

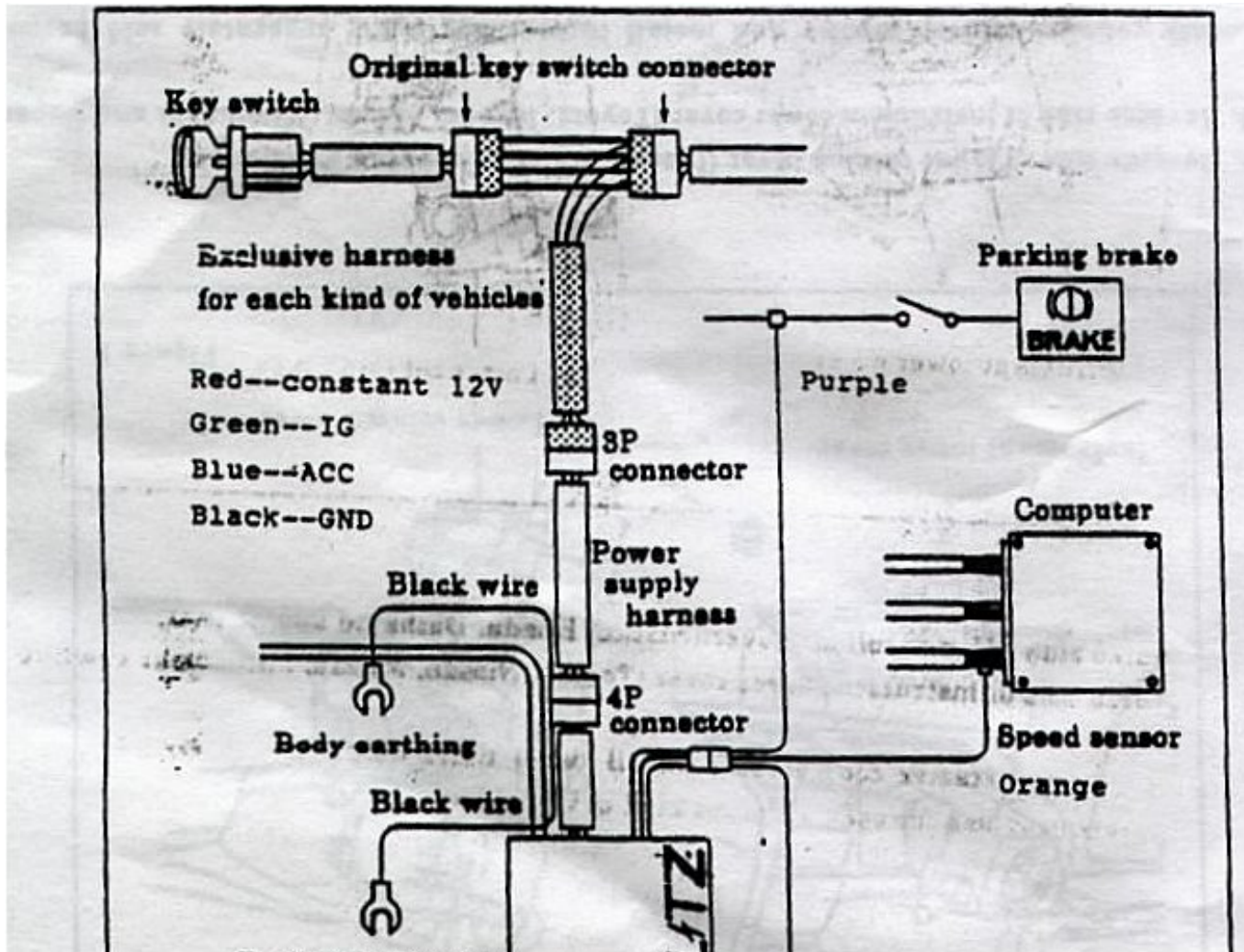
Instructions on How to Install the Blitz Dual Turbo Timer

