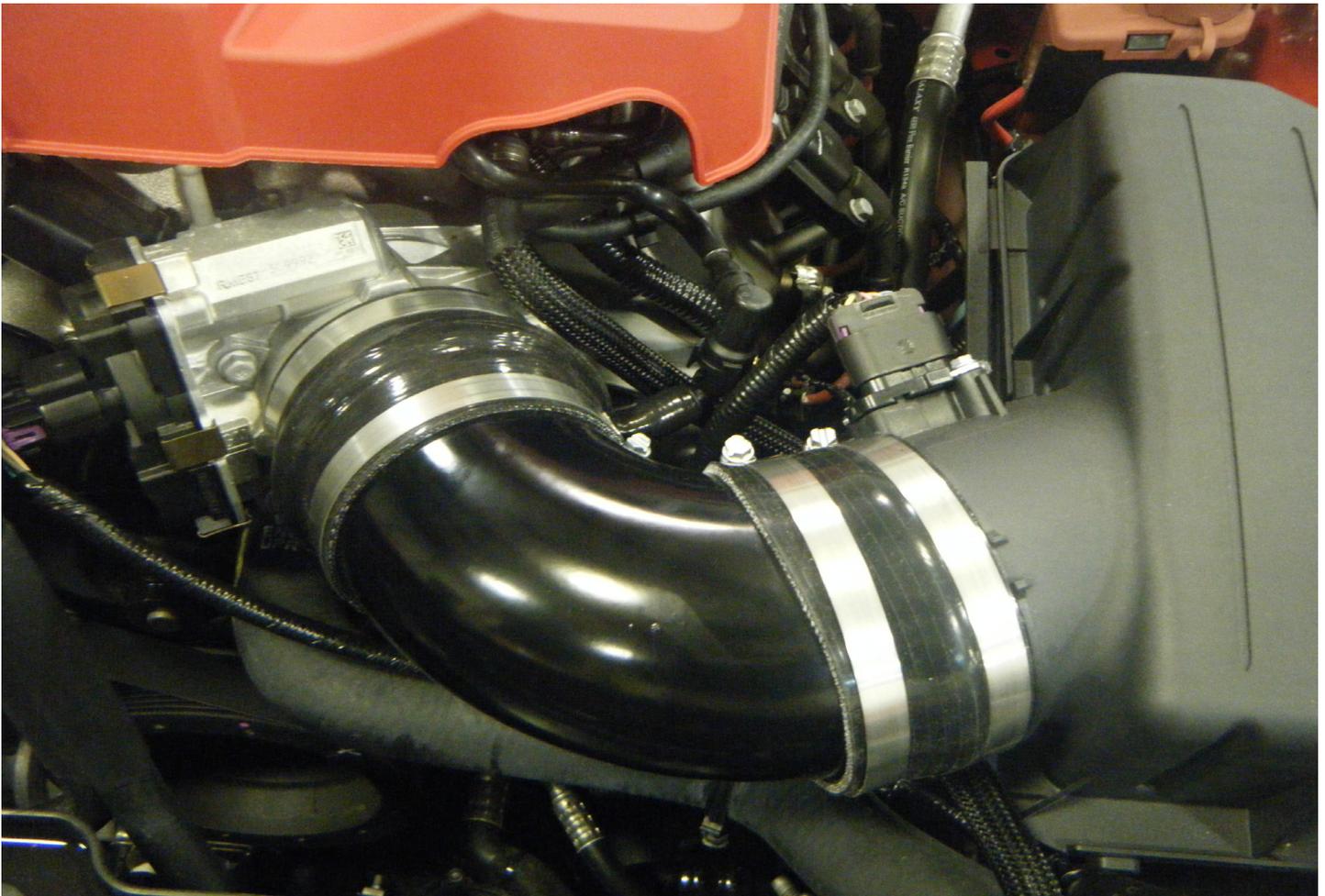


# LINGENFELTER

PERFORMANCE ENGINEERING

## 2012-2014 ZL1 Camaro Air Intake Duct Kit Installation Instructions (6.2L LSA V8 engine)



PN: L650172012

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Release date: 27 February 2014

