

AustinH

Member



Posts: 67
From: USA!!!!
Registered: Jun 2014

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03-24-2017 12:01 PM

Welcome to the One-Stop-Shop for swapping a 3800sc engine into a Fiero! You will likely not come across a more thorough collection of 3800sc fiero swap information, parts, diagrams, or videos than here.

What this thread is: A *suggestion* for a complete 3800sc Series II or Series III supercharged swap guide with a 4-speed automatic 4t65e-HD transmission. There are TWO COMPLETE ENGINE BUILDS detailed here:

- A cheap and easy Series II direct drop-in swap (Build 1)
- An all-out Series III supercharged build including changing camshafts, but not changing pistons/crank/bearings/rods (Build 2)

What this thread is NOT:

- A pricing guide
- A 3800 NA swap guide, though you will find much overlap
- A 3800 turbo swap guide, though you will find much overlap
- A computer (PCM/ECU) reprogramming or tuning guide
- A bottom-end machining/assembly guide (pistons, connecting rods/bearings, piston rings, crankshaft/bearings)
- An automatic to manual transmission swap guide
- An all-encompassing Buick 3800 engine guide for any car but a fiero
- A transmission rebuilding guide
- A detailed manual transmission guide
- Perfect

CONTENTS:

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[BUILD 1: COMPLETE PARTS LIST FOR A CHEAP AND EASY DIRECT SWAP SERIES II SUPERCHARGED 4T65E-HD TRANS BUILD](#)

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- PARTS NEEDED IF YOU DO NOT BUY A PONTIAC GRAND PRIX GTP DONOR CAR

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- Camshaft, timing chain, and balance shaft removal
- 4t65e Transmission

[3800sc Assembly Diagrams and Torque Specs](#)

- Firing Order
- Coolant and Fuel Lines
- SUPERCHARGER, CONNECTIONS, AND ROUTINGS
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- Exhaust Setup for Build 1
(below here is for build 2 only)
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- ENGINE EXPLODED VIEW ASSEMBLY DIAGRAMS
- HOW A PCV SYSTEM WORKS WITH A NORTHSTAR THROTTLE BODY ON A SERIES III 3800SC

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WIRING HARNESS AND COMPUTER/ECU/PCM PROGRAMMING

-Buying a harness
-Building a harness

Disassembly, Reassembly and Final Fiero Installation Videos

-Required for both Build 1 and Build 2
-Required for Build 2
-Engine Tear-down and rebuild instructions
-Porting Heads
-INSPECTING THE BOTTOM END (crank/bearings/connecting rods/bearings/pistons/piston rings)

Other Helpful Fiero Parts While You're At It

EXTREMELY Useful Links

Disclaimer: If you follow any instructions here, you assume 100% liability for your own build. NOTHING is guaranteed to work. If you blow up your engine, it is YOUR FAULT. Do not blindly follow this guide and buy parts until you feel you understand for yourself why and how everything about a 3800 engine works. This build thread is NOT BASED ON THE FACTORY INSTRUCTION MANUAL, but rather years of accumulated modification knowledge from across many companies, personal experience, and the internet. It might be helpful for you to buy a Buick 3800sc factory service manual.

NOTE: I do have the pricing recorded of ALL parts purchased for both builds. Also, if you would like to contribute your content to this page or report a broken link, please contact me at <http://facebook.com/fieroaustin> Please consider supporting my by YouTube channel by subscribing here - https://www.youtube.com/channel/UC...A?sub_confirmation=1

Austin
1988 GT 3800SC Series II 3.4" Pulley
Fiero How-To Videos at https://www.youtube.com/channel/UC...A?sub_confirmation=1
Facebook page at <https://www.facebook.com/FieroAustin/>
Build thread - <http://www.fiero.nl/forum/Forum2/HTML/139530.html>

[This message has been edited by AustinH (edited 03-19-2021).]

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PFF
System Bot

fieroall
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From: Great White North
Registered: Feb 2008

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AustinH
Member



Posts: 67
From: USA!!!!
Registered: Jun 2014

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REPORT THIS POST 03-24-2017 12:46 PM

That's a great list of parts however I think it's a bit misleading. Their are many different ways to do the 3800 swap depending on your abilities and finances. Honestly looking over your list I don't think I used a single part from it to do any of my swaps.

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REPORT THIS POST 03-24-2017 12:49 PM

How to pick out parts for your build: 3800 Performance and Specs of historical swaps

All options for your engine swap will come down to cost and effort. This build thread details two specific paths. Use the charts and videos below to decide what power you want out and how much effort and money you are willing to invest into the project.

-----Modification Selection Chart-----

The below chart shows the dyno wheel horsepower numbers AND quarter mile track times from different people's 3800 supercharged build setups found posted across the internet. The chart shows the modifications for each person's setup (camshafts, superchargers, cylinder heads, fuel type, boost, compression, etc.). The top of the chart also lists all available supercharged 3800 camshaft design specs. Generally, red colored cells indicate either bad performance or hard to achieve (expensive or lots of other supporting mods required), This chart shows ALL M90 3800sc build track times that are on various forums that I could find, which are linked.

If you want a spreadsheet file, you can download from here

https://drive.google.com/open?id=1BhWo_-7onmDaVip8EFwo

M90 Cam Specs	Intake Lift @ 1.6 rocker	Exhaust Lift @ 1.6 rocker	ISA	Centerline	RPM Range	1/4 mile Duration	1/8 mile Duration								
Stock	182	191	0.258	0.255	38.5	0.0000	0.0000	0.4128	0.4080	115	111	1000-5500	262	275	
IS1x	210	221	0.321	0.329		0.0000	0.0000	0.5136	0.5264	115	111	2600-6600			
IS2	214	222	0.332	0.338		0.0062	0.0128	0.5312	0.5408	115	111	2800-6800			
IS3	222	228	0.338	0.344		0.0158	0.0224	0.5408	0.5504	115	111	3000-7000			
IS4	238	238	0.375	0.376		0.0750	0.0736	0.6000	0.6016	116	112	3500-7500			
ZEP V5	208	216	0.320	0.317	31.0	0.0000	0.0000	0.5120	0.5072	115			6000	257	265
ZEP X.P	212	224	0.325	0.335	37.0	0.0000	0.0080	0.5200	0.5360	116			6200	263	275
ZEP N.I.C	230	230	0.347	0.347	48.0	0.0000	0.0000	0.5072	0.5072	112			6500	269	275
ZEP X.P.F	214	224	0.354	0.355	38.0	0.0414	0.0080	0.5864	0.5360	116	114		6700	265	275
Comp Xtreme 1	210	230	0.320	0.320	39.0	0.2000	0.0000	0.5120	0.5120	115	113	1000-5500	264	274	
Thrasher Race	222	222	0.354	0.354		0.0414	0.0384	0.5664	0.5664	114					

M90 Cam Times	1/4th	60'	1/8th	Heads	Supercharger	weight	N2O	Pulley	built/trans/posi	IC	EBS
IS1x	12.170	1.750	7.750	1	3		0				
	11.084	1.710	7.153	3	3	3250	1				
IS2	11.831	1.622	7.496	3	3		0				
	11.245	1.658	7.227	3	5	3190	0				
	11.409	1.644	7.271	3	5	0	0				
IS4	11.169	1.557	7.105	4	5	3170	0				
	12.280			4	3		3.40			1	
	11.852				3		2.80				1
ZEP V5	12.017			2	3					1	
	12.400			1	4					0	



-----Differences between 3800 Engines-----

There are many variations of 3800 engines. There are 3 different series, supercharged and non-supercharged (NA). Virtually every engine has a different wiring harness and different parts between years, makes, and models. The ideal donor car or motor to buy is a 1998-2002 Pontiac Grand Prix GTP. If you do not get an engine from a GTP, there are many parts listed below that you will need in addition, just to make it fit in a Fiero.

Read up:

https://en.wikipedia.org/wiki/Buick_V6_engine

NOTE: DO NOT SWAP A SUPERCHARGER ONTO A 3800 NA (Naturally Aspirated) BLOCK UNLESS YOU KNOW EXACTLY WHAT YOU ARE DOING. THE COMPRESSION, PISTONS, AND RINGS ARE DIFFERENT.

-----Transmission Options-----

NOTE: Many transmissions will work with this car. Here are a few common ones that can handle the 3800 power.

http://www.fastfieros.com/t..06_transmissions.htm

4t60e 4 speed auto (comes with 3800s) - will only withstand ~200hp - https://en.wikipedia.org/wiki/4T60-E_transmission

4t65e 4 speed auto (comes with 3800s) - will only withstand ~250hp - https://en.wikipedia.org/wiki/4T60-E_transmission

4t65e-HD 4 speed auto (comes with 3800sc) - will withstand ~300hp, and up to ~400hp with light modifications - already comes on 3800sc cars. EASIEST TO USE - https://en.wikipedia.org/wiki/4T60-E_transmission

Getrag 282 5 speed manual (stock fiero) - will only withstand ~250hp -

https://en.wikipedia.org/wiki/rag_282_transmission

4t80e 4 speed auto - will withstand ~400hp but is big and heavy -

https://en.wikipedia.org/wiki/GM_4T80_transmission

F23 5 speed manual - will allegedly withstand ~500hp - https://en.wikipedia.org/wiki/rag_F23_transmission

F40 6 speed manual - will allegedly withstand ~600hp - https://en.wikipedia.org/wiki/GM_F40_transmission

-----M90 Gen 3 and Gen 5 supercharger specs-----

Relevant M90 Supercharger Design and Performance Information:

<http://www.msperformance.com/specpg2.html>

Here is a quote from Eaton about the performance of an M90 Gen5 supercharger:

The 90-cubic inch Gen V supercharger is very compact. Its housing includes the throttle-body adaptor, crankcase ventilation plumbing, coolant passages, the evaporative emissions purge valve and the rotor drive mechanism. The drive mechanism is sealed and permanently lubricated, obviating the need for oil connections and eliminating a potential source of leaks. Moreover, the Gen V features all-cast components and a larger, low-restriction outlet port. The tuned inlet port is also less restrictive, compared to previous-generation superchargers, allowing a larger (75 millimeter) throttle body. As a result, more air is pumped by the supercharger through the Series III's induction system. The Gen V's rotor is finished with Abraidable Powder Coating (APC) rather than epoxy. APC is a patented material containing graphite that is electrostatically applied to the rotor and baked on. As a result, the rotor requires less clearance within the supercharger housing, resulting in less leakage around its edges, greater airflow at a given operating speed and lower operating temperature. The Gen V's rotor bearings have been enlarged to increase durability and reduce operating noise and vibration.

As a result, the Gen V operates at considerably higher efficiency than its predecessors. At wide open throttle, the Gen V turns at 700 fewer rpm (a 9 percent reduction), draws 13 percent less power from the crankshaft, decreases operating temperature 15 percent and increases volumetric efficiency 9 percent. For the customer, that means a 9 percent increase in horsepower (see product specifications), and best-in-class acceleration times for the Grand Prix.

-----Motivational Previews-----

3800sc ZZP XPZ Cam + headers exhaust idling sound in a ...



Fiero Gt 3800sc XPZ cam with POSI Traction



Austin
1988 GT 3800SC Series II 3.4" Pulley
Fiero How-To Videos at https://www.youtube.com/cha...A?sub_confirmation=1
Facebook page at <https://www.facebook.com/FieroAustin/>
Build thread - <http://www.fiero.nl/forum/Forum2/HTML/139530.html>

[This message has been edited by AustinH (edited 10-13-2021).]

IP: Logged

BMTFIERO

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03-25-2017 10:40 PM

Thanks for your time and contribution to the cause!!

IP: Logged

Spadesluck

Member



Posts: 1893
From: Georgia
Registered: Jul 2016

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03-26-2017 01:04 AM

Everyone's build will vary for sure depending on wants and needs, however for you to go through the trouble and list what worked for you is greatly appreciated. Thank you. It will, at the very least, give people an idea on what to expect and look for.

[This message has been edited by Spadesluck (edited 03-26-2017).]

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AustinH



REPORT THIS POST

11-08-2017 07:15 PM



Posts: 67
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BUILD 1: COMPLETE PARTS LIST FOR A CHEAP AND EASY DIRECT SWAP SERIES II SUPERCHARGED 4T65E-HD TRANS BUILD

NOTE: THIS BUILD 1 LIST IS COMPLETE AND INDEPENDENT OF BUILD 2, BUT BUILD 2 INCLUDES BUILD 1 LIST!

Preface: The output of this engine is expected 280-300 crank horsepower with easy, minor modifications. Those modifications are:

- 3.4" supercharger pulley - for slightly increased air
 - 180 degrees thermostat - for slightly cooler combustion
 - Re-program radiator fan setpoints - for slightly cooler combustion
 - Tune the computer (ECU/PCM)
 - Autolite 104 Spark Plugs (2 heat range colder than stock spark plugs) - for slightly higher knock resistance
- With these modifications, an extra 30-60hp is expected out of the otherwise totally stock series II motor.

This build thread also assumes you optionally delete the following:

- EGR system - requires welding and sealing shut holes in exhaust and lower intake manifold, detailed in Build 2. For non-emissions compliant states. [Requires reprogramming the computer to delete EGR codes and functionality.](#)
- Catalytic Converter and Rear O2 Sensor - For non-emissions compliant states. [Requires programming the computer and deleting emissions codes and functionality.](#)
- EVAP System/Stock Fiero vacuum lines - requires plugging hole with freeze plug and JB weld. Requires reprogramming the computer.
- Stock Fiero intake - requires new intake mounted.
- "coffee can" vacuum accumulator canister for stock cruise control - stock Fiero cruise control allegedly works by hooking the vacuum line directly to the supercharger port, since the 3800 has more vacuum than the stock Fiero engine.
- balance shaft/tensioner spring (build 2 only)

NOTE: The ideal donor car or motor to buy is a 1998-2002 Pontiac Grand Prix GTP. If you do not get an engine from a GTP, there are many parts listed below that you will need in addition, just to make it fit in a Fiero.

There is no need to separate the 4t65e-HD transmission from the engine. If you do, get new flywheel bolts listed below.

Update: The below build worked great (except for custom wiring issues) and took me less than 1 month. I ran a 13.5 second quarter mile without modifying the tune, and a 1.9 second 60' time with street tires. I drove this build for nearly two years and MAN IT WAS FUN! It was an extremely easy direct-swap effort, and I would do it to EVERY Fiero in a heartbeat. The total cost for hard parts was around \$1700; I bought a car with the engine+transmission+axles in it for \$500 and scrapped the body to get back \$125.

THE LIST:

The numbers in (x) are the quantity of parts you need to order. Almost everything can be found at Summit/RockAuto/Autozone/Advanced/Oreillys/ZZPerformance

-----AIR-----

Flexible air duct flex 4" dia, 41inch long (1x):

Spectre 9751 - <https://www.summitracing.com/parts/spe-9751>

Air filter (1x) - this entirely replaces the stock air intake and water separator. Air filter is fastened under fenderwell behind drivers' seat and behind the stock intake:

K&N RF-1040 - <https://www.summitracing.com/parts/knn-rf-1040>

Oil filter (1x):

ACDELCO UPF47R - <https://www.rockauto.com/en/parts/acdelco,UPF47R,oil+filter,5340>

Fuel filter (1x):

WIX 33481 - <https://www.rockauto.com/en...481,fuel+filter,6200>

Supercharger oil (2x):

GM 12345982 - <https://www.amazon.com/GM-P...r-Gear/dp/B00CFH3BZM>

Supercharger Pulley (1x):

Smoothflow 3.4 Polished Finish Pulley System MPS (Modular Pulley System) - optional, also see supercharger belts - DON'T JUST ORDER A BARE PULLEY! ORDER THE PULLEY SYSTEM WITH THE HUB THAT IS PRESSED ON TO THE SUPERCHARGER SHAFT!:

http://www.smoothflowpulleys.com/3800_MPS.html

Supercharger Pulley Puller (1x) - can rent:

<https://zzperformance.com/p...harger-pulley-puller>

Supercharger belt - may have to go up or down a size in 0.5" increments to ensure tight fitment:

3.7" pulley - 66.5", 6 ribs (1x):

Duralast 665k6 - https://www.autozone.com/co...e-belt-665k6/66396_0

3.4" pulley - 66", 6 ribs (1x):

Duralast 660k6 - https://www.autozone.com/ig...-660k6/315419_0_8239

-----FUEL-----

Note: The fuel fittings in this section do not represent any fittings in the custom fuel rail diagram posted below TBD. These are bolt-on for an easy, direct swap.

Push-Lok Fuel Hose (1x) - heat this up in a pot of hot water before pushing the below barb fitting on. Cut into 2 appropriate length sections for both supply and return fuel hoses.

Fragola 871006 (10ft) - <https://www.summitracing.com/parts/fra-871006>

-6 AN to barb Push-Lok hose adapter (4x):

Fragola 200106-BL - <https://www.summitracing.com/parts/fra-200106>

Stock fuel rail hose release tools (1x) - These are a pain to use, see this video - <https://youtu.be/uVIHx1veJN8?t=33>:

Advance Auto Parts W83148 - <https://shop.advanceautopar...-8-w83148/11962912-p>

Stock Fiero Fuel Supply Hose M16 x 1.5 Adapter to -6 AN (1x):

EAR-991955ERL - <https://www.summitracing.com/parts/ear-991955erl>

Stock Fiero Fuel Return Hose M14 x 1.5 Adapter to -6 AN (1x):

EAR-991954ERL - <https://www.summitracing.com/parts/ear-991954erl>

Stock 3800sc Fuel Rail 3/8" Supply Line To above -6AN Push-Lok adapter (1x):

Vibrant 16886 - <https://www.summitracing.com/parts/vpe-16886>

(replaced in 2nd build below with custom fuel rail parts)

Stock 3800sc Fuel Rail 5/16" Return Line To above -6AN Push-Lok adapter (1x):

Vibrant 16885 - <https://www.summitracing.com/parts/vpe-16885>

(replaced in 2nd build below with custom fuel rail parts)

Thread sealant for Metric Fiero return/supply to -6AN adapters above (1x):

Permatex Form-A-Gasket No. 2 80016 - <https://www.summitracing.com/parts/ptx-80016>

Fuel pump:

Quantum Fuel Systems 255LPM Fuel Pump HFP-343 (1x) - quieter, cheaper, claimed higher quality than walbro 255 - BE CAREFUL WITH THIS PUMP. THE INLET IS TOO CLOSE TO THE BOTTOM OF THE FUEL TANK AND WILL SUCK AGAINST THE TANK, NOT ALLOWING FOR FUEL FLOW AT HIGH FUEL DEMANDS. I TRIMMED THE BOTTOM LIP OFF OF THIS FUEL PUMP TO GIVE MORE CLEARANCE FOR DRAWING FUEL FROM THE BOTTOM OF THE TANK, WHILE STILL ALLOWING ROOM FOR THE SCREEN TO FIT - REMOVE SCREEN BEFORE TRIMMING. - <https://www.highflowfuel.co...8-2-5l-tbi-2-8l.html>

-----SPARK-----

Spark Plugs - two ranges colder than stock Autolite 606 plugs, gap to .050" or less (6x):

Autolite 104 spark plugs - <https://www.summitracing.com/parts/atl-104>

Spark Plug Gap Tool (1x)

Advance Auto W80540 - <https://shop.advanceautopar...ge-w80540/10075900-p>

Spark Plug Wire Kit (1x) - you need a vice and a spark plug crimper below:

Taylor Cable 83253 (45 degree boots) - <https://www.summitracing.com/parts/tay-83253>

Spark plug wire crimper to use with bench vise (1x):

Accel 170040 - <https://shop.advanceautopar...mm-170040/10717178-P>

-----EXHAUST (Upgraded Entirely in Build 2)-----

NOTE: This exhaust system mates to the stock exhaust headers, which can support up to 300hp. You will have to custom-weld your exhaust. There is no bolt-on exhaust for an engine swap (does someone want to start making these?). See pictures of exhaust for this setup in the Assembly Diagrams section. Final fitment can vary between year models of Fieros, engine mount setups, etc. Best advised to go to an exhaust shop and get one welded up after the engine is in the car.

Muffler (1x)

3" right in, 2 2.5" right + left out: - you will have to weld a bend in your own exhaust.