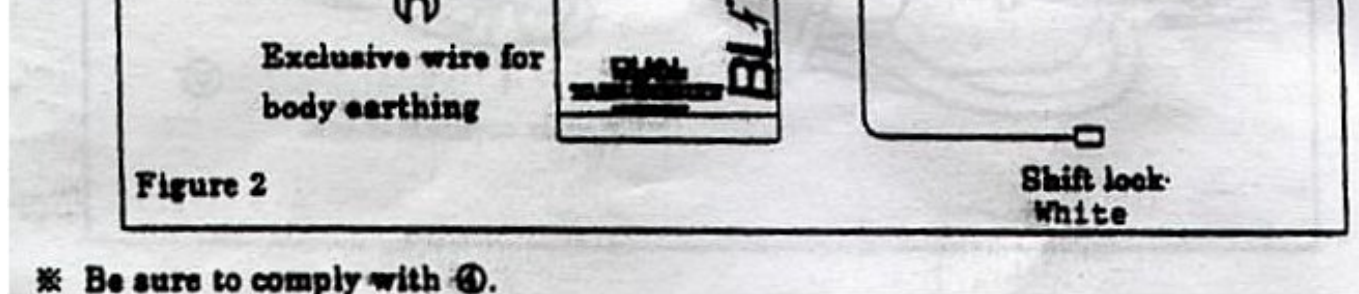
By Harry Yamashita
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Due to many of the TwinTurbo.net members' requests for instructions on the installation of the Blitz Dual Turbo Timer, I have decided to up this DIY up on the web.

Typical locations for mounting a Blitz Dual Turbo Timer (hereon referred to as BDTT) are on the panel under the steering column, on the steering column, in the stock 300ZX clock location, and in one of the DIN stereo openings. I will refer to the installation of the stock clock location for now. Here's a pic of some location ideas (obviously some pics are not of the Blitz unit but you get the idea... :)

This is the basic diagram of what the install would look like (click for a larger pic):





Here are the steps, and click on the pics below for a larger view:

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[Auto Shift-Lock Wire](#)

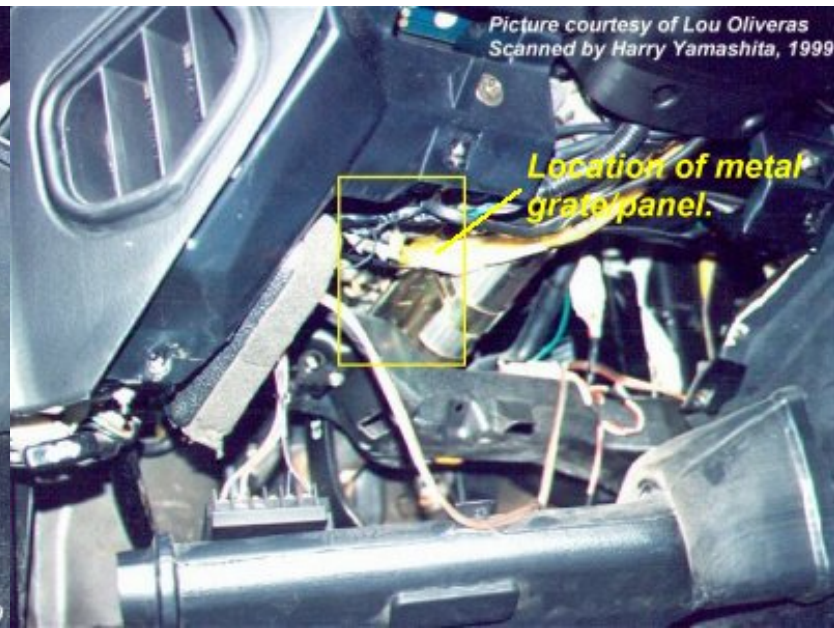
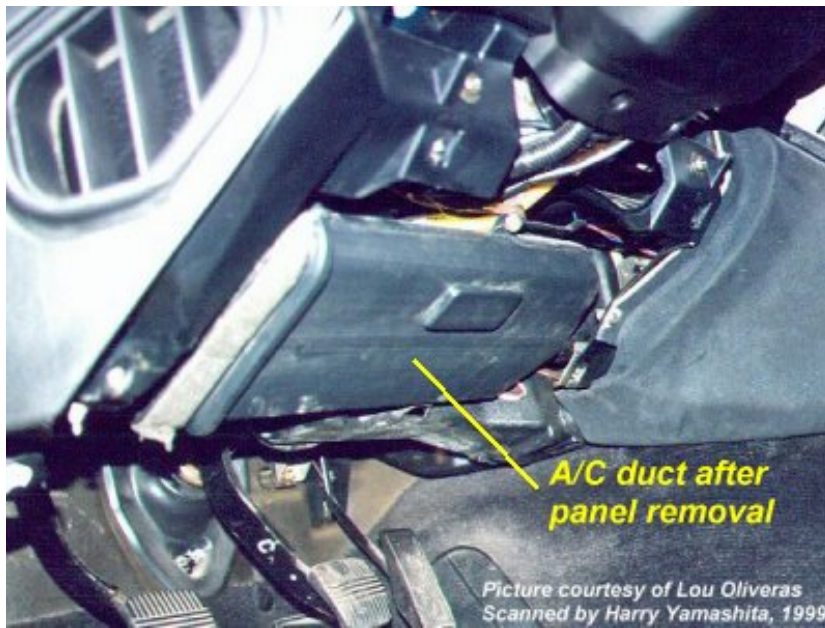
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Installation of the Extra Harness

