



# LEBC Newsletter – 2017 Number 3

## From the President – 4Q17



Here we are already at year-end and about to start a new year! I hope everyone has had a good year and has enjoyed their Broncos as much as we have ours. And I hope everyone was able to get out and participate in some of the great events the Club has had this year!

We had a great Round Up with a surprise guest who actually showed up after several years of rumors. The Father's Day Ride at Wolf Caves was a "hot" success (!). We had a very good showing at OCBR again this year. And, the Fall at the Falls event at Hidden Falls was an outstanding wheeling and culinary event! Plus, we had a bunch of local area Meet and Greets that were well attended.

That said, we're looking forward to an even better 2018 - after all it's the 20<sup>th</sup> Anniversary of the founding of LEBC! We're already in the initial planning stages of the Round Up (April 25-30, 2018). There will be another Wolf Caves ride in June (June 22-24, 2018). The dates for Fall at the Falls have been set (November 2-4, 2018). But the big news for 2018 is a new event – the Lonestar Bronco Mountain Ride! July 16-20, 2018 in Ouray Colorado. See more details on the Mountain Ride in this newsletter.

The best way to get the most out of your Club is to participate! Please plan on attending as many events as you can next year. We'd love to see you there!

Merry Christmas and Happy New Year!

Gary

## 2018 Events:

- **North Texas Meet & Greet:** 1 pm Saturday January 27 at Gecko Cafe, 1381 W. Campbell Road, Richardson, TX (Owners are Bronco folks and new Club members)
- **East Texas Meet & Greet:** January 20, Place is TBD
- **Area meet and greet events – check with your local area director (contact info is on the LEBC club website):**
- **LEBC Round Up:** April 25-29, 2018, K2 Off-road Park, Mason, TX
- **LEBC Father's Day Weekend:** June 22-24, 2018, Wolf Caves, Mason, TX
- **LEBC Lonestar Bronco Mountain Ride:** July 16–20, 2018, Ouray RV Park & Cabins, Ouray, CO
- **OCBR (Oklahoma Classic Broncos Roundup):** September (usually the 3<sup>rd</sup> weekend so stay tuned!), Superlift ORV Park, Hot Springs, AR
- **LEBC Fall at the Falls, Hidden Falls ORV Park, Marble Falls, TX, November 2 – 4**

*Please let the editor (Ken Laird) know if are additional Bronco oriented events to add. We can get them on the club website.*

### Your LEBC Officers for 2018:

President	<b>Gary Gibson</b>	Dripping Springs
Vice-President	<b>Todd Woods</b>	Abilene
Secretary	<b>Ken Laird</b>	Cedar Park
Safety	<b>Brad House</b>	San Antonio
Central Texas Area Director	<b>Bill Hudson</b>	Jonestown
North Texas Area Director	<b>Bill Smith</b>	Richardson
East Texas Area Director	<b>Mark Dominique</b>	Houston
South Texas Area Director	<b>Joe Lebowitz</b>	Boerne
West Texas Area Director	<b>Michael Strickland</b>	Abilene

*The new event!*

## Lonestar Bronco Mountain Ride

### WHERE AND WHEN

Lonestar Early Bronco Club is heading to the Mountains of Colorado. We will be wheeling for 5 days starting July 16, 2018 and ending July 20, 2018.

### OVERVIEW

We will headquarter out of beautiful Ouray, Colorado. The Ouray RV Park and Cabins will be our staging area each day. They have allotted us 12 pre-booked campsites, also providing a meeting room each day to plan the next day's activity. From there we will be going on trails in the Ouray and Silverton area. We plan to have leaders for these trail rides that will take us out, from a few hours to all day. These will be of various difficulty, with most being able to be handled by stock to street-modified Broncos.

For each day we wheel, plan on bringing a lunch and refreshments because you will be on the trail most of the day without possible access to food and/or supplies. Wednesday will be an open day to explore on your own, or have the opportunity to do what you or family would want to do in the area.