Flowtech 50363FLT - <https://www.summitracing.com/parts/big-50363flt>

Exhaust pipes - The best types are mandrel bent stainless steel, but those can be hard to find and expensive. For a lower cost option, go to an auto parts store and pick up the below pipes:

90° bend 3" diameter (1x)

180° bend 3" diameter (1x) - must be VERY TIGHT bend radius, likely needed custom weld job

90° bend 2.5" diameter (2x) - <https://www.summitracing.com/parts/sum-622118>

Straight 2.5" diameter, 1 ft (1x)

2.5" diameter Exhaust Tips (2x) - Re-used stock Fiero exhaust tips

2.5" diameter generic exhaust hanger U-bolts (2x) - use the stock Fiero rubber exhaust hangers to hang these from.

-----COOLANT AND HOSES-----

Heater Hose (1x) - for 87-88 Fieros, may work for other applications but will need longer hoses. Goes with 5/8" barb, you'll have to fabricate and mount a retaining bracket detailed in LostNotForgotton's videos below:

Dayco C87641 - 7/8" 3800sc heater hose elbow, can squeeze on to 5/8" stock Fiero heater hose line -

https://www.autozone.com/co...se-c87641/315787_0_0

Barb For above heater hose to stock Fiero heater hose, 5/8-5/8" (1x):

<https://www.homedepot.com/p...ing-800089/300096112>

Aluminum Heater Hose Elbow (1x):

Dorman 47065HP - <https://zzperformance.com/p...minum-coolant-elbows>

Thermostat housing to drivers' side coolant tube (1x) - cut a few inches off the small end:
Dayco E71082 - 1.25" to 1.25" 3800sc thermostat housing to fiero - https://www.autozone.com/ig...2/886135_16004_10495

Water-pump to Passengers' coolant tube (1x) - cut a few inches off the small end:
Dayco E71030 - 1.25" fiero to 1.5" 3800sc water pump hose - https://www.autozone.com/co...hose-e71030/886077_0

Radiator filler neck 1.25" inlet and 1.25" outlet (1x):
Moroso 63745 - <https://www.summitracing.com/parts/mor-63745>

Radiator cap (1x):
Stant Products 10203 - <https://www.summitracing.com/parts/snn-10203>

1" frost plug for plugging water pump hole (1x):
Dorman 570-005 - <https://www.oreillyauto.com...-plug/570005/4180960>

180° Thermostat (1x - drill small hole in the outside plate):
Duralast 15848 - https://www.autozone.com/co...ostat-15848/615480_0

Coolant/Antifreeze (14qt) - you can really use whatever you want, as long as you don't mix two colors and flush the system properly:
PRESTONE AF3000 (AF3000/F) universal antifreeze - <https://www.amazon.ca/Prest...freeze/dp/B000KKNBVU>

Optional: 3/4" to 3/4" barb ball valve shutoff (1x) - for shutting off coolant into the heater circuit in the summer:
<https://www.walmart.com/ipl...selectedSellerId=282>

-----SENSORS/HARNESS/COMPUTER (ECU/PCM)-----

NOTE: See Harness section for more detailed instructions, diagrams, and parts.

3-pin Oil pressure sender (1x) - comes from a 1988 Fiero V6:
AIRTEX/WELLS 1S6635 - <https://www.rockauto.com/en...sender+/+switch,4588>

3-pin Oil pressure sender connector (1x) - if building your own harness:
STANDARD MOTOR PRODUCTS HP4480 - <https://www.rockauto.com/en...witch+connector,2603>

2-Bar MAP sensor (1x) - if you bought a 3800 NA block or harness:
ACDELCO 2131520 - [https://www.rockauto.com/en...e+\(map\)+sensor,11207](https://www.rockauto.com/en...e+(map)+sensor,11207)

In-line fuse holders (2x) - if building your own harness:
Oreilly Auto FHA1BP - <https://www.oreillyauto.com...8/pontiac c/grand-prix>

Computer (ECU/PCM) (1x):
If you don't have one, get at junkyard for \$25 from ideally a 1998-2002 Grand Prix GTP. - [Junkyard Search](#)

Harness from the donor car (1x):
Again best harnesses and engines are from a 1998 Pontiac grand prix GTP.

Harness from the Fiero (1x)

Fuel pump relay (1x) - if building your own harness
-Can use stock Fiero relay or any modern generic car relay that you pull out of the fuse box from the donor car.

-----4t65e-HD TRANSMISSION-----

Trans line fitting (2x) - 5/8"-18 INVERTED FLARE TO UNF -6AN:
SUM-220667B - <https://www.summitracing.com/parts/sum-220667>

Trans line elbow (2x) - -6AN to 3/8" 90 deg barb to mate with above fitting :
209006-BL - <https://www.summitracing.com/parts/fra-209006-bl>

Transmission Hose to Fiero Hose (1x) - Replaces steel transmission lines:
Derale 13016 - <https://www.summitracing.com/parts/der-13016>

Transmission oil filter (1x):
ACDELCO TF304 - <https://www.rockauto.com/en...utomatic,filter,8600>

Transmission Oil Pan Gasket (1x) - if above filter does not come with one - AVOID CORK GASKETS!
ACDELCO 24206182
Or
ACDELCO 24204624
<https://www.rockauto.com/en...oil+pan+gasket,8612>

Flywheel Bolts (8x) - ONLY NECESSARY if you take off the automatic flywheel. NOT NEEDED if you have a manual transmission. These bolts YIELD and need to be replaced if you take off the flywheel. However if you do install a manual transmission, you will need different flex plate bolts listed in the Mounting and Brackets section.:
GM # 24501365 - <https://www.gmpartsdirect.c...s/gm-s-bolt-24501365>

Transmission Fluid:
7.4 quarts (maintenance) or 10 quarts (total drain) Dexron III Transmission fluid
<https://www.rockauto.com/en...smission+fluid,11387>

-----ACCESSORIES/AC/OTHER/MISC-----

Accessory Belt Tensioner Pulley from a Ford, if using FieroRog's engine mount brackets - (1x):
DAYCO 305217 - <https://www.rockauto.com/en...belt+tensioner,11659>

Supercharger Tensioner Pulley - comes on a 3800sc unless coil pack bracket is missing:
GATES 38365 - <https://www.rockauto.com/en/parts/gates,38365,belt+tensioner,11659>

Accessory Belt - 81.5", 6 ribs (1x):
Gates K060815 - <https://www.rockauto.com/en...es,K060815,belt,8900>

Oil, conventional preferred (4.5 quarts):
5W30

Magnetic Oil Drain Plug (1x):
Dorman 090091 (65372) - <https://www.rockauto.com/en/parts/dorman,65372,>

AC/DRYER if doing A/C (1x):
Four Seasons 33181 -
<https://www.rockauto.com/en/parts/four+seasons,33181,a/c+receiver+drier+/+accumulator,6972>

Custom A/C hose made by a radiator shop (1x) - I had a radiator shop make one. You need an R12 style port for the AC Pressure sensor. I cut one off of a 2001 Pontiac Bonneville AC hose and had it braised onto the Fiero side. I also used the 2001 GTP compressor side AC hose fitting for the compressor that came with the GTP. Beware, there were at least 2 types of compressors/AC hoses on 3800 engines. LostNotForgotton has a video, and people on Facebook fiero pages make the hoses. See LostNotForgotton's video - <https://youtu.be/ZyPZkCPJzNk?t=530>

If you do want to utilize the AC system, you will need to charge it with R134a or newer refrigerant. The Fiero did not come equipped with this, so you will need to swap all your AC System O-Rings with Hydrogenated Nitrile (HNBR, sizes unknown), and your orifice tube (1x):
<https://www.rockauto.com/en.../c+orifice+tube,6936>

Knock Sensor (2x) - a good idea to replace these, especially if they wiggle:
STANDARD MOTOR PRODUCTS KS45 - <https://www.rockauto.com/en...tonation+sensor,5108>

Longer battery ground cable from Advance Auto (1x):
<https://shop.advanceautopar...k-ac129hs/11142544-P>

ALTERNATOR - You need a year 2000+ alternator for any 3800 car. Below is from a Bonneville.
<https://www.rockauto.com/en...tor+/+generator,2412>

Lots and lots of hose clamps of all sizes!!!

Some sort of engine hoist, two jacks, and two jack stands for engine removal and installation...

-----MOUNTING AND BRACKETS-----

I use FieroRog brackets. Order them from Roger here <http://www.fiero.nl/cgi-bin...orum=4&thread=068855>
-engine mount
-4t65e-HD automatic transmission mounts (2x) - see below if you are using a Fiero manual transmission
-alternator relocation bracket
-dogbone engine mount bracket
-bolts

Manual Transmission Brackets:
If using a manual Fiero transmission, get these from FieroRog:
-Custom Flexplate (1x)
-Flexplate bolts (8x) - GM 24505092 (call Roger to verify)
-manual transmission mounts (2x) - instead of automatic transmission mounts above
-Clutch bolts - GM 24571667

Fiero engine and transmission mounts to frame - I would highly recommend NOT re-using the stock Fiero engine and transmission mounts.

New Fiero Transmission Mounts - bolts to FieroRog's 3800 brackets (1x) - http://rodneydickman.com/pr...o.php?products_id=35

New Fiero Engine Cradle Mount - bolts to FieroRog's 3800 brackets (1x) - http://rodneydickman.com/pr...o.php?products_id=73

New Fiero Engine Dogbone Mount - bolts to FieroRog's 3800 bracket (1x) - http://rodneydickman.com/pr...o.php?products_id=72

West Coast Fiero shifter bracket:
NOTE: It is not difficult to construct your own. Some manage to simply unbolt the shifter arm and bolt it on in the reverse direction with other minor modification. Some choose to reverse the linkage action on the fiero side shift lever itself.
<http://westcoastfiero.com/p...ion-shifter-adapterx>

Throttle cable mounting to a 3800 Series II motor - see <http://www.gmtuners.com/swap/3800.htm>

-----AXLES-----

Want to buy axles? Stephen Poe will make axles for you. You must supply him the following information:
-Your Transmission Type
-Your Engine Type

-Your Engine type
-Your Fiero Type (make/model)
-Your engine mount/transmission mount type
-Measurements from both transmission output shaft surfaces to the inside surfaces of the Fiero hubs with no axles installed, with wheels on ground.
Contact him here: <https://www.facebook.com/stephen.poe.5011>

Building axles yourself? See LostNotForgotton's axle building video posted below. THESE AXLES REQUIRE YOU USE THE FieroRog/Rodney Dickman ENGINE AND TRANSMISSION MOUNTS LISTED IN THIS BUILD THREAD AND IN LostNotForgotton's VIDEO. FINAL FITMENT CAN VARY. If you do not have a GTP, go get a 1998 GTP passenger's and drivers' side axle from a junkyard. Below are the parts required for building axles.

3800 Fiero driver's side axle (1x):
Use a Stock automatic Fiero driver's side axle

3800 Fiero passenger's side axle (1x):
Drivers & Passenger GTP axle + any manual Fiero axle - see how-to video https://www.youtube.com/watch?v=D_VKktIEaTE

Axle Boot Inner with grease (1x):
Oreilly Auto Parts 614-004
<https://www.oreillyauto.com...t-kit/614004/4251654>

Generic Axle CV Boot Clamps
https://www.amazon.com/gp/p...07_s00?ie=UTF8&psc=1

Axle CV boot clamp tool
https://www.amazon.com/gp/p...09_s00?ie=UTF8&psc=1
Or
<https://www.oreillyauto.com...liers/w83013/4614564>

-----PARTS NEEDED IF YOU DO NOT BUY A PONTIAC GRAND PRIX GTP DONOR CAR-----

NOTE: Some of these parts can be found at junkyards.

GTP External Transmission Range Gear Selector Neutral Safety Switch / Range Sensor Switch (1x):
<https://www.rockauto.com/en...+/+range+sensor,4584>

GTP Range Sensor Switch Connector for above:
<https://www.rockauto.com/en...ensor+connector,2602>

GTP/Regal Steel Oil Pan (1x):
ULTRA-POWER 264124 {#12512670, 12563240} - <https://www.rockauto.com/en...,engine,oil+pan,5562>

GTP Oil Pan Gasket (1x) (needs cutting to fit over non-GTP oil pickup tube; Depending on your car, you can get either get a GTP oil pickup tube or get a non-GTP oil pan gasket to avoid cutting):
ACDELCO 12587964 - <https://www.rockauto.com/en...,oil+pan+gasket,5436>

Oil Filter Housing Gasket (1x):
ACDELCO 25534742 - <https://www.rockauto.com/en...adapter+gasket,10649>

GTP/Regal oil filter bracket (1x):
GM 12569219 ; 24508441 - More info at <http://www.gmtuners.com/swap/3800.htm>

GTP/Regal angled coil pack bracket (1x) - cut engine mount dogbone off, shown in videos posted below. Get at junkyard including the GTP Tensioner pulley on coil pack bracket:
GM 24507211 ; 24504360 - <https://www.gmpartsbin.com/...?partner=googlebase>

GTP or Oldsmobile Torque Converter (1x):
DACCO B21JXFM - <https://www.rockauto.com/en...orque+converter,8668>

3-pin Temperature sender & wire (1x):
Duralast TU178DG - https://www.autozone.com/en...178dg/625841_71058_0

Austin
1988 GT 3800SC Series II 3.4" Pulley
Fiero How-To Videos at https://www.youtube.com/cha...A?sub_confirmation=1
Facebook page at <https://www.facebook.com/FieroAustin/>
Build thread - <http://www.fiero.nl/forum/Forum2/HTML/139530.html>

[This message has been edited by AustinH (edited 06-02-2021).]

IP: Logged

bulldog85043
Member

Posts: 403
From: Phoenix, AZ USA
Registered: Jan 2009

[Rate this member](#)



REPORT THIS POST

11-12-2017 05:05 PM

I have my engine (3800 SC) out of a 2002 Grand Prix 40th Ann. so I'll be watching VERY close for those vids...

[This message has been edited by bulldog85043 (edited 11-12-2017).]

IP: Logged



BUILD 2: Complete Parts List for an all-out Series III Supercharged 4T65E-HD build, excluding bottom end (connecting rods/pistons/crank), IN ADDITION TO BUILD 1

Preface: This build is expected 400+ wheel horsepower if you run E85 and a good tune, non-intercooled. **THIS BUILD IS IN ADDITION TO BUILD 1, MEANING YOU MUST ORDER ALL OF BUILD 1 PARTS TOO, UNLESS SPECIFICALLY MARKED OTHERWISE**

. This list assumes you buy a Series II engine and convert to a Series III supercharger. It would be easier to buy a Series III to begin with. The bottom end is not modified for this build. This build requires modifying the cylinder heads for the increased lift, by cutting down valve guides by .060". More information in the Assembly videos section.

NOTE: THIS BUILD IS TO MAXIMIZE THE POWER OF YOUR 3800 AT A HIGH RPM WITH THE ZZP XPZ CAMSHAFT. IF YOU WANT MORE COMFORTABLE A DAILY DRIVER, CONSIDER DOING YOUR OWN RESEARCH INTO A LOWER RPM CAMSHAFT/VALVETRAIN/TIMING CHAIN/BALANCE SHAFT REMOVAL SETUP. TRY A ZZP VS CAMSHAFT FOR MILD PERFORMANCE GAINS WITH MINIMAL EFFORT THAT ALSO RETAINS DRIVE-ABILITY.

THE LIST:

The numbers in (x) are the quantity of parts you need to order. Almost everything can be found at Summit/RockAuto/Autozone/Advanced/Oreillys/ZZPerformance

-----Air-----

Series III/GENV Supercharger (1x):

Get at junkyard or private seller from a 2004+ Pontiac Grand Prix GTP or flat out buy a Series III engine - upgrading from Series II / Gen 3 -

<https://www.car-part.com/cg...serIntSelect=1145748>

Series III/GENV Intake Manifold (1x) - upgrading from Series II / Gen 3:

ACDELCO 12603871 - <https://zzperformance.com/p...en-5-intake-manifold>

Series III/GENV Supercharger Aluminum Lower Intake Manifold Gasket Set (1x) - upgrading from Series II / Gen 3:

FEL-PRO MS96847 - <https://www.rockauto.com/en...+plenum+gasket,10394>

Year 2000+ Cadillac DeVille/Seville throttle body (1x) - upgrading from Series II / Gen 3 :

Get at junkyard - <https://www.car-part.com/cg...userIntSelect=679348>

JBweld and 3 dimes (2 must be ground down with a file to fit) for sealing throttle body coolant holes and EGR delete (1x):

<https://www.amazon.com/J-B-...forced/dp/B000601ICE>

LQ4 MAF from a 6.0L Silverado 1500 (1x):

<https://www.rockauto.com/en...air+flow+sensor,5128>

Northstar Throttle Body Adapter Plate (1x) -available on eBay for cheaper. They sell a whole kit including MAF and TB too:

ZZP ZZ-NSAP - <https://zzperformance.com/p...thstar-adapter-plate>

Gasket Maker (1x):

Permatex Ultra Black RTV Gasket Maker 82180 - <https://shop.advanceautopar...2180-82150/7160059-P>

Intake Manifold Gasket Set (1x):

ACDelco 89017825 - <https://www.rockauto.com/en...manifold+gasket,5424>

Valve cover seals (2x):

MAHLE VS50332 - <https://www.rockauto.com/en...e+cover+gasket,10710>

Supercharger Bolts for upgrading from Series II / Gen 3 to a Series III / Gen 5 (1x of each):

Re-use all GENIII Supercharger bolts, but in addition:

1x M8x1.25x120mm bolt

1x M8x1.25x140mm bolt

Can get from Menards.

See supercharger upgrade instructions in Assembly Diagrams section

2.8" Supercharger Pulley (1x) - modular pulley system also needed from Build 1. NOTE: If you go below 2.8", it is required to machine down the supercharger snout. INTENSE Racing suggests this is pointless, as smaller pulleys beyond this point make exponentially increased temperature compressed air:

SmoothFlow Pulleys - http://www.smoothflowpulleys.com/3800_MPS.html

One 1/2" freeze plug (1x) - use with JB Weld for EVAP Delete:

Advance Auto Parts

<https://shop.advanceautopar...s-557-001/22140398-P>

Throttle Body Adapter Cables for Northstar Throttle Body to LQ4 MAF (1x):

ZZP ZZ-MAFADP-SIII-LQ4 - <https://zzperformance.com/p...dapter-with-iat-plug>

Optional ZZP 1" Phenolic Spacer for gen 5 supercharger (1x) - NOT COMPATIBLE WITH INTERCOOLER, instead opt for 1/4" if you intercool:

ZZ-M90HNSPC-G5-1 - <https://zzperformance.com/p.../m90-phenolic-spacer>

Cable stop end for throttle/cruise cable (1x):
Dorman 03336 - <https://www.oreillyauto.com...rtment/03336/4526846>

Northstar Throttle Cable Bracket Adapter (1x):
ZZ-NSCB - <https://zzperformance.com/p...rottle-cable-bracket>

-----Fuel-----

Optional: Alternative recommended fuel rails instead of custom (1x):
Aeromotive 14131 - <https://www.summitracing.com/parts/aei-14131>

Optional: You can get a custom fuel rail made by people on Facebook.
<https://www.facebook.com/gr...37910286395192&rt=11>

Injectors (6x) - DO NOT BUY ON EBAY - THEY'RE FAKES. You can tell by the DEKA words on the injection molding; fakes do not have DEKA on them. Series III harnesses came with EV6 connectors and Series II harnesses came with EV1 connectors. Your harness provider should be able to put whichever connector on. If you end up with the wrong ones, it is possible to get an adapter.

Siemens DEKA EV1 80# Injectors
Intense FIS-840-x - <http://intense-racing.com/PROD/FIS-840-x.html>
or ZZP 110324-6 - <https://zzperformance.com/p...-deka-80-injectors-6>

Fuel Pressure Regulator and gauge (1x) - for custom fuel rail setup:
Tanks, Inc. AFPR1 - <https://www.summitracing.com/parts/tnk-afpr1>

optional:

I had a friend who is a machinist make these. These need to be drilled for injector holes and tapped for fittings on either end. Injector holes must be milled at an angle, and have 2 sizes.:

<https://www.rossmachineracing.com/dash6.html>

The fittings I used are the -6 AN to ORB (O-ring Boss, threaded in to the fuel rails).

-----Spark-----

Spark Plugs (6x) - Autolite Racing Plugs; last longer and burn better (according to marketing). Have a back cut electrode. They are 3 ranges cooler than stock plugs (Autolite 606). Gap to .035" to .045".

Autolite AR103 - <http://intense-racing.com/PROD/ARP-xxx.html> REPLACES SPARK PLUGS BUILD 1

-----Exhaust(ENTIRELY REPLACES BUILD 1 EXHAUST)

NOTE: This exhaust setup is pictured in the Assembly Diagrams section below.