1. Remove the panel below the steering column. There should be 4 bolt/screws securing this panel. Once removed, the A/C duct to the driver vent should be visible.
2. Either remove or set aside the A/C duct (there is 1 screw securing it). Once that is done, you will see the steering column and a metal grate with holes in them directly to the left of the steering column.
3. Remove the bolt (12 mm) and the screw securing the grate in place. They should be located towards the top end of the grate (driver side) and the bottom end of the grate (engine side).
4. Work the grate free from it's mounting place and you will see 3 harnesses set on the grate on the backside. One of the harnesses is where you will use the harness you have purchased. I believe that it is the one closest to the steering wheel (the harness are of different sizes so only one of them will fit the extra harness).



Once extra harness is clipped in, replace the metal grate as before using the bolt and screw you removed. Do not put everything back together yet. You'll have to test the timer once everything is hooked up. It will be easier and less time consuming if you should encounter a problem with the install later.

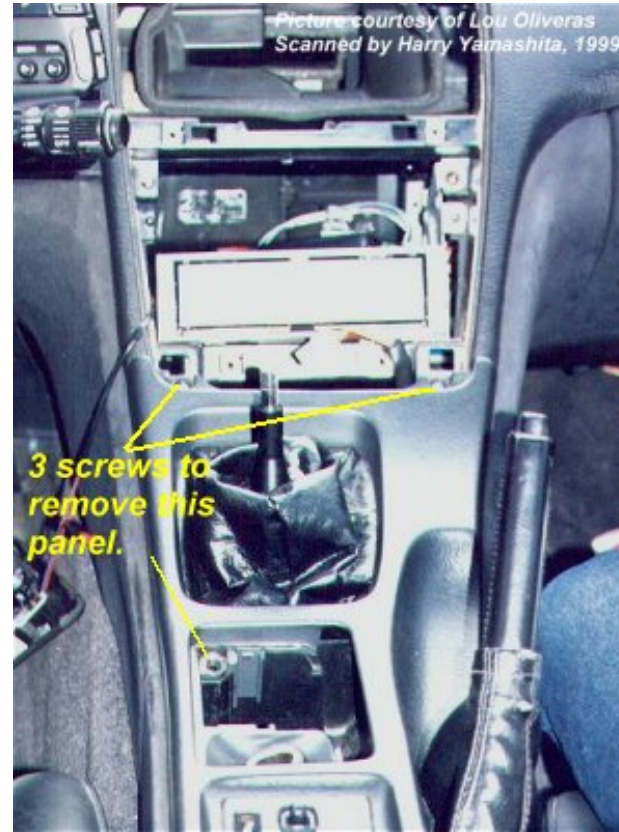
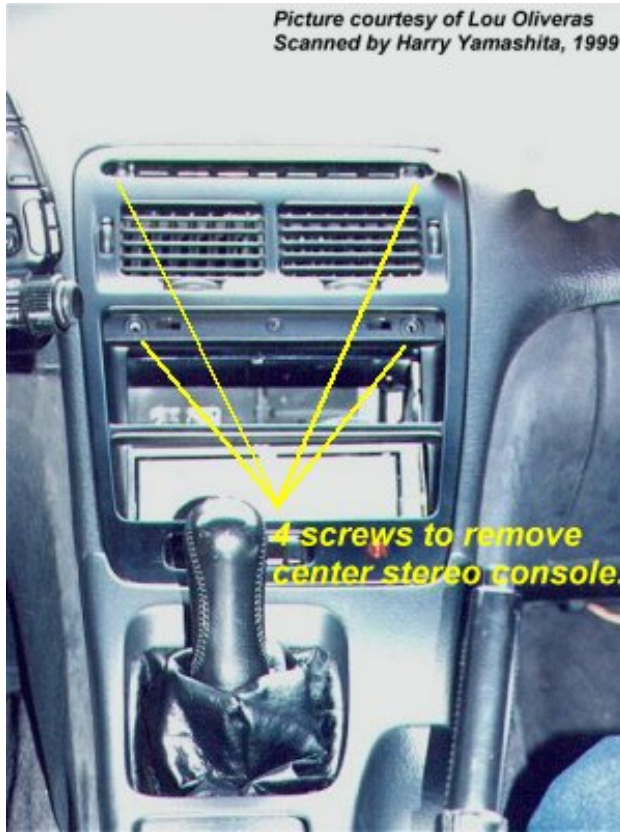
Installation of the Handbrake Kill Wire, ECU Wire, and AutoShift Lock Wire

This is probably going to take you a little while. It's a pain in the ass but it's well worth it. You will need to remove the entire center section of the interior, all the way back to the center storage box.