## REGISTRATION

LEBC's website has the registration form for the event with a link on the LEBC Facebook site. There is no cost registering for this event. For those registering for the camp sites you will need to contact Ouray RV Park and Cabins directly by phone to secure your pre booked site. Per Ouray RV management, you can make the process of registering smoother and more convenient by sending them an email first with your information on it, then they will contact you at your designated best time to call. **See below.**

## CONTACT INFORMATION:

Ouray RV Park & Cabins  
970-325-4523 | [ourayrvpark.com](http://ourayrvpark.com) | [office@ourayrvpark.com](mailto:office@ourayrvpark.com)  
1700 N. Main St. | Ouray, CO 81427

***Easy reservation process*** – send an email to Jason and Amber at the above address with the following information on it (Copying and pasting recommended). **They will call you back as you indicate.**

**Name on reservation and total number of people in the site:**

**Mailing address:**

**email address:**

**Phone number (cell preferable):**

**Pets?**

**RV information: (Example: 45' Motorhome with 3 slides, towing 18' trailer with Bronco):**

**Best phone number and time to reach me is:**

## !!!!!!IMPORTANT!!!!!!

IF YOU PLAN ON SECURING ONE OF THE PRE-BOOKED RV SITES, THIS BOOKING NEEDS TO BE DONE BY YOU **NO LATER THAN JANUARY 15th of 2018**. IF YOU PLAN ON GETTING ANY OTHER LODGING, DO IT EARLY. EVERYTHING IS ALREADY FILLING UP.

## ALTERNATE LODGING

These are within walking distance to the Headquarters Camp Grounds.

Timberidge Lodge  
Riverside Inn and Cabins  
Ouray Hot Springs Inn (most expensive)  
Bridal Veil Bed and Breakfast

Looking forward to you joining us for a great adventure.

Bill & Kathy Hudson  
Lonestar Early Bronco Club

Click [Here](#) to go to the LEBC website to register for the event with LEBC.

# Bronco Tech

## Holley Sniper EFI Installation

*By Mark Havelka*

### Introduction

I've been looking to add fuel injection to my Bronco for quite some time. I'd never been satisfied with the Edelbrock carburetor that was installed on my Bronco when I purchased it in 2004. It was plagued with hot-start issues and flooding, especially on the trail. It seems I was always tinkering with rods, jets, springs, idle adjustment screws, fuel pressure, etc., to try to get it to run well on road and off.

I've spent hours looking online and talking to fellow LEBC members about different options. The Mustang EFI swap is well-documented and highly-regarded in the Bronco community, but the components are getting long-in-the-tooth. The Explorer 5.0/4R70W swaps are becoming more common and seemed like a very attractive option, but after some research I decided this route was outside my space/time/budget equation. Enter the aftermarket TBI (Throttle Body Injection) systems.

Several manufacturers, including Edelbrock, Fast and MSD now offer budget-friendly, self-learning TBI systems that require minimal wiring modifications and provide a touch-screen display for initial setup and fine-tuning. This means you don't have to be an electrical engineer or tuning specialist to get these systems installed and running. In addition to simplicity, these systems also offer the period-correct appearance of a 4-barrel carburetor. I first heard about this type of system when people started discussing the [FiTech](#) units on ClassicBroncos.com. Some people seemed to have great success, while others were vexed with issues and complained about the lack of customer service. Eventually, I decided to "pull the trigger" on the [Holley Sniper](#), primarily based on Holley's history and reputation.

The Sniper supports up to 650HP and is available in chrome, black and gold finishes. In addition to air and fuel delivery, it's capable of controlling electric cooling fans and engine timing. It can even control nitrous and boost (oh boy!) I purchased my kit from [Wild Horses 4X4](#) (support those sponsors!) It arrived in a nicely-padded box with instruction manuals, well-labeled wiring harnesses and an assortment of installation hardware.



## Installation

Everyone knows the best time to upgrade your Bronco is about a month before Round Up, so in late March I placed my order and got to work. The Sniper uses the same mounting pattern as most common 4-barrel carburetors. If you already have a 4-barrel carb, mounting the unit is as simple as pulling the old carb, throwing it in a nearby trash can and setting the Sniper in its place. If you have the original 2-barrel carb, you'll need to source an aftermarket intake.

There are an assortment of ports for connecting various vacuum lines. While a video from [CJ Pony Parts](#) recommends tying the PCV line in with the vacuum line for the brake booster, I had better braking performance using separate ports for these lines.