90 Degree Mandrel Bent Stainless Steel Exhaust Bends (2x):
SUM-622118 - <https://www.summitracing.com/parts/sum-622118>

Muffler (1x) - REQUIRES CUTTING OUT BOTTOM SECTION OF TRUNK TO FIT!:
VPE-10632 - <https://www.summitracing.com/parts/vpe-10632>

Stainless Chinese exhaust headers for a Pontiac Grand Prix GTP (1x) - on eBay search "GTP Exhaust" - REQUIRES CUTTING BOTTOM SECTION OF TRUNK TO FIT! Also, Since the Grand Prix GTP headers will likely not fit out of the box, the cross-over pipe will require cutting and re-welding, and the EGR will require welding shut.
https://www.ebay.com/sch/i...gtp+exhaust&_sacat=0

Exhaust wrap (1x) - exhaust wrapping the Chinese headers sucks but is a MUST, the exhaust headers get extremely hot, especially in the tight Fiero engine bay. Wear gloves when wrapping and watch the how-to video at

<https://www.youtube.com/watch?v=LWHHMTVHv7w>

Design Engineering 010130 (2" by 100' roll) - <https://www.summitracing.com/parts/dei-010130>

Stainless Tie bands for exhaust wrap (50x):
https://www.amazon.com/gp/p...02_s00?ie=UTF8&psc=1

2" exhaust clamp (2x):
https://www.amazon.com/gp/p...06_s00?ie=UTF8&psc=1

3" v-band flange and clamp (1x) - https://www.amazon.com/gp/p...06_s00?ie=UTF8&psc=1

Generic Exhaust Hanger (2x):
https://www.napaonline.com/en/p/BK_7321015

Exhaust Tips (2x):
Re-used stock Fiero exhaust tips.

-----Cylinder Heads/Valvetrain/Pushrods/Lifters-----

Re-using stock valves and porting GENIII heads. Stock Series III valves (1.83") are .030" larger than stock Series II valves (1.80").

Cylinder Head Modification: Machining off .060" off of valve guides, valve job, gasket match intake runners, widened exhaust runners (maintain D shape). Head surface was decked. Performed at machine shop. See below how to videos on custom porting heads.

Head Gasket (1x right and left side) - My cylinders measure out of hole ~0.025". You want .038"-.046" of quench

according to INTENSE, so I am going .040" quench + .025" stock = 0.65" thick gasket.
NOTE: The arrow and the "L," or Left-Hand Side (LHS) gasket goes on the cylinder 1/3/5 side of the engine. If you look at the rear cover, it goes on the left hand side.
INTENSE HGP-0xx - <http://www.intense-racing.com/PROD/HGP-0xx.html>

Rockers Arms (12x) - light 1.65 rockers with re-usable rocker bolts (yields):
ZZP ZZ-165RA - <https://zzperformance.com/p...zzp-1-65-rocker-arms>

Valve Springs (12x) - 130# @ .050" installed height valve springs, .600" lift max
PAC 1218 - comes with 16 - <https://www.summitracing.com/parts/rsc-pac-1218-16>

Valve Spring Retainers and locks (12x) - They allow for ~0.005" more valve guide to retainer clearance!
Use LS1 Spring retainers reused from another engine - <https://zzperformance.com/p...lve-spring-retainers>
Or
<https://www.rockauto.com/en...pring+retainer,10022>

Intake Valve Stem Seals (6x):
MAHLE SS45910 - <https://www.rockauto.com/en...valve+stem+seal,5800>

Exhaust Valve Stem Seals (6x):
MAHLE MAHLE SS45911 - <https://www.rockauto.com/en...valve+stem+seal,5800>

LS7 Hydraulic Roller Lifters (12x):
INTENSE Racing GMH-VVL - <http://www.intense-racing.com/PROD/GMH-VVL.html>

Head Studs (1x) - factory head bolts YIELD and need replaced:
APR 193-4001 - <https://arp-bolts.com/kits/...ail.php?RecordID=727>
Instructions for installing ARP Head Studs - <https://tech.arp-bolts.com/...uctions/193-4001.pdf>

TEFLON TAPE HEAD BOLT THREAD SEALANT (1x) - DO NOT USE ARP THREAD SEALANT!
Advance Auto AC561 - <https://shop.advanceautopar...-600-ac561/5014298-P>

ARP 7/16"-14 Thread Chaser (1x) - do NOT use a tap:
ARP 911-0004 - <https://www.summitracing.com/parts/arp-911-0004>

High Strength Threadlocker for Rocker Bolts and Lifter Retainers (1x):
Loctite 272 - <https://shop.advanceautopar...red-37480/16160014-p>

ZZP Pushrod length Checker (1x):
ZZP ZZ-PRDLCKR-3800 - <https://zzperformance.com/p...shrod-length-checker>

Ignore this: Intake Pushrod (stock size 7.029") - MELLING MPR605 (MPR-605) - MEASURE YOURS! YOURS WILL BE DIFFERENT DEPENDING ON CAM, DECKING, VALVES, VALVE RETAINERS AND HEAD GASKET SETUP!
Detailed in video section.

Ignore this: Exhaust Pushrod - 7.00" - ZZ-CUSPRD-7.00-5/16-12 - MEASURE YOURS! YOURS WILL BE DEFERNT DEPENDING ON CAM, DECKING, VALVES, VALVE RETAINERS, AND HEAD GASKET SETUP! Detailed in video section.

-----Camshaft, timing chain, and balance shaft removal-----

ZZP XPZ Camshaft (1x):
XPZ-1 - <https://zzperformance.com/p...ts/supercharged-cams>

Camshaft Assembly Lube (1x):
GM 12345501 - <https://www.summitracing.com/parts/nal-12345501>

Aluminum Water Pump Gasket (1x):
Fel-Pro 35804 - <https://www.rockauto.com/en...ter+pump+gasket,2148>

Double Roller Rollmaster Timing Chain Set (1x) - Needed for 130# valve springs:
ZZP CS6150 - <https://zzperformance.com/p...ollmaster-timing-set>

Machined oil pump cover (1x) - required for rollmaster double timing chain clearance - I surface grinded the non-oil pump side of the cover down by grinding off .023", or buy ZZP's:
ZZP # ZZ-OILPCVR - <https://zzperformance.com/p...hined-oil-pump-cover>

Extra thick front cover gasket (1x) - needed for double roller timing chain:
ZZP ZZ-FCGG - <https://zzperformance.com/p...k-front-cover-gasket>

Camshaft Bolt (1x) - yields:
INTENSE GMH-BCM - http://intense-racing.com/M...Product_Code=GMH-BCM

Crankshaft Bolt (1x) - yields:
INTENSE GMH-BCR - <http://intense-racing.com/PROD/GMH-BCR.html>

Balance shaft delete 440 camshaft bearing (1x) - POUND THIS IN TO BLOCK OIL PASSAGE, WITH OILING HOLES ON OPPOSITE SIDES SO ITS PLUGGED
ENGINETECH CC476 - <https://www.rockauto.com/en...amshaft+bearing,5208>

Crankshaft Seal (1x) - REAR:

ACDELCO 12582320 - <https://www.rockauto.com/en...crankshaft+seal,5604>

Crankshaft Seal (1x) - FRONT:

ACDELCO 12582313 - <https://www.rockauto.com/en...crankshaft+seal,5604>

Engine Break-In Additive Oil (2x):

Comp Cams 159 - <https://www.summitracing.com/parts/ccca-159>

Camshaft Bearings:

NOTE: It is very difficult to replace camshaft bearings without completely disassembling the bottom-end.

MAHLE / CLEVITE SH1812S - <https://www.rockauto.com/en...amshaft+bearing,5208>

-----4t65e Transmission-----

NOTE: I had a professional disassemble my transmission and install the below parts. This is a very complicated process and can be very easy to mess up.

Hardened Input Shaft (1x) - needs GM J-tool and complicated disassembly to be installed properly, must take off valve body to access and replace gaskets. This shaft is to support over 350 whp:

ZZP 4340 - <https://zzperformance.com/products/input-shafts>

Chrome Moly Pump Shaft (1x) - needs same install as above. This shaft is to support over 350 whp.:

ZZP ZZ-CMPS-4T65E - <https://zzperformance.com/p...rome-moly-pump-shaft>

Hardened 4th Clutch Shaft (1x) - must take off chain to access, to support over 350whp.:

ZZ-HRD4CLSH - <https://zzperformance.com/p...ned-4th-clutch-shaft>

Gasket and Seals Kit for above assembly (1x):

PIONEER 750240 - <https://www.rockauto.com/en...240,rebuild+kit,8512>

Flywheel Bolts (8x) - yields - **Duplicated in Build 1:**

GM # 24501365 - <https://www.gmpartsdirect.c...s/gm-s-bolt-24501365>

Torque Converter (1x) - **Duplicated in Build 1:**

DAACO B21JXFM - <https://www.rockauto.com/en...orque+converter,8668>

Engineered Performance Positraction Differential (1x) - There are a few options out there for differentials. This one is affordable and does the trick.

<http://www.engineered.net/eplsd.htm>

Optional: 3.29 Gear Set, 7/8" chain and sprockets (1x)

ZZ-GRCK-3.29 - <https://zzperformance.com/p...ratio-conversion-kit>

Austin

1988 GT 3800SC Series II 3.4" Pulley

Fiero How-To Videos at https://www.youtube.com/cha...A?sub_confirmation=1

Facebook page at <https://www.facebook.com/FieroAustin/>

Build thread - <http://www.fiero.nl/forum/Forum2/HTML/139530.html>

[This message has been edited by AustinH (edited 06-02-2021).]

IP: Logged

VanGTP5000

Member

Posts: 669

From: Sunny South Florida, USA

Registered: Feb 2017

[Rate this member](#)



REPORT THIS POST

11-20-2017 01:53 PM

quote

Originally posted by AustinH:

Well I am tearing down my 2nd 3800sc engine for a rebuild now and doing a how-to about it.

I decided to launch a Facebook page, as Facebook seems to have replaced some Forums as a modern source of information in many ways. You can find it here:

<https://www.facebook.com/pg/FieroAustinH/>

3800sc 400whp Fiero Rebuild Part 1/4 - Lon...



Great job on the video Austin...I enjoyed watching it. I am sure it will be very helpful to many!!!

-Van

IP: Logged

AustinH
Member



Posts: 67
From: USA!!!!
Registered: Jun 2014

[Rate this member](#)

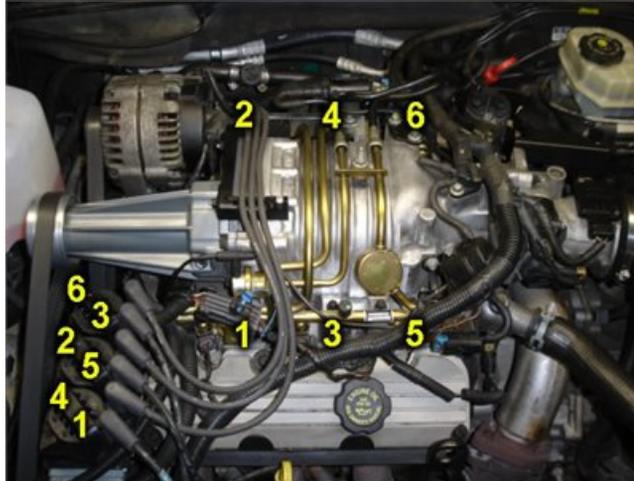


REPORT THIS POST

12-24-2017 12:03 PM

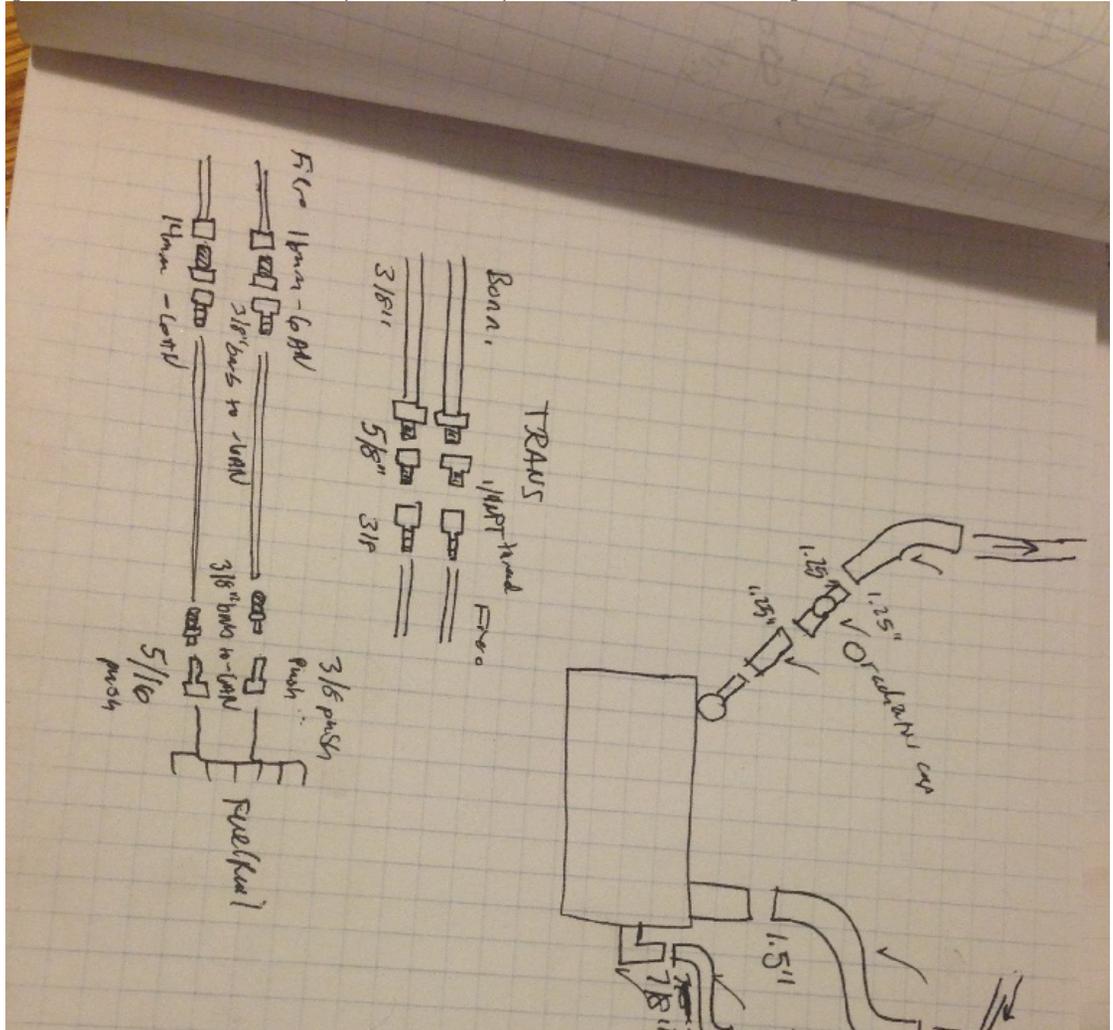
3800sc Assembly Diagrams and Torque Specs

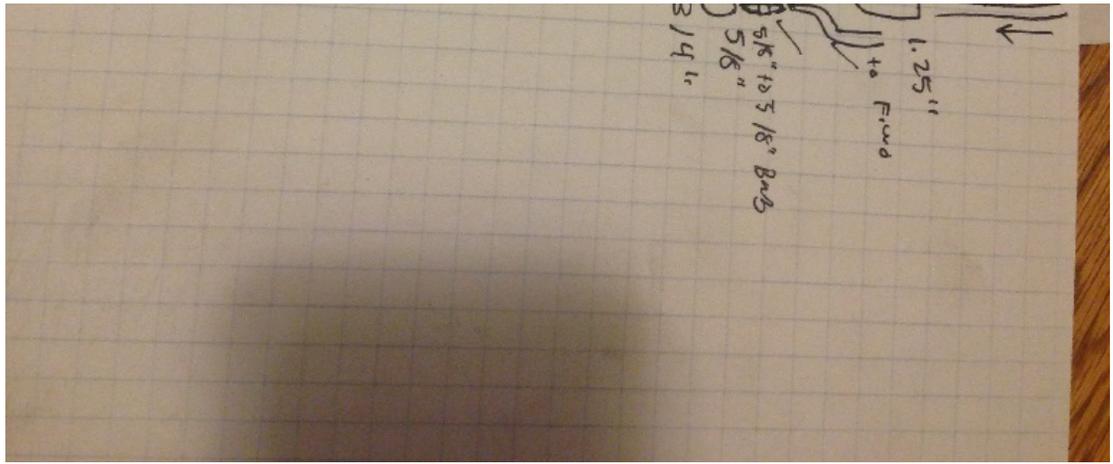
-----FIRING ORDER-----



-----COOLANT AND FUEL LINES-----

Ignore transmission lines here, I simplified them with parts in the build lists. New diagrams in transmission section.





-----SUPERCHARGER, CONNECTIONS, AND ROUTINGS-----

Excellent Gen 3 to Gen 5 Supercharger Upgrade Guide:

<http://www.grandprixforums...en-five-gen-5-a.html>

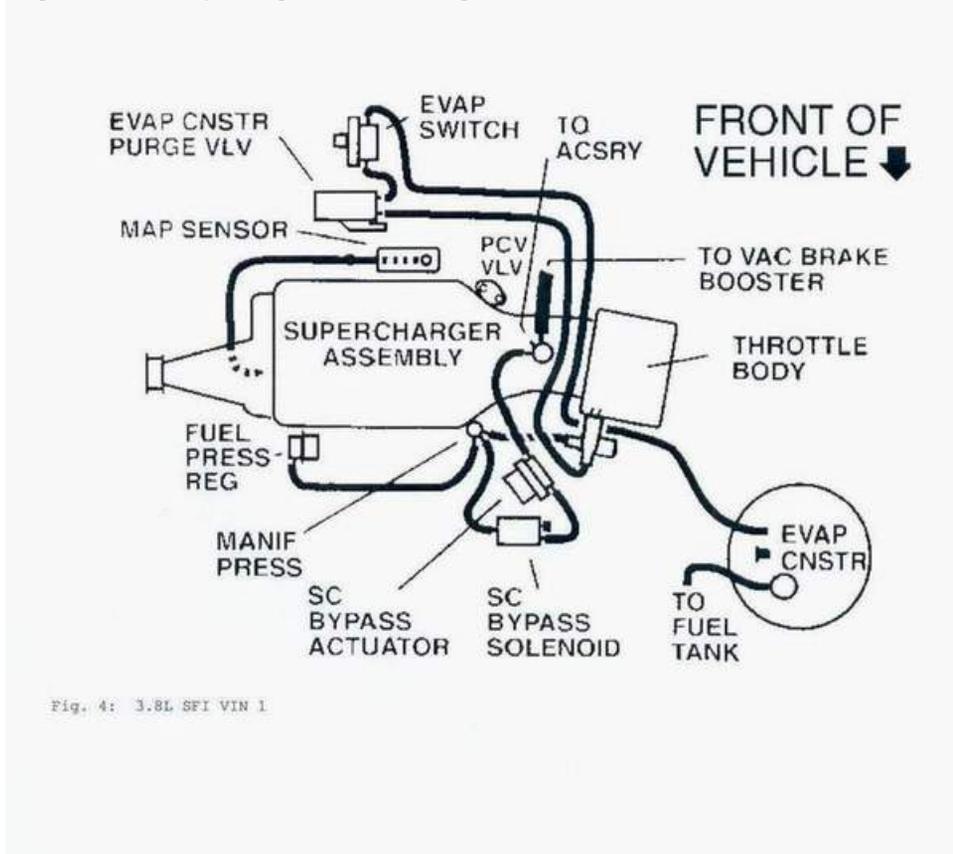
Another Gen 3 to Gen 5 Supercharger Upgrade Guide:

<https://www.instructables.c...n-V-M90-Swap-on-L67/>

ZZP's 3800 NA to Gen 3 supercharger installation instructions:

<http://s3.amazonaws.com/zzp...rger+Kit+Install.pdf>

Diagram of Gen 5 Supercharger and hose routings:



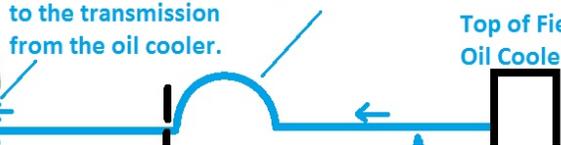
-----HOW TO HOOK UP THE 4t65e TRANSMISSION-----

How to connect 4t65 transmission lines to Fiero:

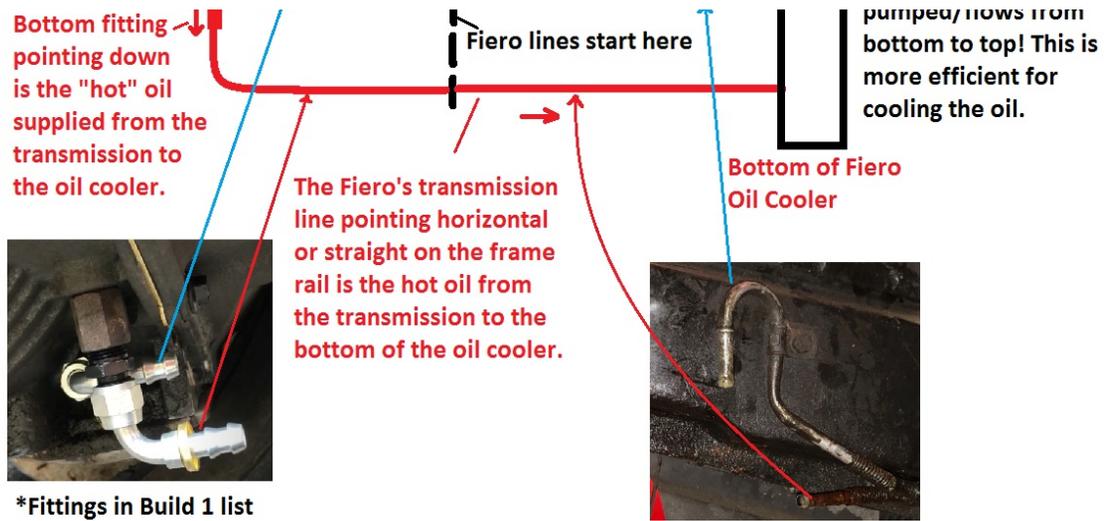
4t60/4t65/4t65e-HD

Top fitting pointing sideways is the "cool" oil returning to the transmission from the oil cooler.