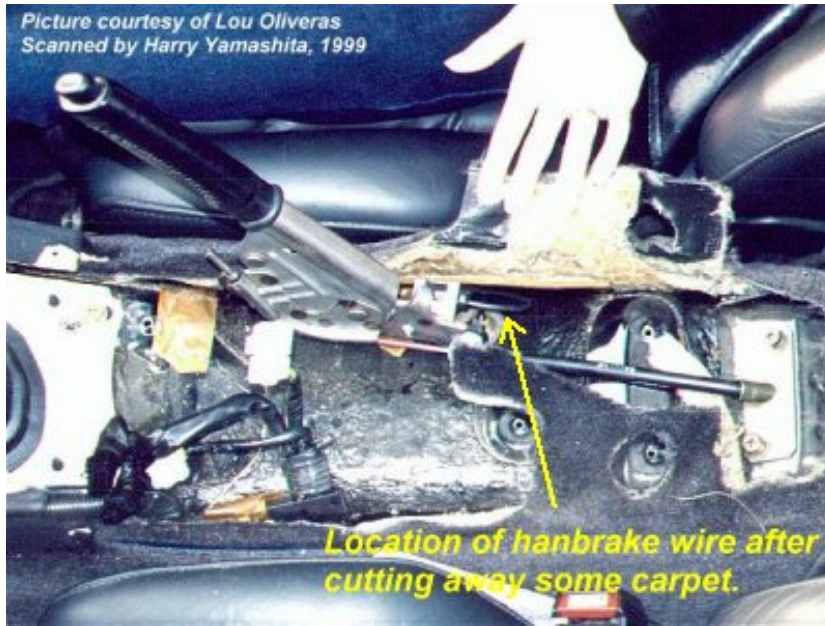
Handbrake Kill Wire

1. Remove the cover for the center stereo console. There are 4 screws that are covered by plastic clips. 2 are located in the top corner of the A/C vents, and two are located in the middle of the center panel under a long horizontal piece of plastic. Simply pop those off with a flathead screwdriver.
2. If a 5-speed, remove the shift knob by turning the shift knob counter-clockwise. If it's stuck, give the knob a really big yank, it will come free. If you have an auto, you may skip to Step 3.
3. Remove the panel directly below the center stereo panel you just removed. There are 3 screws holding this down, 2 are located in the top corners on this panel, and 1 on the ashtray area (remove the ashtray and you'll find the screw in the top-left area). Pop the top ends on this panel off and then slide the panel forward. you will have some wires/harness connecting to the cigarette lighter and the mirror and suspension control switches. Unhook those and set the panel aside.
4. Remove the center storage box. You'll have to empty the storage box, and pull the carpeting of the box off. There are 5 big screws holding the box down: 3 screws in the box and also 2 more towards the front of this entire piece.