The kit comes with several different brackets to connect most throttle and kickdown linkages to the unit. Unfortunately, at the time of this installation, Holley did not offer a bracket to connect the original kickdown rod for the C4 automatic. Instead, I purchased a kickdown cable from [BC Broncos](#) and modified one of the brackets that was included in the Sniper kit to connect it to the throttle body.



The system comes with a coolant temp sensor that I installed in place of the existing aftermarket sending unit I had in the intake manifold. Also included with the kit is an O<sub>2</sub> sensor and a clamp-on threaded bung that's designed to allow you to be able to install the sensor without welding-in a permanent fitting. The clamps that

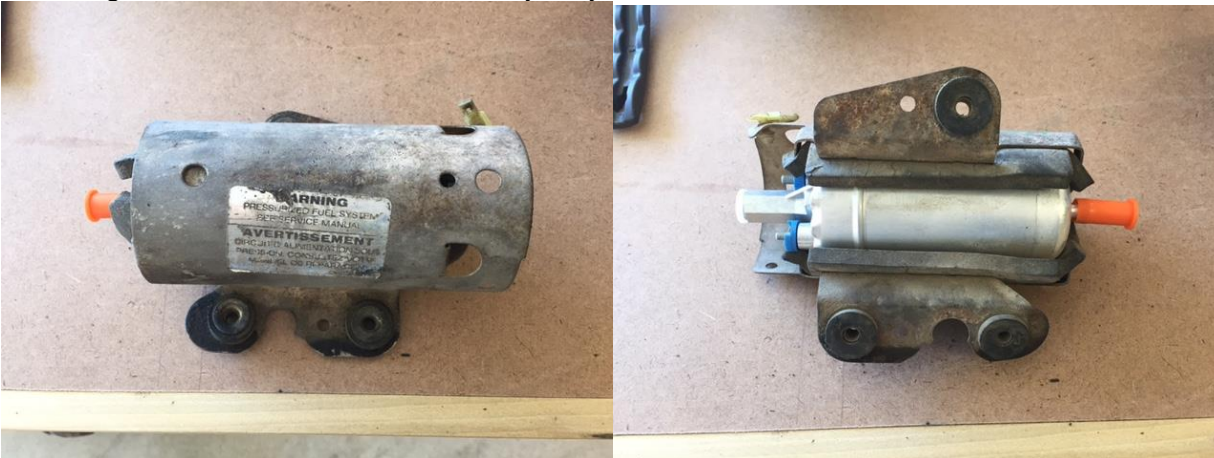
came with the kit broke when I attempted to tighten them, so I took the passenger side exhaust pipe off and had a bung welded-in at a local muffler shop.



## Fuel Delivery

Holley suggests installing an in-tank fuel pump with this system, but a \$600 EFI-ready gas tank wasn't in the budget. There are some in-tank retrofit pump kits available from places like [Tanks, Inc](#) and [Holley](#), but I wasn't excited about cleaning and cutting on my old 23-gallon NWMP tank. Its depth also exceeds the limit of most of these kits.

If using an inline pump, Holley strongly recommends that it be mounted at-or-below the bottom of the fuel tank. With my deep main tank, and intention of using the Bronco off road, this wasn't really an option. After researching some threads on ClassicBroncos.com, I decided to try my luck with an inline pump mounted on the frame rail. I purchased a Bosch 69100 pump (OEM replacement for 80-90's Ford trucks) and picked-up a mounting bracket off an F-150 at a local junk yard.



For the fuel lines, I used a combination of EFI-rated rubber hose and  $\frac{3}{8}$ " hard lines, mounted to the frame with rubber-coated clamps. Two fuel filters are required with this configuration: One before the pump and one before the throttle body. A fuel pressure gauge is highly recommended (more on that later.)



The Sniper has a built-in fuel pressure regulator, which requires a return line to the tank. For this run I used the same combination of fuel lines and added a tee fitting to the tank's filler neck vent line.



Holley offers their EFI system with a Master Kit, which includes an inline fuel pump, fuel line, fittings and mounting hardware. The Master Kit wasn't available when I purchased my system, but I wish it had been. At \$250, this option is a good value, especially when you take into consideration the time and effort involved in figuring-out what pieces are needed, running to various parts stores and/or making multiple purchases online.

