches is a messy subject, but on my other cars (Running Bob's Auto Sports catch cans) they catch way more they people on here are witnessing with this unit. Isn't this the main reason why your are doing this right? So just a FYI and be aware of what your buying.

Quote

Quick Reply

08-08-2017, 01:51 PM

post #9 of 24 (permalink)

Vert
Senior Member



Join Date: Sep 2016
Posts: 973
[Garage](#)

Quote:
Originally Posted by **Cobra99**

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The plastic fittings are OEM and that's what I used on my Mustang with no issues and they might not be pretty like AN fittings, but they get the job done.
To my knowledge this is the only kit out for the 2.7 so its better than nothing.

Quote

Quick Reply

08-08-2017, 02:47 PM

post #10 of 24 (permalink)

Cobra99
Member

Join Date: Oct 2016
Posts: 68

I was talking about the t fittings and such. The oem pcv fittings are fine as they have to attach someway. I'm trying to find a good 3 way since you don't need a kit as much as a good separator.

Sent from my SM-G935W8 using Tapatalk

Quote

Quick Reply

Reply

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