5. Your handbrake should now be exposed. Locate the wire to the handbrake sensor (passenger side and toward the back of the handbrake mechanism). You'll have to cut away some of the plastic insulation to expose the wire AND THEN splice that wire to the white wire of the

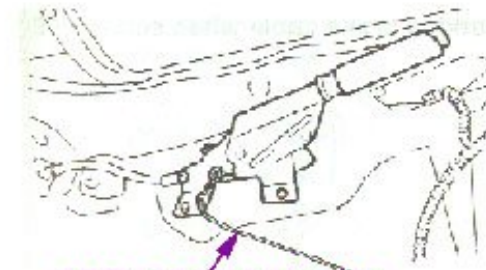
BDTT (the BDTT may not come with the extension so use any 18-22 gauge electrical wire). Here's the diagram, this was taken from a posting on TT.net where a member wrote that the hanbrake was optional. This is true but you will lose this feature if you do not hook it up (*basically, you'd be allowing anyone to drive away in your while the timer is active*).



Picture courtesy of Lou Oliveras
Scanned by Harry Yamashita, 1999



Location of hanbrake wire after cutting away some carpet.



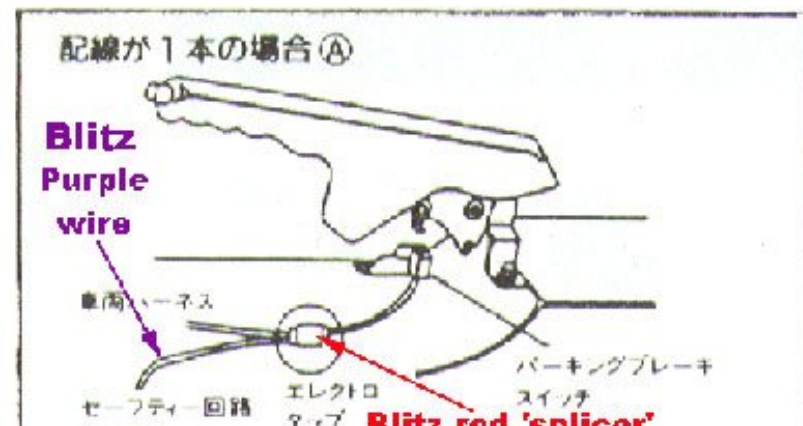
This should be the
wire to splice into.
(OPTIONAL)

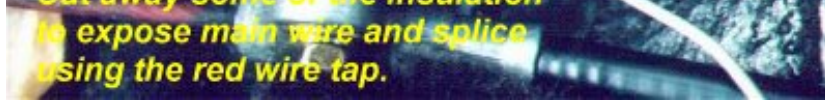
(If not done, then you
MUST GROUND Purple
wire to body metal!)

Picture courtesy of Lou Oliveras
Scanned by Harry Yamashita, 1999



Cut away some of the insulation
to expose main wire and splice





Auto Shift-Lock Wire

In the case of this wire, it is the purple wire. For the automatic transmission Z's, you will have to find the shift lock wire that comes off the auto shifter and splice the purple wire there. As far as I know, the autoshift lock switch is located near the base of the "gear stick" on the stereo side.