The "U" bent Fiero transmission line pointing downward is the cool oil from the top of the oil cooler to the transmission.

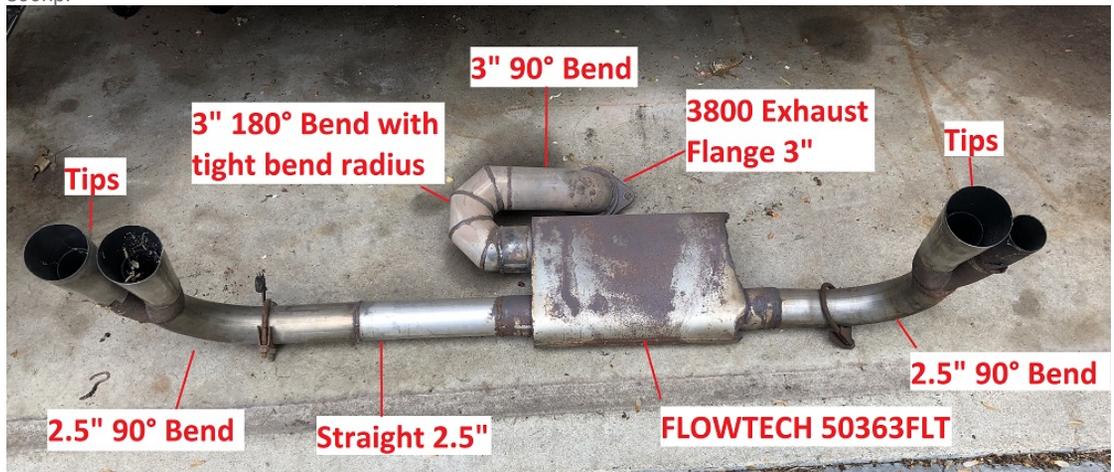


*Yes, oil is
sucked/blown from



-----EXHAUST SETUP FOR BUILD 1-----

NOTE: Refer to Build 1 parts list. This setup is for mating with the stock exhaust headers, which can support up to 300hp.



EVERYTHING BELOW THIS POINT IS FOR BUILD 2.

-----TORQUE SEQUENCES-----

NOTE: The Torque Sequence refers to the order in which you torque bolts. Head bolt torque sequencing can require multiple steps. Please refer to the torque guide website below for these steps, or to the guide from head stud your manufacturer.

For example, Instructions for installing ARP Head Studs - <https://tech.arp-bolts.com/...uctions/193-4001.pdf>

3800 Engine Torque Specs (helpful to print this off):

NOTE: THE TORQUE SPEC CALLING OUT 74 ft-lbs FOR A/C COMPRESSOR BRACKET/STAY IS INCORRECT. SUGGEST TO USE 30 ft-lbs INSTEAD.

<http://www.torkspec.com/tor...?KI=12-3.8L-231ci-V6>

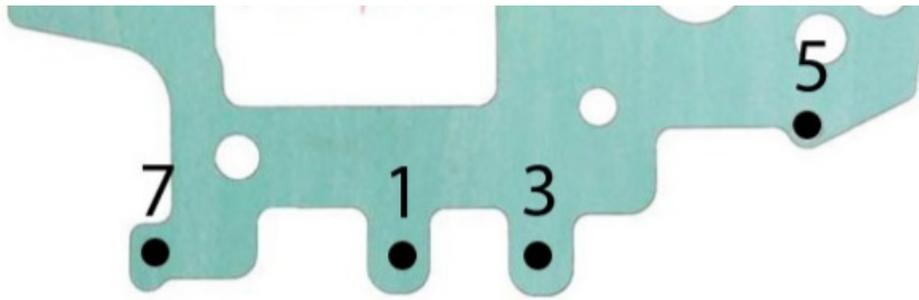
ZZP's Instruction Manual for swapping 3800 superchargers:

<http://s3.amazonaws.com/zzp...rger+Kit+Install.pdf>

Supercharger Torque Sequence:

3800 Supercharger torque sequence

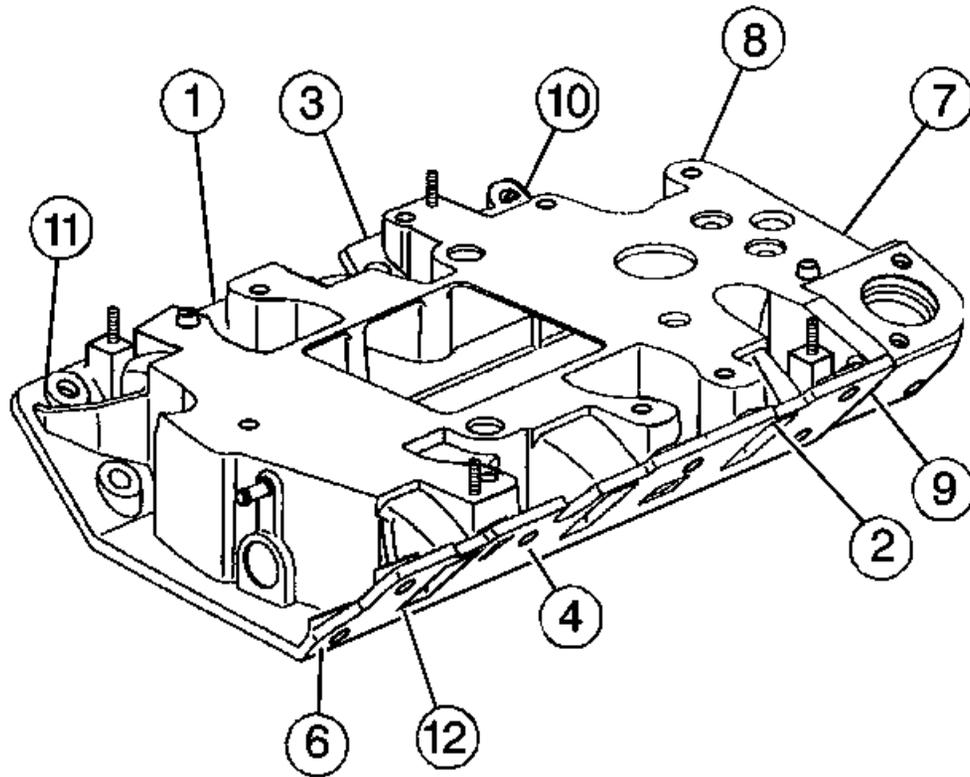




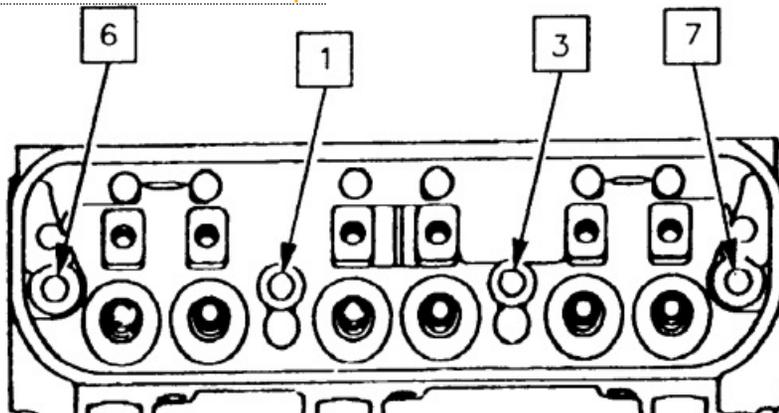
Torque bolts to 17ft/lb.

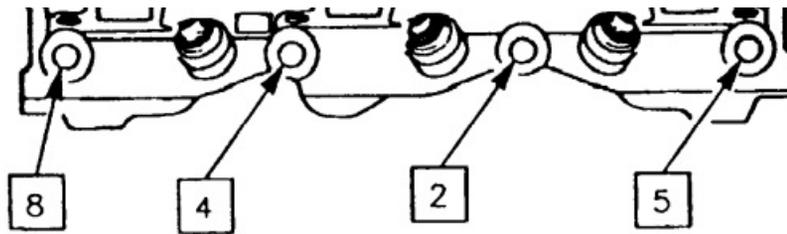
Gasket is for visual reference only and may not be the gasket used in certain applications.

Series II Supercharged Lower Intake Manifold Torque Sequence:
 NOTE: #5 is not shown, but it is directly below #11.



3800 Cylinder Head Torque Sequence for both sides (follow torque values in the torque spec website for stock or follow the head stud manufacturer's torque specs. ARP Head stud torque specs found here: <https://tech.arp-bolts.com/...uctions/193-4001.pdf>)



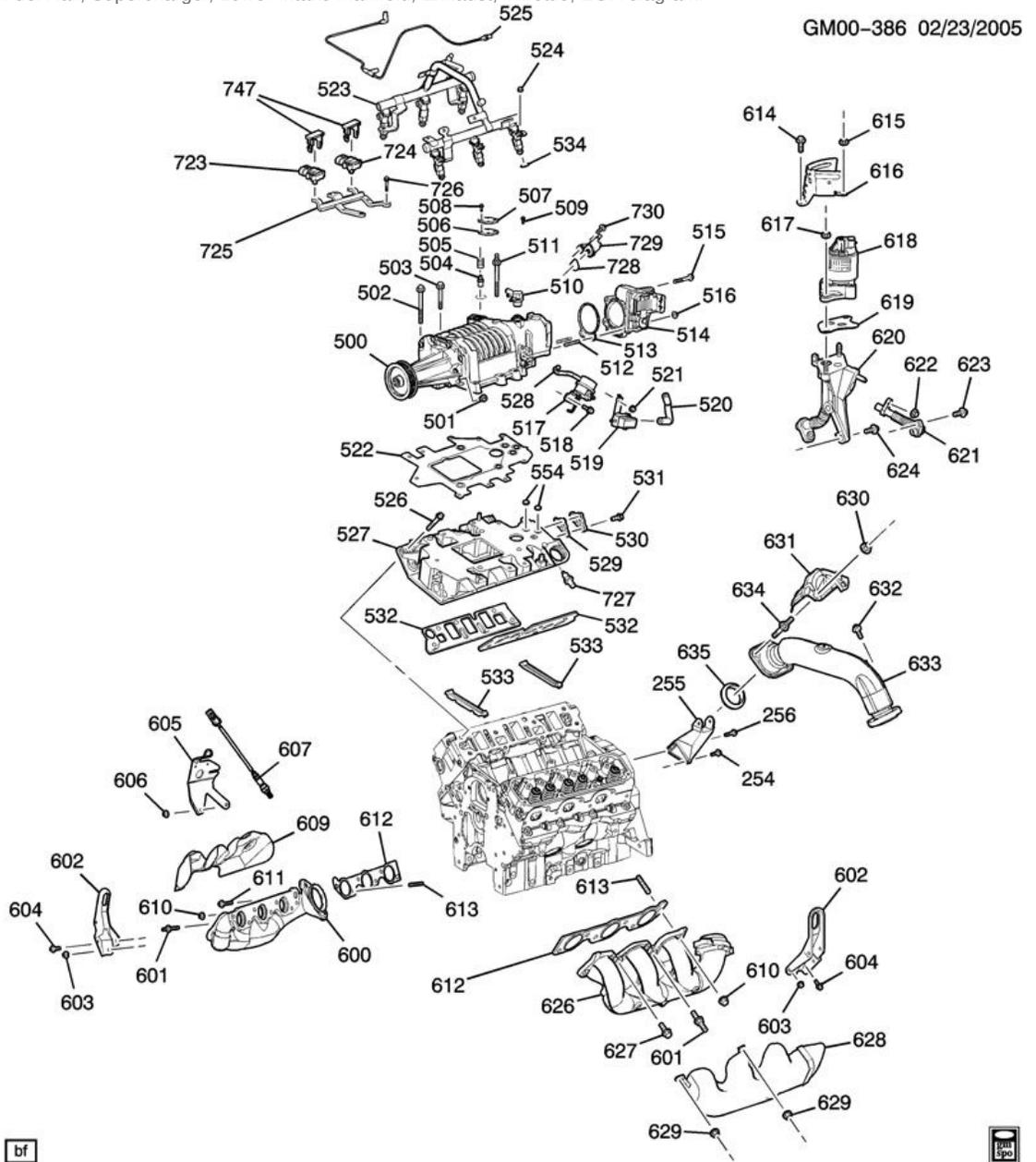


-----ENGINE EXPLODED VIEW ASSEMBLY DIAGRAMS-----

You can find most of these diagrams and the part #s of the parts labeled at many GM parts websites. These diagrams were taken from here:

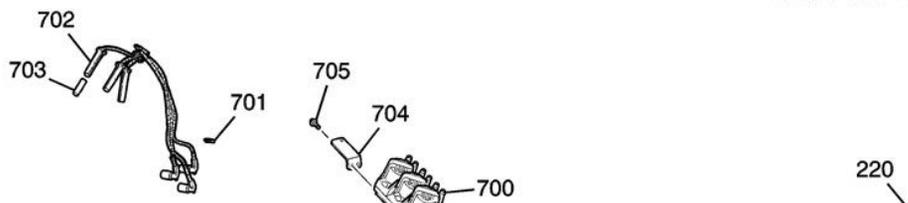
<https://www.wholesalegmpart...x-GTP-4DR-parts.html>

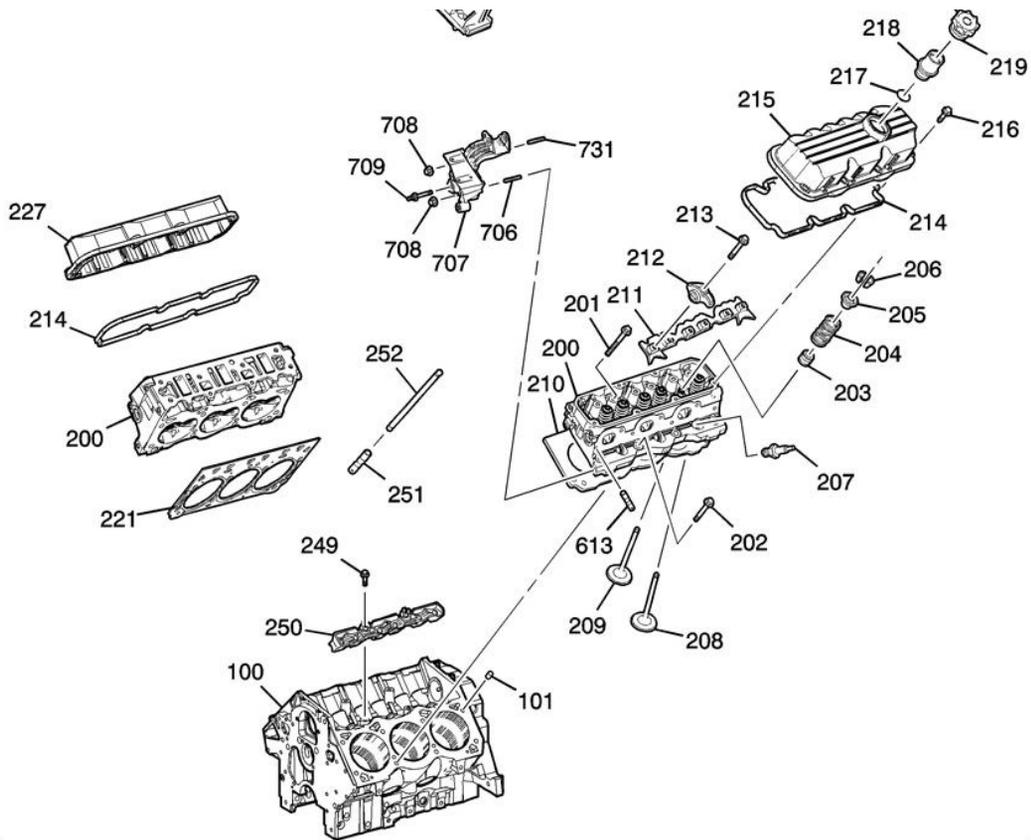
Fuel Rail, Supercharger, Lower Intake Manifold, Exhaust, Throttle, EGR diagram:



Cylinder Head, Valve Train, Coil Pack, Lifter, Pushrod, Rocker, and Valve Cover Assembly.