## Wiring

This is one of the areas where these self-contained units really shine. The system requires only four wiring connections (battery +, battery -, switched ignition and rpm) to run. Battery + and - are pretty self-explanatory. It's important that these connections be made at the battery terminals, and the kit includes all necessary wiring and connectors.

For switched ignition, the system requires a "clean" 12-volt wire that is hot when the ignition switch is in the Start and Run positions. I found a blue wire in the Bronco's wiring harness that was already providing this signal to the Duraspark ignition module. I used a relay and a distribution block to isolate the signal wire for the Sniper from the Duraspark module. For the rpm signal, I used the tach output from the Duraspark. This will all be cleaned-up when I remove the Duraspark and use the Sniper to control timing (probably days before next year's Round Up.) I did have to run wires to the fuel pump as well. The Sniper wiring harness contains a relay and enough wire to get to the back of the Bronco.

## System Setup and Initial Start

With all the fuel and wiring connections made, it was time to connect the Sniper's 3.5" touch screen display. This device is used to set up engine parameters and monitor system performance, but it can also be used for

data logging and to fine-tune individual settings. The display can be permanently-installed and used as a gauge/monitor, but it is not required to remain connected once the system is up and running.



Using the supplied Quick Start Guide and on-screen wizard, I selected the number of cylinders, engine displacement, target idle speed, camshaft type (on a 1-4 scale of mild to wild) and the type of ignition system. Once these settings were saved, I cycled the key so the system could energize the fuel pump. I found a couple of leaks in the fuel line and fixed those before running-through the pre-startup checklist. The engine started within the first few cranks, but it was idling really high (2200 RPM) so I shut it down and called Holley's tech support line. To make a long story short, the next few days were spent trouble-shooting, test-driving, sitting on hold with tech support and scouring various online forums. During this process, I installed a fuel pressure gauge, which pegged immediately.



The internal pressure regulator on the Sniper is supposed to maintain a healthy 60 PSI. I called Holley to report the high pressure reading, and the Tech knew what the problem was instantly. It turns out that some of the pressure regulator caps had been installed with a rubber bumper that was too long, which caused the pressure regulator to be compressed. The Tech shipped a new regulator and cover to me overnight. It arrived the Wednesday before Round Up. Here's a picture of the original cover (left) and replacement (right.)



With the new regulator and cover installed, the fuel pressure reading came down to 62 PSI, which allowed the system to function properly. I was still having high idle issues, so I followed an article from [EFI System Pro](#) to get the idle where I was comfortable. Now that the main issues were resolved, I was able to spend some time driving the Bronco around town. The system uses a standard tune, based on the parameters you select during the initial setup process. Once the engine temp gets to 160 degrees, the system goes into a learning mode and adjusts the tune based on engine performance. I only had a day or two to let the system learn as much as possible before loading the Bronco on a trailer and heading to K2. The Bronco ran great at the Round Up. No hot start issues, and the engine never stumbled on the Level 2 trails.

## Continued Use and Overall Impressions

I haven't put a ton of miles on the Bronco since the Round Up, but the engine continues to run well. It does seem to have a bit more power during acceleration, but I wouldn't say it awakened a sleeping beast. I found a vacuum leak at the carb spacer that was between the intake and throttle body. Once that was resolved, I was

able to get the idle exactly where I wanted it. One minor annoyance is that the unit makes a whistling noise when accelerating slowly from cruising speed. My guess is that this noise is created as the throttle plate opens and Idle Air Control valve closes.

Overall, I'm happy with this system. It resolved most of the drivability issues that I had experienced with the carburetor. The initial startup would have gone much smoother if it weren't for the pressure regulator issue. From my understanding, these bad regulator covers were installed on a handful of the first batch of units that Holley shipped. I would have saved a lot of time trouble-shooting if I had installed a fuel pressure gauge in the first place. While I would recommend the Sniper, part of me wishes I'd waited until I could put together an Explorer 5.0/4R70W swap...