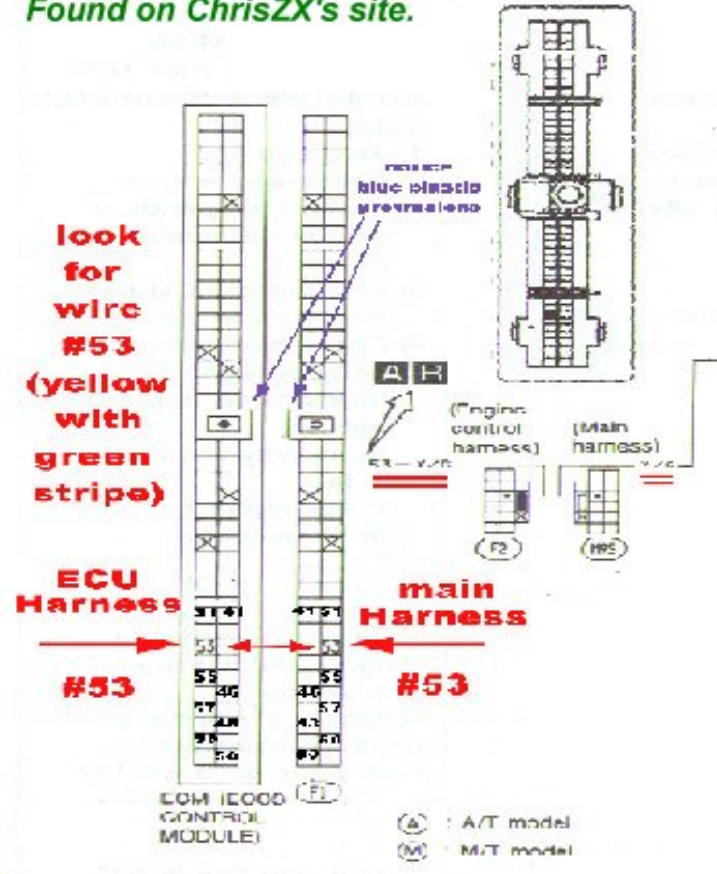
For 5-speed Z's, simply splice this wire together with the handbrake kill wire as 5-speeds transmissions do not have the AutoShift Lock feature. I have also heard of people simply grounding the wire, but it is not recommended as this may confuse the BDTT later in the future.

ECU Wire (Speed Sensor)

The remaining orange wire is spliced to the ECU so that it will enable you to use the Auto-Timer feature of the BDTT. **DISCONNECT THE BATTERY BEFORE YOU DO THIS SECTION!!!** Your ECU is located under the passenger foot board. Simply remove the carpet and remove the wooden board. Your ECU is on the left. You'll need to remove the ECU from it's resting position and remove the harness connecting to the ECU. Pic of a diagram will follow, or refer to your instruction manual. On the Japanese instruction manual, the correct diagram for Z32's ECU is on Page 19, Diagram 3. Please look at the diagram carefully as the harness is divided into 4 sections of 16-20-20-20 wires. The spot marked with a black spot is the wire you will need to splice.

VEHICLE SPEED SENSOR

Found on ChrisZX's site.



Once you've completed this section, find yourself a suitable location to mount BDTT in the car. One of the more common places is in the stock clock location. However, unlike the HKS Turbo Timer III or IV, it's doesn't fit perfectly and you need to do some filing to the clock opening to make the BDTT fit nicely. Also you will need to fabricate some kind of bracket in the back to help hold the BDTT in place.

Here are some pics of alternative location to the stock clock locations.