GM00-383 03/26/2003



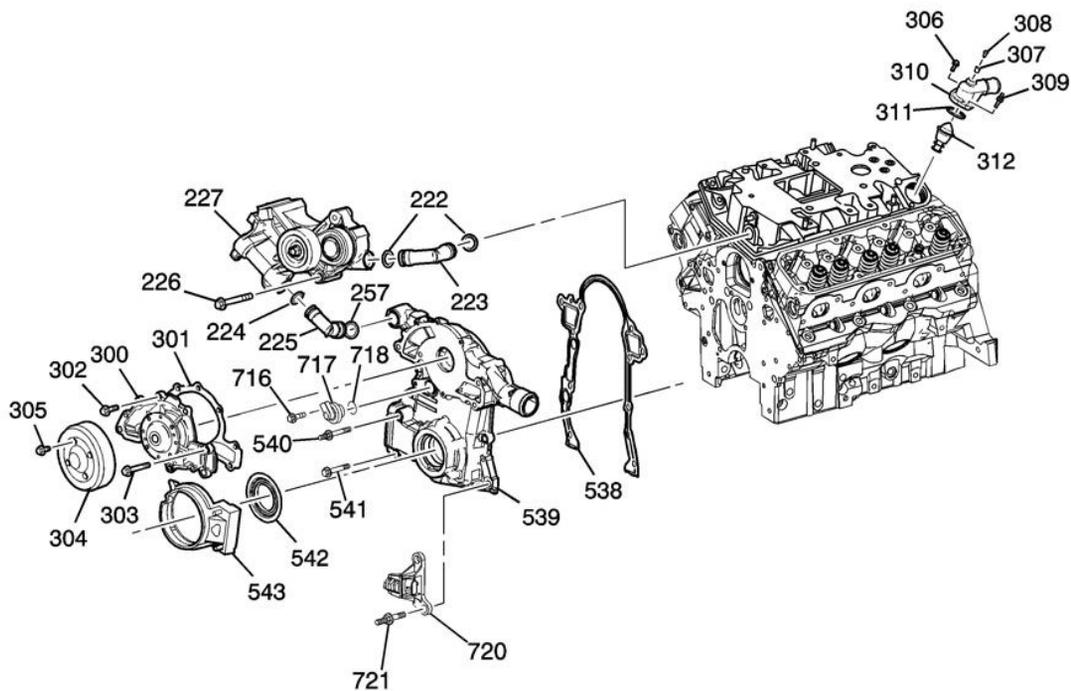


kf



Water Pump, Front Cover, Alternator Bracket, Thermostat, Balancer diagram:

GM00-384 03/29/2006

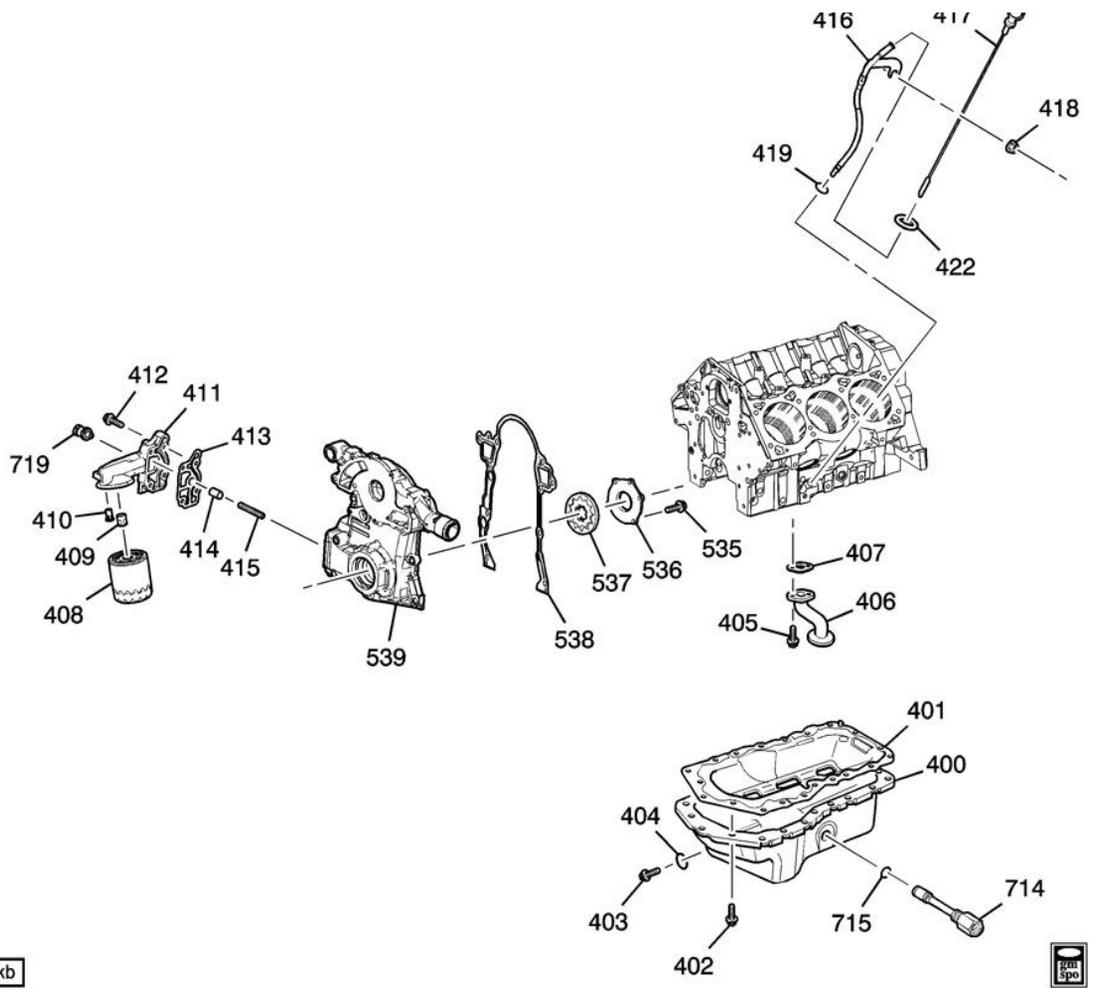


RN

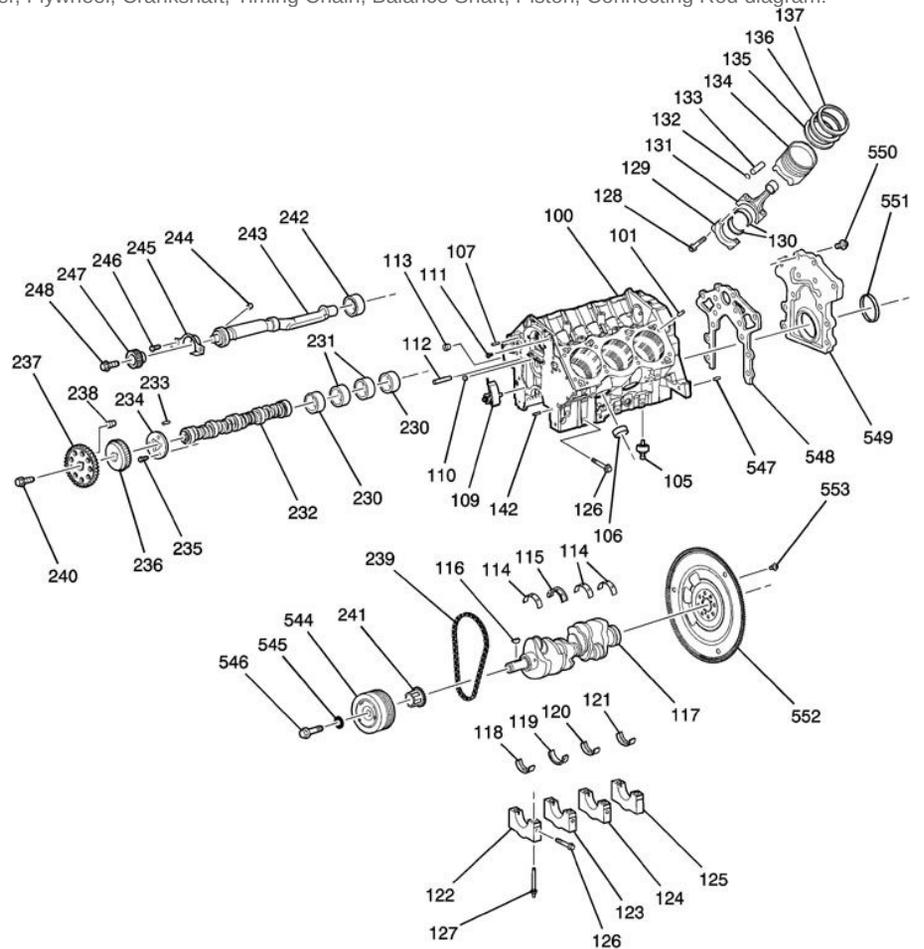


Front Cover, Oil Pump, Oil Pan, Dipstick diagram

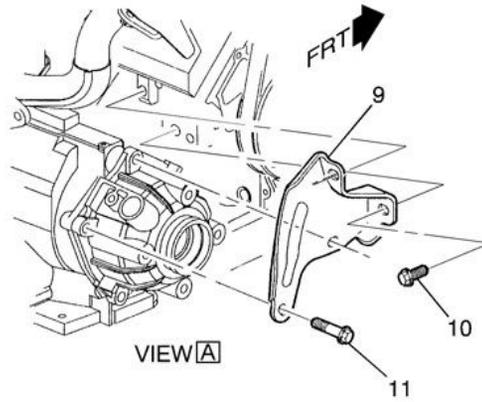
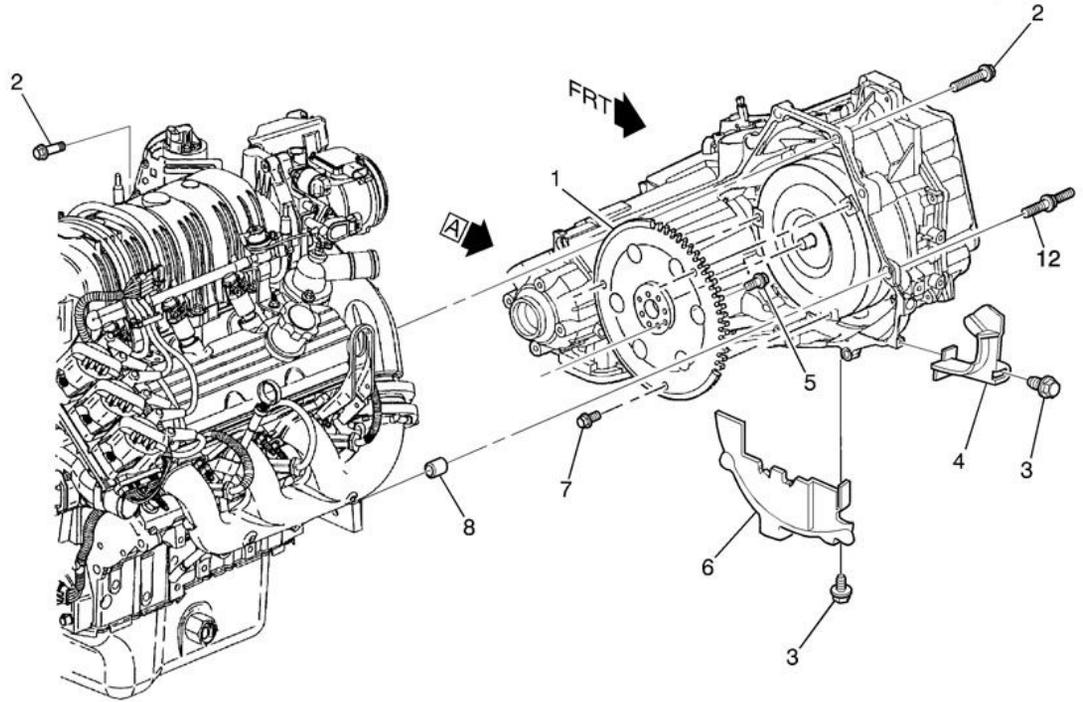
GM00-385 06/02/2004



Camshaft, Rear Cover, Flywheel, Crankshaft, Timing Chain, Balance Shaft, Piston, Connecting Rod diagram:



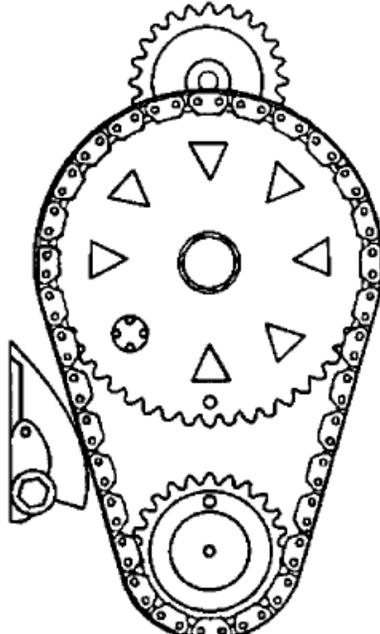
Transmission to Engine Mating Diagram:



rb

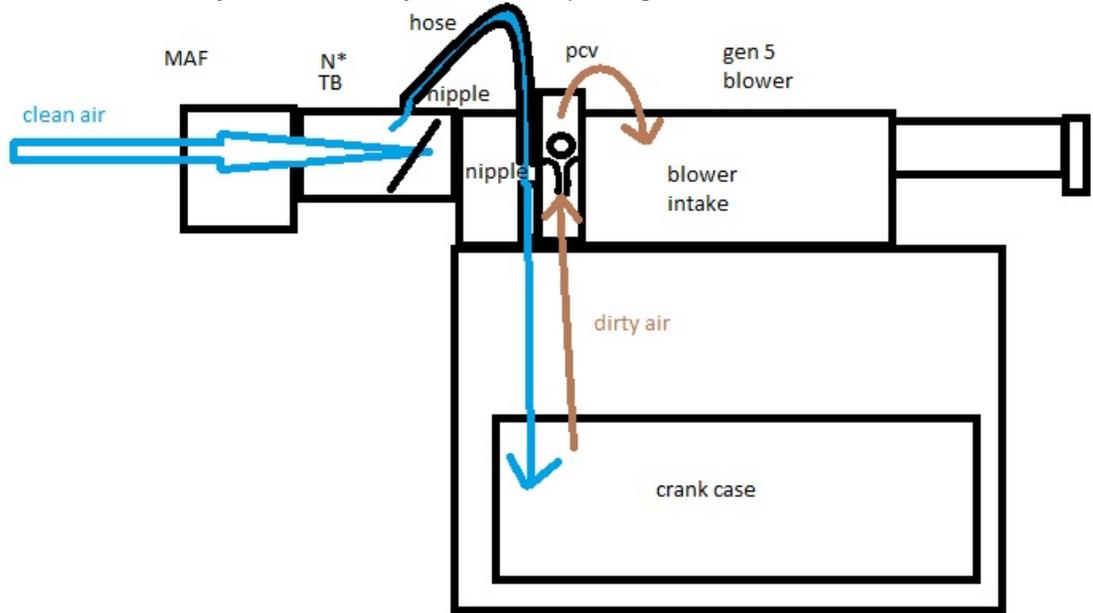


Crankshaft and Camshaft Timing Gear TDC Alignment:



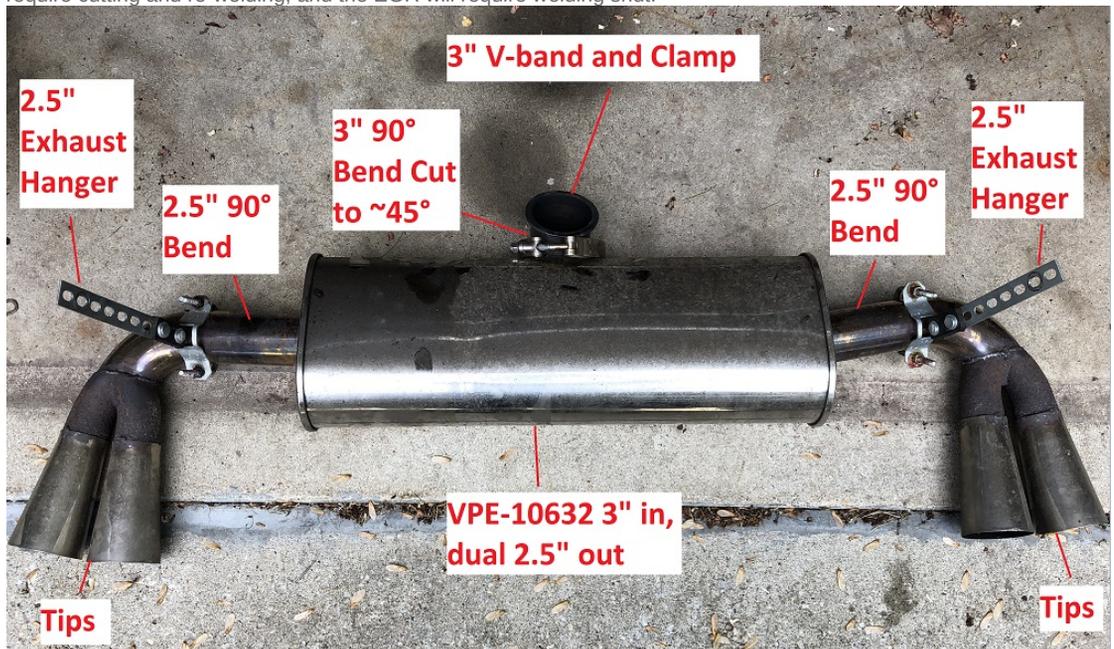
-----HOW A PCV SYSTEM WORKS WITH A NORTHSTAR THROTTLE BODY ON A SERIES III 3800SC-----

All you do is attach a hose from the Northstar TB nipple (before butterfly valve but after MAF) to the nipple on the supercharger by the PCV. The air goes from the throttle body, through the supercharger nipple, through the intake manifold, through the heads to the crank case, back through the intake manifold, through the PCV valve, and back into the supercharger intake. There is no way to run a catch can without bypassing the actual PCV in some way, since it sits directly in the Gen 5 Supercharger intake.



-----EXHAUST SETUP FOR BUILD 2-----

Note: See build 2 parts list in conjunction with this picture. This exhaust mates with the ebay chinese exhaust headers. REQUIRES CUTTING OUT BOTTOM PORTION OF FIERO TRUNK TO FIT! ALSO REQUIRES GRAND PRIX GTP HEADERS FROM EBAY! Since the GTP headers will likely not fit out of the box, the cross-over pipe will require cutting and re-welding, and the EGR will require welding shut.



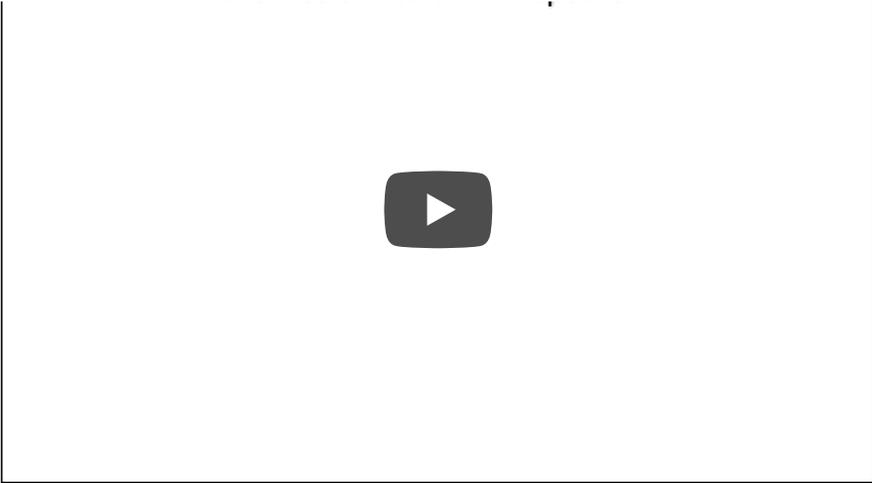
-----4t65 Transmission-----

Check out 4t65e-HD upgrades:
https://shop.tripleedgeperform...T65E-Upgrades_c2.htm

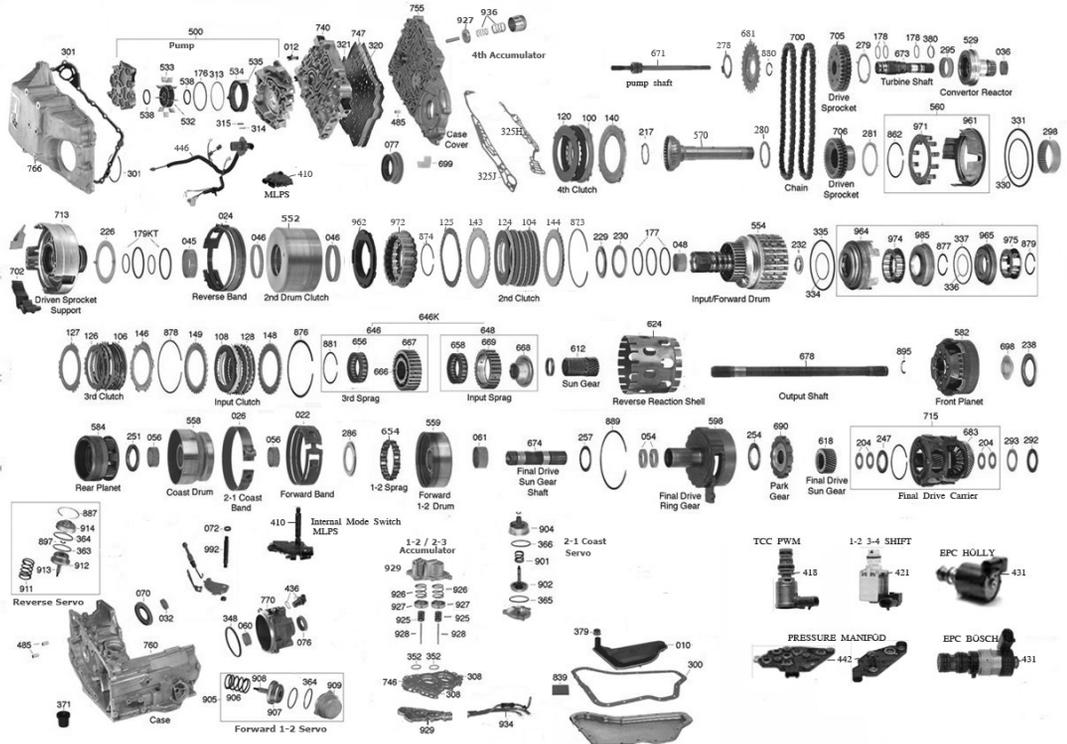
These guys will also rebuild your 4t65 transmission for you:
https://tripleedgeperforman...rformance_4T65E.html

Good 4t65 disassembly video here:

4T65 E Transmission Teardown Inspection



4t65 transmission diagram, parts available here:
<https://www.transpartsonlin...TransPartsType=4T65E>



Austin
1988 GT 3800SC Series II 3.4" Pulley
Fiero How-To Videos at https://www.youtube.com/cha...A?sub_confirmation=1
Facebook page at <https://www.facebook.com/FieroAustin/>
Build thread - <https://www.fiero.nl/forum/Forum2/HTML/139530.html>

[This message has been edited by AustinH (edited 12-05-2021).]