Here's a list of all the purchases I made (minus beer) to complete the install:

Part #	Description	Vendor	Qty	Unit Price	Subtotal
550-516	Holley Sniper	Wild Horses	1	\$999.95	\$999.95
69100	Bosch Fuel Pump	Amazon	1	\$86.36	\$86.36
VPN-1128-3057	Fuel Pump Hose Barb Fitting 10mm x 3/8	Summit	1	\$5.97	\$5.97
	Fuel Pump Bracket	LKQ Auto Parts	1	\$3.70	\$3.70
3482	10 Micron Fuel Filter	Napa	1	\$9.69	\$9.69
3033	Pre Fuel Filter	Napa	1	\$5.99	\$5.99
602044	Poly Armour 3/8 x 25' Brakeline Coil	Autozone	1	\$27.99	\$27.99
D3532341	Gates Barricade 3/8" EFI Fuel Line	A-Line Auto Parts	6	\$3.79	\$22.74
GAT 27341	Gates Barricade 3/8" EFI Fuel Line	O'Reilly	4	\$4.99	\$19.96
28634	Gates 5/8" Tee Fitting (for return)	O'Reilly	1	\$4.09	\$4.09
	5/8" Fuel line (for return and filler neck vent)	A-Line Auto Parts	3		\$0.00
EAR-750166ERL	Earls Vapor Guard Hose End -6AN x 3/8	Summit	2	\$4.95	\$9.90
EAR-750006ERL	3/8" Vapor Guard Hose Clamps (5/pack)	Summit	2	\$7.49	\$14.98
SUM-402035	Fuel Pump Block-Off Plate	Summit	1	\$3.97	\$3.97
11-71011	C-4 kickdown cable, carb for Early Bronco	BC Broncos	1	\$53.99	\$53.99
	02 Bung, welded	SoCo Muffler	1	\$45.00	\$45.00
80000DL	Red Power Distribution Block, 1/4"	Del City	1	\$6.72	\$6.72
784656	Rubber coated clamps	Napa	1	\$4.49	\$4.49
LS00100	Marshall Instruments Liquid Filled Fuel Pressure Gauge	Amazon	1	\$20.99	\$20.99
4942	5/32" Vacuum Line	Autozone	3	\$1.49	\$4.47
739236436573	3/8X1/4 BRASS ADAPTER BARB	Home Depot	1	\$3.36	\$3.36
551707	1/4-20 x 3/4 Bolt (pkg of ??)	Autozone	2	\$2.99	\$5.98
				Total	\$1,360.29

## Wolf Caves – Abundant Challenges But Stockers Beware



A few of us went on a little tour of Wolf Caves Off-road Park in December. We'd heard great things about it from the darksider crowd, but we wanted to see what the trails would be like for stock and trail modified rigs. So, off we went on a chilly early December morning...



When we arrived, we were greeted by the friendly owner, Kurt. He took one look at our Broncos and said something like, "That is a really nice Bronco. Are y'all sure you want to take them out there?" We kind of understood what he meant by the time we got to the gate that goes into the park from the campground. The road leading through the ranch gate was blocked and the go-around path had a level 2 rock obstacle to negotiate for entry.



Once inside, we began navigating with a park map. After a little orienting, we were able to set courses for different areas of the park using their number system. When you saw a number posted on a tree or rock, you knew exactly where you were. What we didn't expect was the technical nature of the park roads. There were quite a few challenging places on them. Some of these could be rated at level 3. This added clarity to the park rule about no wheeling alone. Stock and modified stock vehicles will need spotters and possibly some help clearing these obstacles. The trails marked blue, green, yellow, and red could rate out as level 2 and 3, level 3 and 4, level 4 and 5, and level 5+, respectively, my best guess. We traversed several blue trails and a few sections of green ones as we crisscrossed the park. It was a Bronco work out!



All in all, there were a wide range of trails, wheeling challenges-a-plenty at every level, and some great views. That made for a great day and it sure made post-ride whiskey taste real good.





## Visit Our Facebook Page!

Check it out! See the latest postings and post your own cool stuff!

<https://www.facebook.com/Lonestar-Early-Bronco-Club-135481709786/>

## **Newsletter Material Wanted!**

We need your feedback and ideas for future articles. If you write an article, I will help you get it in a future newsletter or in Bronco Driver Magazine. Have any how-to, DIY instructions or write ups that someone could benefit from? Please send them and share with the club. (*Mark Havelka did a great job on his Sniper EFI article, huh? That's what I'm talkin' about! Way to go, Mark and thanks!*)

Meet and Greet, links to interesting products. Bronco related things you come across... get em' in, please.

Don't be shy – send me stuff and we'll get it written up.

*Thanks, Everybody!*

*Ken Laird*