Produced by SpdDemon13@aol.com, 1999



Produced by Harry Yamashita 1998



Installing the Vacuum Boost Hose

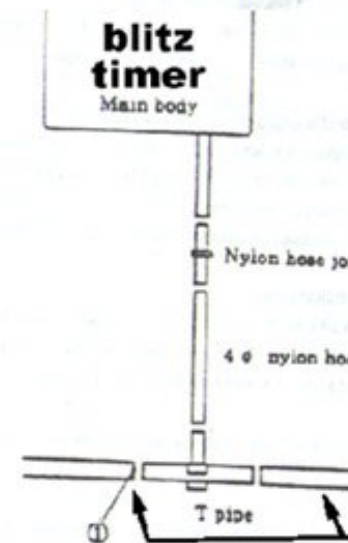
To install this hose, you have a couple of options. If you already have an aftermarket boost gauge already hooked up, you can simply splice into that. Simply, cut the hose on the aftermarket boost gauge and using the T connector (and some rubber vacuum hose, approximately 1.5 inches on each side to ensure no boost leaks occur).

Extracting methods of intake manifold pressure for boost

CAUTION

After-idling time of automatic timer mode is indefinite when the negative pressure is not extracted precisely. Be sure to take negative pressure out from behind the throttle.

- ① Cut the portions as indicated in the illustration.
- ② Insert attached T pipe at the cutting portion.
- ③ Insert attached nylon hose 4 φ into the connecting portion of T pipe.
- ④ Connect attached nylon hose joints to nylon hose 4 φ sticking out of the main body.
- ⑤ Insert the opposite end of nylon hose installed in ③ into nylon hose joints installed in ④.
- ⑥ Fix the connecting portions of nylon hoses with attached small tie wrap bands.

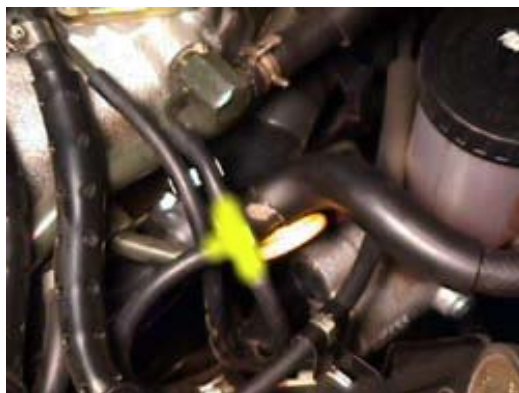


Found on ChrisZX's site.

$$1 \text{ kg/cm}^2 = 14.222 \text{ psi}$$

Diagram of vacuum hose hook up and some good info on boost conversion.

If you do not have an aftermarket boost gauge, you will have to run the black vacuum hose (supplied with the BDTT) into the engine bay. I find that the best way is to run the hose through the same hole as the hood release cable. This hole is located just behind fuse area in the driver kick panel. This will probably take some time to get the hose through as it's a pain in the ass to get done. I would also recommend you have a metal coat hanger handy as you will need it to be able to hook the hose from deep in the engine bay where your hands may not be able to get to the hose. Once the hose is through, you can splice the hose, using the T connector with the hose marked below.



Testing the Blitz Dual Turbo Timer

Remember when I told you why you shouldn't put everything back together right away? We need to test it and see if it works first! Otherwise we'll just end up pulling everything apart again if something goes wrong.

Test #1

Start the engine, set your timer on manual mode and set it to 20 secs (to differentiate from auto mode). With the handbrake up, remove the key from the ignition. Your engine should still be running and the countdown begins. When it hits zero, the engine should shut down.

Test #2

Start the engine, turn to auto timer mode (the timer automatically sets it at 10 secs). Be sure there is a little square "A" on the display. If not, the autotimer won't work in this mode. Simply push the Minute button and the "A" will appear, push the button again to turn it off. Handbrake up, and remove the key, timer should countdown and engine shut down at zero.

Test #3

Set in either auto or manual mode, start the engine. With your foot on the brake (so you won't roll away), remove the key. Timer should count down like in the above two tests. Now with the foot on the brake, release the handbrake anytime before the timer hits zero. The engine should automatically shutdown.

If all of the above works fine, you have successfully completed the install and may replace all the ducts and panels.

Enjoy the ride!

If you should run into any problems with the install, please email me and I will help you walk through the installation process.

Last Updated: July 24th, 1999.
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Special thanks to Lou Oliveras for his pictures of his install and ChrisZX for his Blitz diagrams.