IP: Logged

Curtisk1060
Member
Posts: 291
From: Colorado Springs,
Colorado, USA
Registered: Dec 2011
[Rate this member](#)

 **REPORT THIS POST** 12-25-2017 10:07 PM

I have not heard of most people re-designing the existing fuel pump circuit. I believe most have utilized the original circuit, especially the oil pressure switch and just upgraded the fuel pump fuse to a 15 amp. Some have replaced the original relay with a newer model, but the wiring has remained the same.. curtis

IP: Logged

PFF
System Bot



 **REPORT THIS POST** 12-25-2017 10:47 PM

WIRING HARNESS AND COMPUTER/ECU/PCM PROGRAMMING
NOTE: There is no actual tuning guide here, although it is REQUIRED to reprogram your 3800 computer.



Posts: 67
 From: USA!!!!
 Registered: Jun 2014

[Rate this member](#)

-----Buying a harness-----

Want to buy a harness and PCM tune? I highly recommend this. Contact one of the below two guys:

James L. Brown - <https://www.facebook.com/pr...p?id=100010340077920>

Dan McIlmoyle - <https://www.facebook.com/danny.mcilmoyle>

And supply them with the following information, including programming:

- Ship them your donor harness and donor computer (PCM/ECU)
- Fiero Year/Model?
- Year/Make/Model of donor car engine?
- Transmission type?
- Keep or delete EGR?
- Keep or delete Boost Bypass valves/solenoid?
- Throttle Body and MAF type?
- Keep or delete rear O2 sensor after catalytic converter?
- 88 fiero oil pressure sender 3-pin (only center pin used)
- Keep or delete EVAP system?
- 3 pin temp sensor (use the center pin for fiero gauge)
- Keep or delete A/C pressure sensor connector near compressor connector?
- Keep or delete Electronic cruise control?
- Speedometer sensor buffer circuit
- External or Internal transmission gear selection range switch?
- MAP sensor type? (1-bar or 2-bar?)

Programming:

- Delete ABS
- Radiator fan activate at low temp (185?) and turn off at 180
- Accommodate for type of MAF/TPS/IAC tables
- Vehicle Speed Sensor programmed at:
- 24,713.7? ppm if using stock 215/60R15 rear tires (double check this)
- 24,327.5 ppm if using specific 225/60R15 rear tires
- VATS Security delete
- Rev Limiter? (Up to ~7000RPM)
- Amount of timing to add? Determined by below
- Camshaft type?
- Supercharger type?
- Thermostat type?
- Supercharger pulley size?
- Spark plug type?
- Fuel type? (87/89/91/93 octane or E15 or E85?)
- Cooling type if added? (Methanol injection, nitrous, intercooled?)
- Head Gasket Type?
- Compression Ratio?
- Other modification type? (ported heads, ported supercharger, fuel injectors, exhaust system, valve springs, rocker ratio)
- custom ported heads

-----Building a harness-----

Want to build your own harness instead? Below are diagrams for doing so. This thread does not supply any wire loom dimensions for laying out the harness - that is owned by harness makers above. It is possible to simply splice all of the connections that you need and lay out your own harness routings, but this is unreliable and messy. This guide will not help with that, but it will help with the final wiring diagram.

Go to <http://www.alldatadiy.com/> and buy a subscription to your donor car's information. You can find a PCM pinout diagram of PCM Connectors C1 (Blue) and C2 (Clear) that will be critical in aiding you with building the harness. Below is an example of the PCM pinout diagram of a 2001 Bonneville SSEi. DO NOT USE THIS DIAGRAM IF YOU DID NOT BUY AN ENGINE FROM A 2001 BONNEVILLE SSEi; THEY WILL VARY SLIGHTLY!

Powertrain Control Module (PCM) C1

Connector Part Information		<ul style="list-style-type: none"> • 80 Way Connector (BLUE) • Body - 12160549 • TPA - 1216056A • Terminals - 12084913 • Shield - 12160921 	VARIES WITH CAR MAKE, MODEL, AND YEAR
Pin	Wire Color	Circuit No.	Function
1	BLK	808	Low Reference
2-3	—	—	Not Used
4	LT GRN	1222	1-2 Shift Solenoid Valve Control
5	DK BLU	473	High Speed Cooling Fan Relay Control
6	DK GRN	335	Low Speed Cooling Fan Relay Control

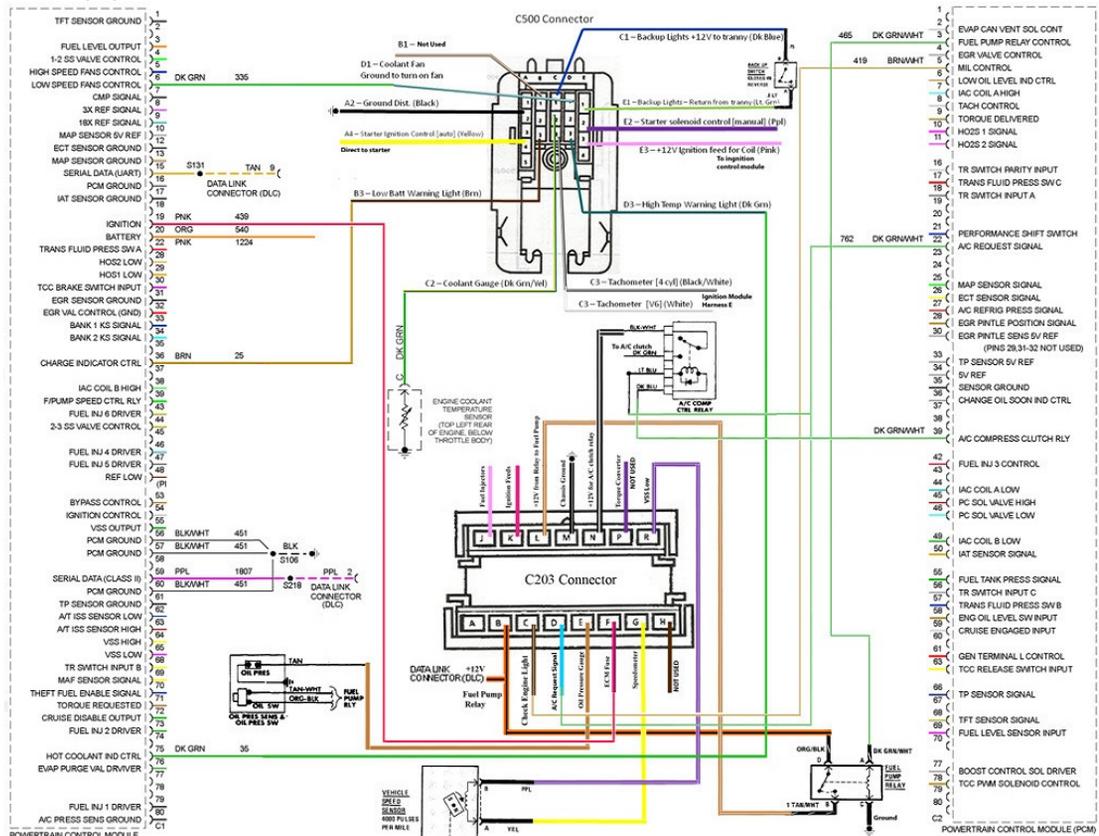
7	BLK	630	Camshaft Position Signal
8	PPL/WHT	430	Low Resolution Engine Speed Signal
9	LT BLU/BLK	647	Medium Resolution Engine Speed Signal
10	GRY	605	5 Volt Reference
11	—	—	Not Used
12	BLK	470	Low Reference
13	ORN/BLK	469	Low Reference
14-15	—	—	Not Used
16	BLK/WHT	1551	Ground
17	RED/BLK	645	Low Reference
18	—	—	Not Used
19	PNK	1390	Off/Run/Crank Voltage
20	RED	240	Battery Positive Voltage
21	—	—	Not Used
22	PNK	1224	Transmission Fluid Pressure Switch Signal A
23-27	—	—	Not Used
28	TAN	1671	HO2S 2 Low Signal
29	TAN	413	HO2S 1 Low Signal
30	PPL	420	TCC Brake Switch Signal
31	BLK	552	Low Reference
32	GRA	435	EGR Ground
33	DK BLU	496	KS (1) Signal
34	LT BLU	1876	Knock Sensor 2 Signal
35-37	—	—	Not Used
38	LT GRN/WHT	1749	IAC Coil B High Control
39-42	—	—	Not Used
43	YEL/BLK	846	Fuel Injector 6 Control
44	YEL/BLK	1223	(73 Solenoid or Shift Solenoid B) Valve Control

Many great wiring harness pin out charts already exist at GMTuners: <http://www.gmtuners.com/files/index.htm>

NOTE: For sensors and some wire connector part #s, refer to Build 1.

Consult gmtuners for pinout list (this guide is specifically for a 1998-2002 GTP engine and transmission harness): http://www.gmtuners.com/files/o_L67_PCM_wiring.pdf

Harness wiring diagram (For a GTP harness that works manual Fiero transmission. For automatic harnesses, you will need to ground the VSS LOW Fiero input pin and add the buffer circuit shown below between the GTP computer and the fiero pin):



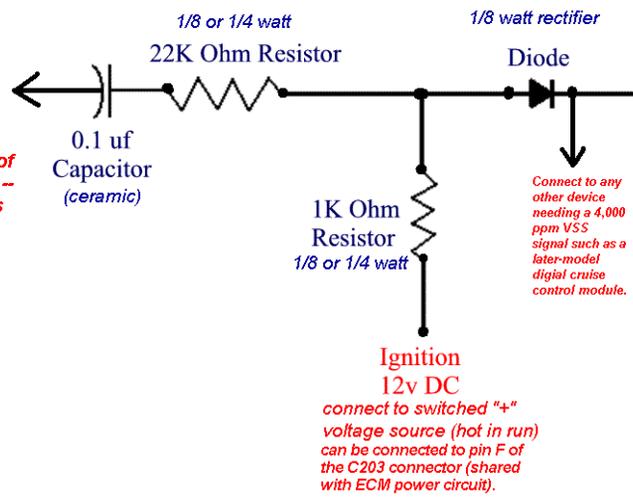
Speedometer Buffer Conversion Circuit (the input signal to the Fiero speedometer is incompatible with the 4t65e-HD transmission Vehicle Speed Sensor (VSS) output signal) : <http://www.gmtuners.com/fierofmods.htm>

Fiero Speedo Conversion

ECM or PCM

To Fiero Speedo (input) Yellow Wire; pin G of the C203 connector.

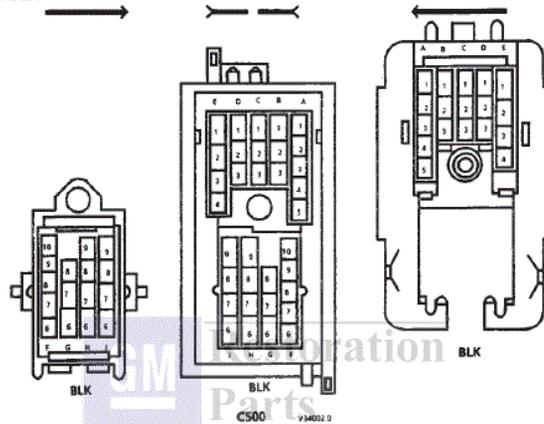
Disconnect wire coming from pin R of the C203 connector -- not needed with this conversion circuit.



Stock Fiero C500 connector in engine bay:

A good pinout is located here: <http://www.nathanbittinger...roadaddiction/c203c500>

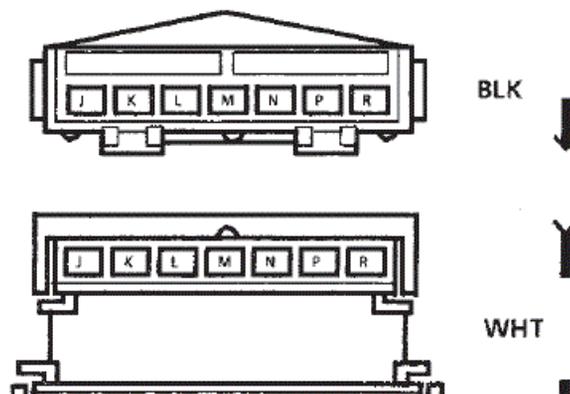
HARNESS CONNECTOR FACES: C500

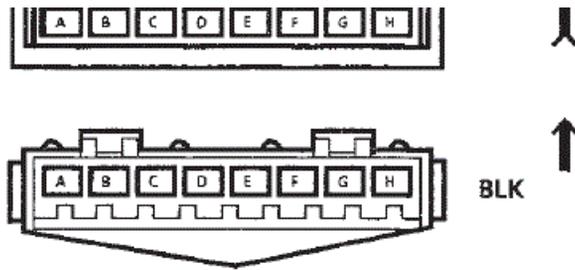


CAVITY	WIRE COLOR		SCHEMATIC-PAGE
	PIN HALF	SOCKET HALF	
A1	—	—	(Not Used)
A2	BLK (L4 VIN/R)	BLK	Ground Distribution — 14-3
A2	DK GRN (V6 VIN S)	BLK	Ground Distribution — 14-3
A3	—	—	(Not Used)
A4	YEL	YEL	Starter and Charging System — 30-0
A5	—	—	(Not Used)
B1	BRN/WHT	BRN	Starter and Charging System — 30-0
B2	—	BRN	(Not Used)
B3	BRN	BRN	Starter and Charging System — 30-0
C1	DK BLU	DK BLU	Backup Lights — 112-0
C2	DK GRN/YEL	LT GRN	Instrument Panel: Indicators Cluster — 80-0
C3	WHT (V6 VIN 9)	WHT	Instrument Panel: Indicators Cluster — 80-0
C3	BLK/WHT (L4 VIN/R)	WHT	Instrument Panel: Indicators Cluster — 80-0
D1	DK GRN/WHT	DK GRN/WHT	Coolant Fan — 31-0
D2	—	—	(Not Used)
D3	DK GRN	DK GRN	Instrument Panel: Indicators Cluster — 80-0
E1	LT GRN	LT GRN	Backup Lights — 112-0
E2	PPL	PPL	Starter and Charging System — 30-0
E3	PNK (L4 VIN/R)	PNK	Electronic Fuel Injection: Ignition — 20-0
E3	RJST (V6 VIN 9)	PNK	Multi-port Fuel Injection: Ignition — 21-0

CAVITY	WIRE COLOR		SCHEMATIC-PAGE
	PIN HALF	SOCKET HALF	
E4	—	—	(Not Used)
F6	TAN	TAN	Cruise Control: Vacuum — 34-1
F7	BRN	BRN	Exterior Lights: Tail/Pier Marker/License — 110-3
F8	WHT/ORN	WHT	Instrument Panel: Indicators Cluster Hood/Trunk/Door Ajar Indicator — 80-2
F9	LT GRN	LT GRN	Backup Lights — 112-0
F10	DK GRN/BLK	DK GRN/BLK	Ground Distribution — 14-3
G6	LT BLU/BLK	LT BLU/BLK	Cruise Control: Vacuum — 34-1
G7	WHT	WHT	Exterior Lights: Turn/Hazard/Park/Front Marker/Stop/High Level Stop — 110-0
G8	BRN/WHT	BRN	Exterior Lights: Rear Pontiac Emblem — 110-5
H6	DK BLU	DK BLU	Cruise Control: Vacuum — 34-1
H7	YEL	YEL	Exterior Lights: Turn/Hazard/Park/Stop — 110-2
H8	WHT	WHT	Exterior Lights: Turn/Hazard/Park/Front Marker/Stop/High Level Stop — 110-0
H9	ORN	ORN/DK BLU	Interior Lights: Cigar Lighter, Clock and Trunk Light — 114-0
J6	LT GRN	LT GRN	Cruise Control: Vacuum — 34-1
J7	PPL	LT GRN/BLK	Cruise Control: Vacuum — 34-1
J8	—	—	(Not Used)
J8	—	—	(Not Used)

Stock Fiero C203 Connector under center console





C203

C203 and C500 connector pinouts, courtesy of <http://www.gmtuners.com/files/index.htm>

Fiero C203 Connector		
Pin	Wire Color	Circuit Description
A	Tan/Blk	Upshift Indicator Lamp control feed
B	Org	Fuel Pump fused 12v + power supply from fusebox
C	Brn/Wht	Service Engine Soon lamp control feed
D	Lt Blu	A/C Request (12v + when A/C is selected at HVAC head)
E	Tan	Oil Gauge sender circuit feed
F	Pnk/Blk	Fused ECM Ign 12v power supply (ECM Fuse)
G	Yel	VSS High
H	Brn	VSS 2000ppm feed to Fiero ECM from speedo
J	Pnk	TBI Injector 1 fused 12v IGN power
K	Pnk	TBI Injector 2 fused 12v IGN power
K	<i>Dk Grn</i>	<i>A/C Clutch + Feed from A/C Relay (84 Fiero only)</i>
L	Tan/Wht	12v + power feed to Fuel Pump from relay
M	Blk	VSS/Speedo Ground (connect to engine ground)
N	Blk	A/C Relay Clutch 12v + power feed (hot when HVAC is on A/C)
N	<i>Brn</i>	<i>A/C Relay 12v+ IGN power feed from gauges fuse (84 Fiero only)</i>
P	Ppl	TCC Brake Switch feed (N/C; hot in run)
R	Ppl	VSS Low
R	<i>Ppl/wht</i>	<i>Crank Signal [hot in crank only] (84 Fiero only)</i>

Fiero C500 Connector (engine harness)		
Pin	Wire Color	Circuit Description
A1	Blk	Trunk Release Feed
A1	<i>Dk Grn</i>	<i>A/C Clutch + Feed from A/C Relay (84 Fiero only)</i>
A2	Blk	Engine Ground
A4	Yel	Starter Solenoid Control (auto trans)
B1	Yel	VSS high (84 Fiero only)
B3	Brn	Generator Control (batt ind lamp)
C1	Dk Blu	Backup lamps fused 12v + IGN feed (85-88)
C1	<i>Ppl</i>	<i>VSS low (84 Fiero only)</i>
C2	Dk Grn/Yel	Temp Gauge sender feed
C3	Wht	Tach feed
D1	Dk Grn/Wht	Fan Request (coolant temp switch)
D2	Lt Grn/Blk	Fan Request (models with 2 speed fan)
D3	Dk Grn	"Hot" temp warning ind lamp feed
E1	Lt Grn	Backup lamps control feed from trans
E2	Ppl	Starter Solenoid Control (manual trans)
E3	Pnk	Ign B+ power feed for Coil

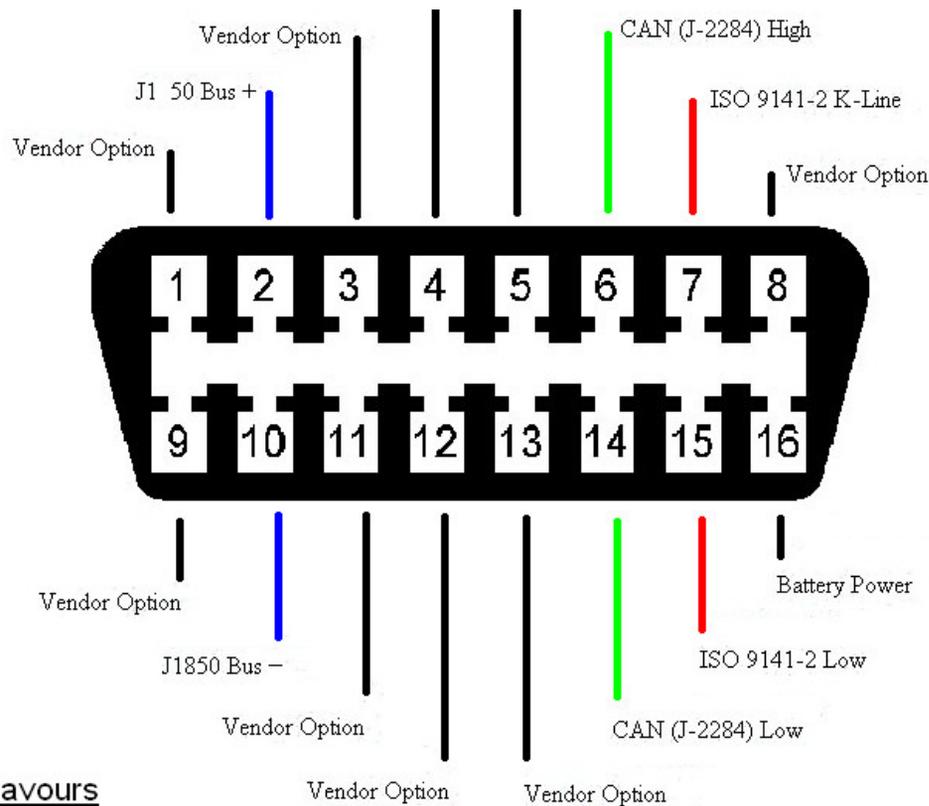
Pin location and usage may vary depending on year/engine/trans

OBDII Connector Pinout:

NOTE: The 3800sc Fiero only uses the "VPW" configuration on pins 2, 4, 5, and 16.

OBD-II Connector and Pinout





Flavours

J1850 Bus

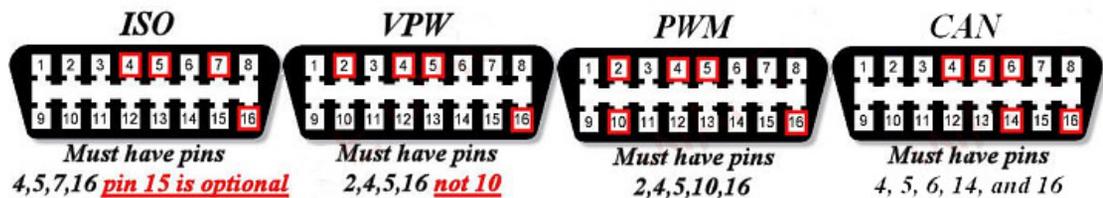
- SAE J1850 PWM(41.6Kbaud) (pulse width modulation) used by Ford Motor Company and Mazda
- SAE J1850 VPW(10.4Kbaud) (variable width modulation) used by General Motors and in light trucks

ISO 9141-2 K-Line

- ISO9141-2(5 baud init,10.4Kbaud) older protocol in Chrysler, European, and Asian vehicles between 2000-2004
- ISO14230-4 KWP(5 baud init,10.4 Kbaud) KWP2000 (keyword protocol 2000) commonly used in cars from 2003
- ISO14230-4 KWP(fast init,10.4 Kbaud)

CAN

- J2284/3 - High-Speed CAN (HSC) for Vehicle Applications at 500 KBPS
- ISO15765-4 CAN(11bit ID,500 Kbaud) ISO 15765-4 CAN-BUS = first introduced in 2004 then mandatory in all vehicles from 2008
- ISO15765-4 CAN(29bit ID,500 Kbaud)
- ISO15765-4 CAN(11bit ID,250 Kbaud)
- ISO15765-4 CAN(29bit ID,250 Kbaud)
- A.SAE J1939 CAN(29bit ID,250*Kbaud)
- B.USER1 CAN(11*bit ID,125*Kbaud)
- C.USER2 CAN(11*bit ID,50*kbaud)



External Transmission Range Selector Switch for a 4t60/4t65/4t65e-hd transmission:

Note: You will need to purchase one of these and put it on your gear selector if you did not buy a GTP. You may also need the connector for it, available at Rockauto. See above Build 1 Parts List.

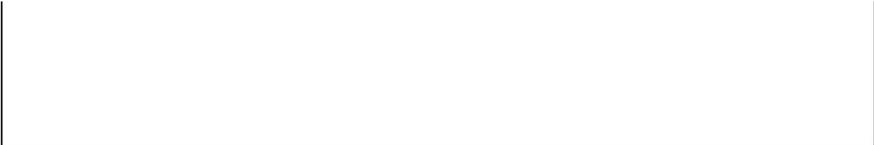
4T60-E / 4T65-E Transmission Range (Gear Position) Switch 7-pin connector electrical interface to Fiero				
Pin	Circuit	Wire/Color	Action	Description
A	ground park output	varies	not needed	(supplies a ground output in park only)
B	switched 12v+ input	varies	connect to	dark blue wire coming from pin C1 of the Fiero's C500 connector
C	12v+ park output	varies	not needed	(supplies a switched 12v + ignition power output when in park only)
D	ground input	black	connect to	engine block or transmission case ground
E	start/crank output	large purple	connect to	starter solenoid terminal (smallest of the 3 terminals on the starter solenoid)
F	backup lights output	lt green	connect to	light green wiring coming from pin E1 of the Fiero's C500 connector
G	start/crank input	large yellow	connect to	large yel wire coming from pin A4 or large ppl wire coming from pin E2 of the Fiero's C500 connector

Fiero C500 pin ID/usage may differ

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Optional: 3800 Electronic Cruise Control (can instead rig up the Fiero vacuum cruise to work)

Last Modified: 5/19/16



Austin
 1988 GT 3800SC Series II 3.4" Pulley
 Fiero How-To Videos at https://www.youtube.com/cha...A?sub_confirmation=1
 Facebook page at <https://www.facebook.com/FieroAustin/>
 Build thread - <http://www.fiero.nl/forum/Forum2/HTML/139530.html>

[This message has been edited by AustinH (edited 03-19-2021).]

IP: Logged

AustinH
 Member



Posts: 67
 From: USA!!!!
 Registered: Jun 2014
[Rate this member](#)

 **REPORT THIS POST** 03-01-2018 11:05 AM

Disassembly, Reassembly and Final Fiero Installation Videos

-----Below this line is required for both Build 1 and Build 2-----

Fiero Engine Removal:

Pontiac Fiero: How to Remove a 2.8 V6 Engine step-by-step



How to replace the Fuel Pump :

PONTIAC FIERO HOW TO: Replacing the Fuel Pump (Also ...



How To Change The Supercharger Pulley Using The ZZP Pulley Puller:

Pontiac Fiero 3800 HOW TO: Changing The Supercharger ...



How to change Supercharger Oil:

HOW TO CHANGE THE SUPERCHARGER OIL ON A GM 38...



How to Install oil sending unit, Thermostat & plugging water pump:

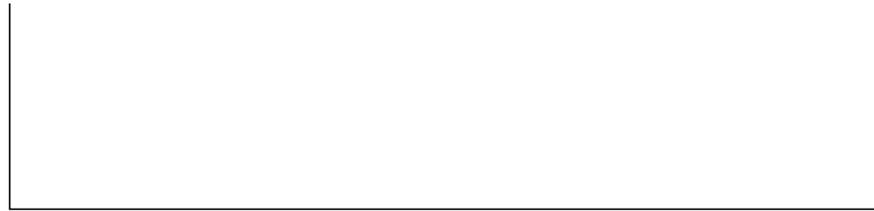
Pontiac Fiero 3800 HOW TO: Installing oil sending unit, Th...



How to install FieroRog Engine Brackets, Belts & Accessories in a 3800 Fiero:

Pontiac Fiero 3800 HOW TO: Installing FieroRog Engine Br...





How to Install A Custom Fuel Rail & Swapping Valve Covers:

Pontiac Fiero 3800 HOW TO: Installing A Custom Fuel Rail...



How to build your own 3800sc Fiero Swap Axles:

Pontiac Fiero 3800 swap HOW TO: Building Custom Axles...



How to install Transmission:

Pontiac Fiero 3800 swap HOW TO: Installing a 4t65e-HD a...



How To Mount Engine to Trans/Install supercharger Belt

Pontiac Fiero 3800 HOW TO:FieroRog Bracket/Mounting ...



How To Install an Injection Technology Wiring Harness

Pontiac Fiero 3800 HOW TO: Installing an Injection Techn...



How to hook up fuel lines, AC lines & hoses:

Pontiac Fiero 3800 HOW TO: Hooking up fuel lines, AC lin...



Fiero Engine Bay for 3800 Swap Overview

Fiero Engine Bay Walk-through for Engine Swap



How to install engine in car and hook up exhaust:

Pontiac Fiero 3800 HOW TO: Hooking up Exhaust and FIR...



Engine Bay Routings/Hookups 1:

Pontiac Fiero 3800 HOW TO: FINAL HOOK UPS AND TEST...



Engine Bay Routings/Hookups 2:

3800sc Fiero Swap Engine Bay Routings + XPZ cam perfo...





Engine Bay Routings/Hookups 3:

3800 Supercharged Fiero (Tips & Closer Look Part 3) / En...



-----Below this line is only required for Build 2-----

IMPORTANT: BEFORE TEARING DOWN THE ENGINE, PLEASE WATCH THESE FACTORY SERVICE VIDEOS TO SAVE YOU SOME HEADACHES!

Buick 3800 Engine Noise and Repair Techniques:

Buick - Engine Noise and Repair Techniques (1993)



Buick 3800 Engine Mechanical:

Buick - Engine Mechanical (1998)



Why you don't want to disassemble the bottom end (rods/pistons/crankshaft/bearings):

3800 V6 Rebuild Part II



-----Engine Tear-down and rebuild instructions-----

How to tear down and rebuild the Lower Intake Manifold:

NOTE: I THOROUGHLY CLEANED OUT THE INSIDE OF MY LOWER INTAKE MANIFOLD BY SOAKING IN BRAKE CLEANER AND THEN TAKING IT TO A CAR WASH AND MANUALLY SPRAYING DOWN THOROUGHLY, INSPECTING, AND DRYING.

Pontiac Fiero 3800 HOW TO: Replacing The Supercharged...



How to tear down the "long block" (accessories, supercharger, intake, water pump, etc.):

3800sc 400whp Fiero Rebuild Part 1/4 - Long Block Teard...





Installing a Phenolic Spacer instead of Intercooler:

3800 L32 engine build parts. 2019 build



How to remove front cover, balance pulley, timing chain, balance shaft, camshaft, etc.:

3800sc 400whp Fiero Rebuild Part 2/4 - Camshaft & Timi...



How to remove front cover, balance pulley, timing chain, balance shaft, camshaft alternative:

HOW TO BUILD A 3800 L27 FOR BOOST - PART 3 - VR V6 ...



How to disassemble cylinder heads with a valve spring compressor:

NOTE: You should drop your cylinder heads off at a machine shop, detailed at the end section of this post. BE CAREFUL WITH THE CYLINDER HEAD DECK SURFACE. DO NOT SCRATCH THE BOTTOM OF THE HEADS. PLACE ON A LINT FREE CLOTH AND DO NOT PUT THEM ON THE GROUND OR A HARD SURFACE UNLESS YOU INTEND TO DECK THEM.

How To Use A ToolPRO Valve Spring Compressor



FACTORY SERVICE GUIDE for installing heads, valve train, balance shaft, intake manifold, valve covers, etc.:

Buick - 3800 Engine (1988)



How to prepare deck surfaces and assemble cylinder heads

HOW TO BUILD A 3800 L27 FOR BOOST - PART 1 - VR V6 ...



ZZP Installing Heads:

Zoom's 3800 Rebuild



How to assemble cylinder heads, valve train (lifters/rockers/pushrods), intake manifold, supercharger, and throttle body:
NOTE: DO NOT USE ARP THREAD SEALANT SHOWN IN VIDEO. INSTEAD USE HIGH TEMP NON-HARDENING RTV SILOCONE.

3800sc 400whp Fiero Rebuild Part 3/4 - heads, intake ma...



How to assemble valve train alternative:
NOTE: I DO NOT AGREE WITH THE METHOD USED HERE FOR MEASURING PUSH ROD LENGTH. INSTEAD WATCH ABOVE VIDEO.

HOW TO BUILD A 3800 L27 FOR BOOST - PART 2 - VR V6 ...



How to assemble Custom Exhaust, Custom Fuel Rails, Accessories:

3800 400whp Fiero Rebuild Part 3/4 - heads, intake ma...

3800sc 400wmp Fiero Rebuild Part 4/4 - Exhaust, Fuel Rail...



How to wrap your exhaust:

"The Original" TITANIUM Exhaust Wrap Installation



-----PORTING CYLINDER HEADS-----

PREFACE: According to INTENSE Racing, stock cylinder heads will out-flow ANY M90 supercharged 3800 engine setup. There is virtually NO NEED to modify cylinder heads, UNLESS YOU RUN LIFT HIGHER THAN 0.525, DETAILED BELOW.

NOTE: I would NOT attempt performing ANY of this at home. Take your cylinder heads to a machine shop. That being said, below is a collection of information about porting 3800 cylinder heads.

Here are the instructions I supplied a machine shop for porting my cylinder heads:

NOTE: Maximum valve lift on a stock 3800sc (NOT NA) block and pistons is ~0.600" before running into piston-to-valve clearance issues. Over 0.525" lift REQUIRES machining down valve guides.

1. Machine .060" off intake valve guides to support XPZ Camshaft lift.
 - a. 1.65 rocker arm * 0.354 XPZ camshaft intake lift = 0.5837" lift. Stock lift max is 0.525" before intake valve runs into valve guide with stock retainers. $0.5837" - 0.525" = 0.0587"$. Therefore, cut down top of valve guide by 0.0587" (or 0.060" to be safe). NOTE: LS Retainers add about .005" clearance, meaning max intake lift would be 0.0530".
2. Machine .060" off exhaust valve guides
 - a. 1.65 rocker arm * 0.335 XPZ camshaft exhaust lift = 0.5528" lift. Stock lift max is 0.528" before exhaust valve runs into valve guide with stock retainers. $0.5528" - 0.528" = 0.0247"$. Therefore, cut down top of valve guide by .0247" (or 0.060" to be safe and consistent with intake).
3. Redrill and replace valve guides with Bronze oil lite guides
4. Valve job
 - a. widen valve seats for 1.83" intake valves (on heads now) (stock is 1.80"), 1.52" exhaust
 - b. Replace seats with hardened seats at custom 3 angle cut.
 - c. Back-cut valves with same 3 angle cut. Lap valves if necessary.
 - d. If not replacing seats with hardened seats, don't grind seat, but grind right up to it, without touching it, to maintain factory hardened seat.
5. Blend bowl smooth - remove casting mark and lips on radius
 - a. Street/strip port, Polish combustion chambers
 - b. Smooth short side radius
 - c. Don't drop port floor
6. Gasket Match Intake runners and Lower Intake Manifold
 - a. Don't gasket match exhaust. Keep the D-shape of exhaust ports (can widen a bit)
 - h Polish runners

c. 1.5mm runners

c. Blend in short side of intake

d. Be careful not to grind through walls.

7. Deck head surfaces and record thickness decked by. Need at least 50 Roughness Average (RA) on deck surface to properly seal Cometic Head Gaskets.

Valve job video:

Firebird 1999 valve job part 7



Head Porting 1:

3800 Head Porting Tips Part 1



Head Porting 2:

Ported 3800 heads Part 2 (Intake openings)



Head Porting 3:

Ported 3800 Heads (Part 3)



Head porting example:

3800 porting clips



How to lap / grind / regrind valves and valve seats:

Cylinder Head 105 - Valve Job Basics



-----INSPECTING THE BOTTOM END (crank/bearings/connecting rods/bearings/pistons/piston rings)-----

In addition to porting cylinder heads, on the engine block, measure each cylinder "out of hole" clearance, or the amount which a piston sticks out above the block deck when the crankshaft is at top dead center. Stock piston height should be between 0.012" to 0.025". If the out of hole measurements for each piston are significantly different than one another, then consider decking the block. At this point, you will need to disassemble the bottom end. If re-using stock bottom end parts, keep every bolt/bearing/rod/piston/journal/cylinder matched with where it came from, including direction. Consider getting the engine inspected and blueprinted, the crankshaft ground, the rods

conditioned, the rotating assembly balanced, having new oversized bearings installed afterwards, honing cylinders, and replacing piston rings with correct gap for your boost. This is how to properly tear down the bottom end which is not covered in this guide. Here are the instructions I would provide a machine shop with for working with the bottom-end:

If the rotating assembly is in good shape, re-use all factory items and don't recondition.

1. Measure if block needs decked. .003" out of flat and 50 microinch RA surface or more required for decking. If not leave it. If so, deck block/heads and continue.
2. Disassemble pistons/rods.
3. Keep rods, rod bolts, rod bearings, crank bearings, and journals, etc matched to each other.
4. Clean pistons and rings with oil based solvent.
5. Check rings. Leave stock rings and don't hone if rings are OK. If rings are seized:
 - a. Replace rings (oversized?)
 - b. Gap rings. Adjust gap for 12-14.5 psi roots style supercharger boost (350 deg. Max)
 - c. Hone cylinder bores.
 - d. Oil and install pistons and rings.
6. Measure rods/bearings. If good, leave stock. If rods are worn:
 - a. Recondition rods, bore and find matched bearings (oversized?)
 - b. Clean rod bearing seats with alcohol
 - c. Oil inside of bearings but not in seat, work in oil to crank
 - d. Assemble rods to torque spec with matched bolts
 - e. Measure play (plastigauge) to verify correct size bearing
 - f. Also do replace crank bearings (below).
7. Measure crank bearings for wear
 - a. If crank or rod bearings worn, replace with new bearings (oversize?)
 - b. Plastigauge new bearings once torqued and seated to verify correct size
 - c. Clean main seats with alcohol.
 - d. Oil inside of bearings, torque mains down and rotate crank with oil in inside of bearings.
8. Measure main seats. If round, leave. If out of round:
 - a. Re-bore mains. Select appropriate bearings
9. Measure crank journals. If out of round:
 - a. Machine journal to round
 - b. Replace bearings (oversized?)
10. Measure crankshaft thrust bearing play. Recondition if necessary
11. Check assembly for balance
 - a. If out of balance for 6,700RPM, then re-balance rotating assembly
 - i. Flexplate
 - ii. Torque Converter
 - iii. Crank
 - iv. Pistons
12. Replace front and rear main seals and covers, reinstall everything and torque

Here is a decent video on inspecting the bottom end

NOTE: This video does not describe matching and conditioning rods parts. Before disassembling anything for yourself, if you're not an expert, **JUST TAKE IT TO A MACHINE SHOP AND HAVE THEM DO EVERYTHING.**

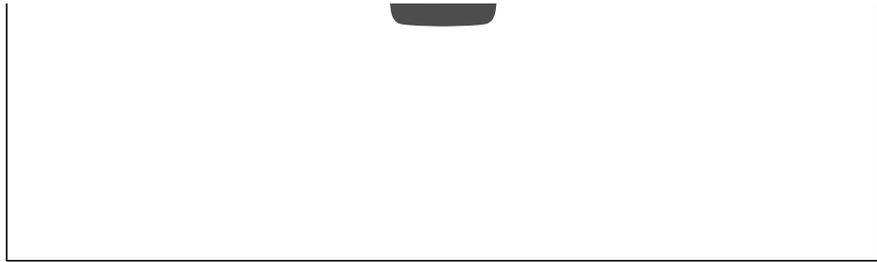
Measuring Bearing clearances in an engine - they have a ...



Here is a in-depth video about measuring crankshaft and connecting rod journals.

[4k] The merits of Plastigage? ...A Jafromobile "short"





Austin
 1988 GT 3800SC Series II 3.4" Pulley
 Fiero How-To Videos at https://www.youtube.com/cha...A?sub_confirmation=1
 Facebook page at <https://www.facebook.com/FieroAustin/>
 Build thread - <http://www.fiero.nl/forum/Forum2/HTML/139530.html>

[This message has been edited by AustinH (edited 03-19-2021).]

IP: Logged

AustinH
 Member



Posts: 67
 From: USA!!!!
 Registered: Jun 2014

[Rate this member](#)



REPORT THIS POST

03-01-2018 12:24 PM

Other Helpful Fiero Parts While You're At It

Bigger tires General Altimax RT43 (2x of each size):
 225/60R15 rear on stock 15x7" rims (stock rear tire size is 215/60R15)
 215/60R15 front on stock 15x7" rims - 1988 fronts came with 15x6.5" rims (stock front tire size is 205/60R15)

Replace end links and sway bar bushings (2x of each):
 Go to an auto parts store and buy generic end-links and sway bar bushings after having measured your end-link length on your car, if it is equipped with a rear sway bar.

Replace all rear bushings:
 1984-1987 - <https://www.fierostore.com/...%20%20%20%20%20BLACK>
 1988 - <https://www.fierostore.com/...%20%20%20%20%20BLACK>

Rear Brake lines:
 Autozone M10 to M10 Copper-Nickel line 60" (1x)
 Autozone M10 to M10 Copper-Nickel line 12" (1x)
 Autozone M12 to M12 Steel Line 36" (1x)
 Autozone M12 to M12 Steel Line 60" (1x)
 Autozone M12 to M14 steel line 12" (2x)
 Autozone M12 to M12 coupler (2x)
 Dot3 brake fluid

Stainless steel brake hoses - <https://www.fierostore.com/...px?s=56098&d=379&p=1>

Headlights:
 H6054

Rear Decklid Scoop - buy a Mustang Fox Body Hood scoop and mount reverse on your decklid.

1988 only Front shocks (2x):
 KYB KG4513 - <https://www.rockauto.com/en...,shock+absorber,7556>

1988 only Rear struts (2x) - VERY EASY TO REPLACE WHEN ENGINE IS OUT OF CAR:
 ACDELCO 503143 - <https://www.rockauto.com/en...uspension,strut,7584>

Pontiac Fiero: How To Convert the 84-87 Rear Struts to C...



How to install and upgrade bushings for 84-87 Fieros:

Pontiac Fiero : How to remove & Install Bushings from a C...



How to install a stock looking boost gauge for your 3800sc Fiero dashboard:

Fiero Turbo Sunbird Tachometer Boost Gauge Install + Dic...



Austin

1988 GT 3800SC Series II 3.4" Pulley

Fiero How-To Videos at https://www.youtube.com/cha...A?sub_confirmation=1

Facebook page at <https://www.facebook.com/FieroAustin/>

Build thread - <http://www.fiero.nl/forum/Forum2/HTML/139530.html>

[This message has been edited by AustinH (edited 04-09-2021).]

IP: Logged

AustinH

Member



Posts: 67
From: USA!!!!
Registered: Jun 2014

[Rate this member](#)



REPORT THIS POST

03-01-2018 06:41 PM

EXTREMELY useful links:

Playlist for hundreds of 3800 related videos:

<https://www.youtube.com/pla...y06RXVNmLuiX2rw4OJfz>

Good 3800 modification and suggestion forum:

<https://www.fastfieros.com/3800faq.htm>

Another 3800sc swap step-by-step build thread:

<http://www.fiero.nl/forum/A...100421-1-053213.html>

FastFieros technical pages:

<http://www.fastfieros.com/tech/>

GMTuners.com:

<http://www.gmtuners.com/>

GMTuners Technical Articles:

<http://www.gmtuners.com/tech/index.htm>

GMTuners wiring and other information:
<http://www.gmtuners.com/files/index.htm>

GMTuners 3800 Swap guide (not as thorough as above, but used as inspiration):
<http://www.gmtuners.com/swap/3800.htm>

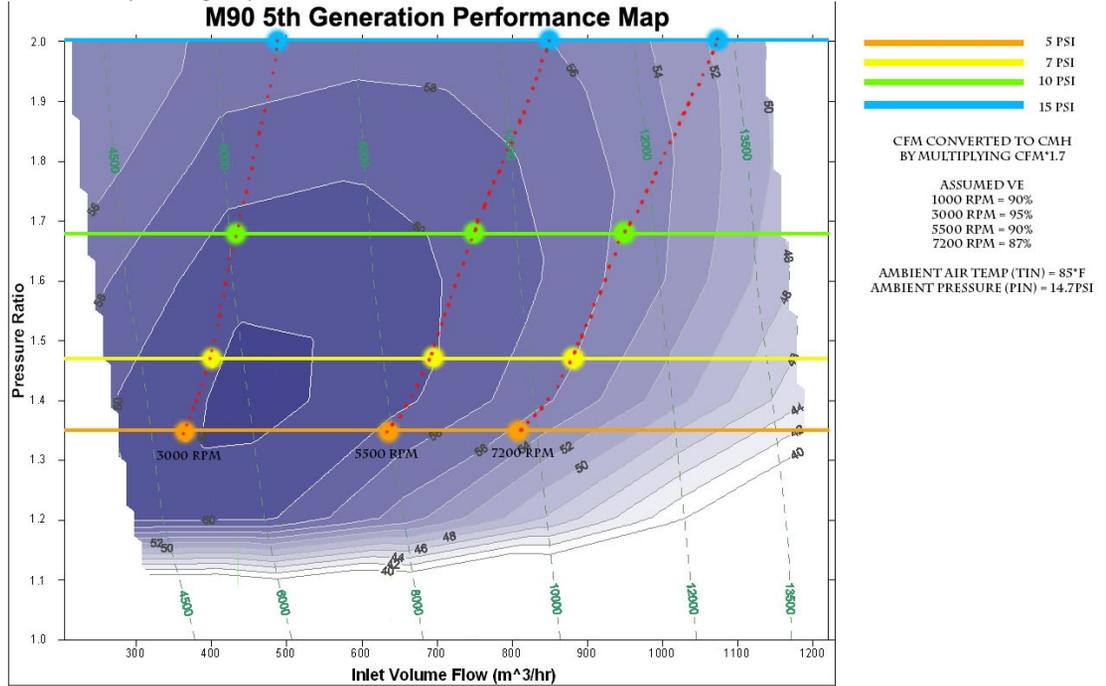
GMTuner's parts list for swaps (not as thorough as above, but used as inspiration):
<http://www.gmtuners.com/fiero/parts.htm>

Triple Edge Performance - they will rebuild your 4t65e-HD transmission for you:
https://tripleedgeperforman...rformance_4T65E.html

The Ogre's Fiero Cave:
<http://fierocave.shorturl.com/>

Cow S. Patoot Fiero information:
<http://www.fieroinfo.com/>

Other M90 supercharger specs



NOTE: The pulley sizes here are for a mustang engine and do not apply to 3800's, but the rest of the info can be helpful. This is for a Series II/Gen3 supercharger. For Series III/Gen5, subtract approx. 40°F to temperatures here.

Specifications: Eaton M90 (Roots Supercharger)						
Blower Pulley	Max Boost Pressure	Inlet Air Temp	Air Into Intercooler	Air out of Intercooler	Rotor Speed	Peak HP
2.75	7.7	77	185	162	14,180	287
2.40	9.3	81	235	185	16,249	308
2.20	10.4	77	265	205	17,727	314
1.975	12.6	76	304	233	19,746	318

Austin
1988 GT 3800SC Series III 2.8" Pulley
Fiero How-To Videos at https://www.youtube.com/cha...A?sub_confirmation=1
Facebook page at <https://www.facebook.com/FieroAustin/>
Build thread - <http://www.fiero.nl/forum/Forum2/HTML/139530.html>

[This message has been edited by AustinH (edited 09-27-2021).]

IP: Logged

REPORT THIS POST 04-09-2018 09:10 AM

I dont know how I missed this before. Thanks for the huge effort in documentation.

IP: Logged

1MohrFiero
Member

From: Paucan, ky
Registered: Apr 2003



Total ratings: 157
[Rate this member](#)

AustinH
Member



Posts: 67
From: USA!!!!
Registered: Jun 2014

[Rate this member](#)



REPORT THIS POST 04-09-2018 10:09 AM

removed

[This message has been edited by AustinH (edited 04-30-2018).]

IP: Logged

AustinH
Member



Posts: 67
From: USA!!!!
Registered: Jun 2014

[Rate this member](#)



REPORT THIS POST 04-22-2018 01:08 AM

removed

[This message has been edited by AustinH (edited 05-28-2020).]

IP: Logged

longjonsilver
Member

Posts: 1029
From: Lower Sackville, Nova Scotia
Registered: Nov 2001

[Rate this member](#)



REPORT THIS POST 05-17-2018 09:36 PM

Thanks Austin: lots of good information here. Everybody's swap is different, so the more info we get the more options we have to choose from and the better decisions we make. The electrical diagrams you posted are especially helpful, as are your videos on youtube.
thanks again
jon

I'm the original owner of a white '84 2M4 purchased Dec 10, 1983 from Pontiac. Always garaged, no rust, 4-wheel drifts are fun! 3800 SC swap to come!

IP: Logged

Oz
Member



Posts: 52
From: Warner Robins, Ga
Registered: Nov 2018

[Rate this member](#)



REPORT THIS POST 03-14-2019 09:52 PM

How did it turn out?

IP: Logged

Shho13
Member



Posts: 904
From: North Jersey
Registered: Feb 2014

[Rate this member](#)



REPORT THIS POST 03-17-2019 12:40 PM

Amazing post and lots of valuable information here. Thanks for documenting your swap and all the information so well! 🍷

"Discord"
Red 1988 GT under restoration!

Let's Go Mets!

(๖_๖)

IP: Logged

PFF
System Bot

AustinH
Member



REPORT THIS POST 05-09-2019 06:07 PM

removed



[This message has been edited by AustinH (edited 05-28-2020).]

IP: Logged

Posts: 67
From: USA!!!!
Registered: Jun 2014

[Rate this member](#)

LornesGT

Member

Posts: 1333
From: Granite City, IL
Registered: Jan 2013

[Rate this member](#)

	REPORT THIS POST	05-09-2019 06:52 PM
--	-------------------------	---------------------

It's not like I am an expert but the crank becomes positive so I believe the flow will be opposite of your explanation.

IP: Logged

AustinH

Member



Posts: 67
From: USA!!!!
Registered: Jun 2014

[Rate this member](#)

	REPORT THIS POST	05-09-2019 08:26 PM
--	-------------------------	---------------------

quote

Originally posted by LornesGT:

It's not like I am an expert but the crank becomes positive so I believe the flow will be opposite of your explanation.

Air through the PCV valve can only travel the direction shown. Intake vacuum sucks air directly into the blower through the PCV from the crank case.

[This message has been edited by AustinH (edited 01-24-2021).]

IP: Logged

AustinH

Member



Posts: 67
From: USA!!!!
Registered: Jun 2014

[Rate this member](#)

	REPORT THIS POST	05-31-2019 09:02 AM
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removed

[This message has been edited by AustinH (edited 05-28-2020).]

IP: Logged

AustinH

Member



Posts: 67
From: USA!!!!
Registered: Jun 2014

[Rate this member](#)

	REPORT THIS POST	06-18-2019 01:55 PM
--	-------------------------	---------------------

Removed.

[This message has been edited by AustinH (edited 01-13-2020).]

IP: Logged

DimeMachine

Member

Posts: 947
From: Eastern Metro, Minnesota, USA
Registered: Sep 2011

[Rate this member](#)

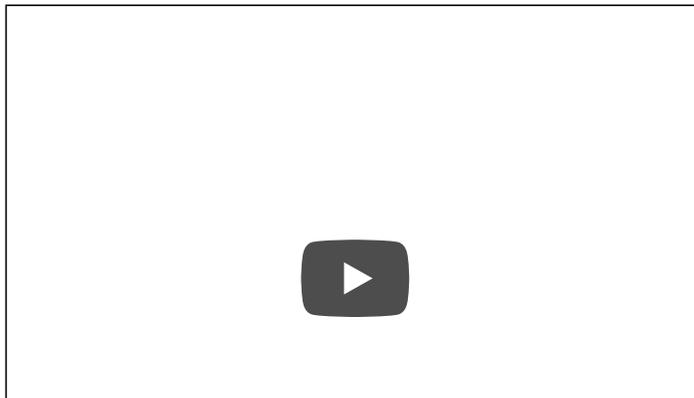
	REPORT THIS POST	06-18-2019 06:30 PM
--	-------------------------	---------------------

quote

Originally posted by AustinH:

Today's video is everything you need to know about a 3800sc.

Part 4 of the swap coming soon!





Austin H.
 Fiero How-To Videos at https://www.youtube.com/use...4?sub_confirmation=1
 Facebook page at <https://www.facebook.com/FieroAustinH/>
 Build thread - <http://www.fiero.nl/forum/Forum2/HTML/139530.html>
 Build pictures - <https://drive.google.com/dr..OM2I3THM?usp=sharing>

Fantastic thread young man! I'll be watching as you seem to be doing a fine job!

 84/87 NB, 3800SC, E-85, VS Cam, 2.8 Pulley, 4T65E-HD, HP Tuners, AEM Wideband, Regal GS Gauges, S-10 Brake Booster. 1/4 mile -11.85 at 114mph

IP: Logged

DimeMachine

Member

Posts: 947
 From: Eastern Metro, Minnesota, USA
 Registered: Sep 2011

[Rate this member](#)

	REPORT THIS POST	06-18-2019 06:33 PM
--	-------------------------	---------------------

You seem to be very analytical in your approach - researching and then making informed decisions. Curious what your conclusion was regarding the Gen 3 M90 ported vs Gen 5.

Thanks!

IP: Logged

AustinH

Member



Posts: 67
 From: USA!!!!
 Registered: Jun 2014

[Rate this member](#)

	REPORT THIS POST	06-18-2019 06:54 PM
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removed

[This message has been edited by AustinH (edited 05-28-2020).]

IP: Logged

DimeMachine

Member

Posts: 947
 From: Eastern Metro, Minnesota, USA
 Registered: Sep 2011

[Rate this member](#)

	REPORT THIS POST	06-18-2019 09:19 PM
--	-------------------------	---------------------

quote

Originally posted by AustinH:

Hey Dime.

I honestly picked up my Gen V + the two series III heads + the Lower Intake Manifold for \$150 total... maybe got lucky.

The hype online is that a ported Gen III blower is equal airflow to a Gen V blower.

I think that the 13% less HP parasitic and 15% less heat would remain with the Gen V blower however.

Here are the exact numbers from Eaton found here: <http://www.grandprixforums....en-five-gen-5-a.html>

The 90-cubic inch Gen V supercharger is very compact. Its housing includes the throttle-body adaptor, crankcase ventilation plumbing, coolant passages, the evaporative emissions purge valve and the rotor drive mechanism. The drive mechanism is sealed and permanently lubricated, obviating the need for oil connections and eliminating a potential source of leaks. Moreover, the Gen V features all-cast components and a larger, low-restriction outlet port. The tuned inlet port is also less restrictive, compared to previous-generation superchargers, allowing a larger (75 millimeter) throttle body. As a result, more air is pumped by the supercharger through the Series III's induction system. The Gen V's rotor is finished with Abradable Powder Coating (APC) rather than epoxy. APC is a patented material containing graphite that is electrostatically applied to the rotor and baked on. As a result, the rotor requires less clearance within the supercharger housing, resulting in less leakage around its edges, greater airflow at a given operating speed and lower operating temperature. The Gen V's rotor bearings have been enlarged to increase durability and reduce operating noise and vibration.

As a result, the Gen V operates at considerably higher efficiency than its predecessors. At wide open throttle, the Gen V turns at 700 fewer rpm (a 9 percent reduction), draws 13 percent less power from the crankshaft, decreases operating temperature 15 percent and increases volumetric efficiency 9 percent. For the customer, that means a 9 percent increase in horsepower (see product specifications), and best-in-class acceleration times for the Grand Prix.

Ha. Makes it an easy decision when a deal like that falls into your lap....

IP: Logged

	REPORT THIS POST	06-19-2019 08:48 AM
--	-------------------------	---------------------

Junior Member

Posts: 1
From: Texas
Registered: Feb 2019

[Rate this member](#)

Just wanted to add my "keep on moving forward"! You are doing FINE work, so keep it(the work), the posts, and vids on youtube coming. I'm sure I'm not the only one taking it all in.

How are you doing the computer? We are looking at hptuners and efilive for a programmer for our sc gtp swap into an 85 Fiero.

IP: Logged

PFF

System Bot

Dennis LaGrua

Member

Posts: 14659
From: Hillsborough, NJ U.S.A.
Registered: May 2000


Total ratings: 325

[Rate this member](#)



REPORT THIS POST

06-19-2019 09:01 AM

quote

Originally posted by TexasT:

How are you doing the computer? We are looking at hptuners and efilive for a programmer for our sc gtp swap into an 85 Fiero.

I would recommend that the OP use HP Tuners to tweak the program as there is a long history with that software. It takes a while to learn how to use editing software but if you add any mods, having it is essential.

" **THE BLACK PARALYZER**" -87GT 3800SC Series III engine, custom ZZP /Frozen Boost Intercooler setup, 3.4" Pulley, Northstar TB, LS1 MAF, 3" Spintech/Hedman Exhaust, P-log Manifold, Autolite 104's, MSD wires, Custom CAI, 4T65eHD w. custom axles, Champion Radiator, S10 Brake Booster, HP Tuners VCM Suite.

"**THE COLUSSUS**"

87GT - ALL OUT 3.4L Turbocharged engine, Garrett Hybrid Turbo, MSD ign., modified TH125H

" **ON THE LOOSE WITHOUT THE JUICE** "

IP: Logged

AustinH

Member



Posts: 67
From: USA!!!!
Registered: Jun 2014

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REPORT THIS POST

06-19-2019 09:47 AM

quote

Originally posted by TexasT:

Just wanted to add my "keep on moving forward"! You are doing FINE work, so keep it(the work), the posts, and vids on youtube coming. I'm sure I'm not the only one taking it all in.

How are you doing the computer? We are looking at hptuners and efilive for a programmer for our sc gtp swap into an 85 Fiero.

Thanks! The above post is correct, I have a friend with HPTuners. James L Brown (who manufactures 3800sc swap harnesses) also programs the PCM for you.

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AustinH

Member



Posts: 67
From: USA!!!!
Registered: Jun 2014

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08-27-2019 07:43 PM

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[This message has been edited by AustinH (edited 05-28-2020).]

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AustinH

Member



Posts: 67
From: USA!!!!
Registered: Jun 2014

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11-21-2019 09:12 AM

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[This message has been edited by AustinH (edited 05-28-2020).]

IP: Logged

Fiero Ron

Member

Posts: 16
From: CT
Registered: Aug 2015



REPORT THIS POST

11-21-2019 03:18 PM

I have been subscribed for a while, I love the videos, they are very informative. When I saw the part about the A/C compressor, I was laughing because I did the same exact thing torquing the nuts to 74 ft-lbs because of how it was described in the list of toraue specs. I pulled the threads right out of the compressor bracket. I ended up tapping to

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the next size with the same thread pitch and using a Time-Sert. Glad to have you and LostNotForgotten giving tips with the 3800 Supercharged install, it definitely helps many of us a lot. I hope you get over 1,000 subscribers soon, you definitely deserve it. Keep up the good work!

Ron

IP: Logged

AustinH
Member



Posts: 67
From: USA!!!!
Registered: Jun 2014

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01-13-2020 09:11 AM

removed

[This message has been edited by AustinH (edited 05-28-2020).]

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VROOMZ28
Junior Member

Posts: 10
From: New Brockton, AL
Registered: Jan 2020

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02-14-2020 12:03 AM

AustinH,

Thank you for the updated video. I am in the process of getting all my parts required to perform my 3800sc swap and I have been watching your videos and "LostbutNotForgotten's" videos. You guys are my inspiration and my guides in doing this swap. I can't thank you enough for sharing the information.

I have a 3800sc Series II L67, but I've aquired a Gen V M90 and L32 lower intake manifold.

Do you know is there any VATS or PASSKEY on the Gen II that needs to be disabled in the ECU? I'd like to test run my engine before I mount it in the Fiero.



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AustinH
Member



Posts: 67
From: USA!!!!
Registered: Jun 2014

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VROOMZ28
Junior Member

Posts: 10
From: New Brockton, AL
Registered: Jan 2020

[Rate this member](#)



REPORT THIS POST

02-14-2020 10:11 AM

quote

Do you know is there any VATS or PASSKEY on the Gen II that needs to be disabled in the ECU? I'd like to test run my engine before I mount it in the Fiero.

You are welcome! Glad to hear.

Yes, there is VATS you must disable. You can do that with a programming tool like HPTuners. I have a friend handle all that stuff for me. If your harness came from Danny (Canada) or James Brown, then they would have disabled it already. You can send out your PCM to one of them or take it to a shop to have done otherwise. What are you doing for a harness?

James Brown - <https://www.facebook.com/pr...p?id=100010340077920>

Danny - <https://www.facebook.com/danny.mcilmoyle>

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REPORT THIS POST

02-22-2020 10:53 PM

I wasn't sure if I should try to use the existing harness and splice into the Fiero wiring or try to get a harness made. The harness is really the only thing I am missing to perform my swap. My engine is from a 1998 Grand Prix GTP so hopefully its not too challenging. What are your recommendations? I pretty handy, but I'd be willing to buy one too save me some headaches...

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