## Parts List

### ZL1 Camaro Air Intake Duct Kit (PN: L650172012)

#	Part Number	Description
1	XX05312-0004	Duct, ZL1 Camaro for stock airbox
1	XX05312-0005	4" x 2.25" silicone hose
1	XX03277-0003	4" hump hose
1	L920100000	LPE domed decal
1	25862741	45 degree nipple connector
4	705-1027	Hose clamp, size 64
1	L920010000	Lingenfelter decal
1	Instructions	N/A

### Tools & Materials Required

- 8mm socket
- Socket wrench
- Silicone lubricant
- Hook tool

### Optional Items

Part number	Description
33-2434	K&N air filter, 2010-2013 Camaro
L220030709	2.55" LSA supercharger pulley, one piece
L250150309	LPE 10 bolt SC pulley hub and bolt kit
L220300709	2.55 2 piece LSA pulley, 8 rib, 10 bolt (requires 10 bolt hub)
L220310709	2.38 2 piece LSA pulley, 8 rib, 10 bolt (requires 10 bolt hub)
L220050709	LSA damper kit (SC pulley required)
L220646509	Stock diameter LSA pulley for LPE LSA damper, 8 rib, 7.87"
L220060709	6% OD LSA pulley, 8.25", for LSA damper kit
L220070709	11% OD LSA pulley, 8.66", for LSA damper kit
L220170709	18% overdrive LSA damper pulley, 9.17" OD
L220290709	23% overdrive LSA damper pulley, 9.55" OD
L220380709	28% overdrive LSA damper pulley, 10" OD
L220636509	LSA Idler Pulley Relocation Bracket Kit
L310065307	THERMOSTAT, 160, 2007-2013, LSA LS9 LS3
L310155307	LSA 174 degree thermostat
L960130709	Solid supercharger isolator coupling, LSA and LS9
L200175307	Single bolt camshaft conversion kit
L210150309	GT9 camshaft, 215/247 629/656
L730100309	High flow LS9 LSA injector, 62 lbs/hr, each [needs 8]
BOS0280158040	11.2 g/sec EV14 short injector, high impedance [needs 8]
K080645	8 rib 1643mm/64.5" belt
8PK1655	8 rib 1655mm/65.2" belt
12628026	stock 1680mm/66.1" belt
K080670	8 rib 1702mm/67.0" belt
K080675	8 rib 1715mm/67.5" belt
K080680	8 rib 1727mm/68.0" belt
K080685	8 rib 1740mm/68.5" belt
K080690	8 rib 1753mm/69.0" belt
K080695	8 rib 1765mm/69.5" belt
K080700	8 rib 1778mm/70.0" belt
EFIAUTOCAL	EFILive AutoCAL programmer

Thank you for purchasing the Lingenfelter Performance Engineering (LPE) Air Intake Duct Kit for the ZL1 Camaro. This kit is designed to be installed in vehicles that will retain the Original Equipment Manufacturer (OEM) airbox. Aftermarket supercharger pulleys and dampers increase the supercharger speed and airflow, resulting in increased inlet pressure drop that can cause the factory rubber inlet duct to get sucked shut under high RPM use. For this reason Lingenfelter Performance Engineering has designed a replacement air intake system to resolve these potential problems.

**Read the entire instruction manual before beginning installation. Many of the stock parts will be used in reassembly.**

**When referencing the side of the vehicle, the driver side of the vehicle is considered the left side and the passenger side of the vehicle is considered the right side of the vehicle.**

**Torque value warning - the torque values for the fasteners are provided in metric (Nm) and then imperial units. For the imperial units some are referenced in lb-ft and others in lb-in. Make sure you notice the difference and set your torque wrench correctly.**



1. Open the hood. If you have been driving your vehicle, allow a couple hours for the engine to cool down before beginning installation.



2. By pressing the retaining tab, disconnect the Positive Crankcase Ventilation (PCV) connector that connects the air intake tube to the driver-side valve cover.



3. There are two (2) clamps that connect the stock air duct to the throttle body and airbox as shown by the red arrows in the adjacent picture.



4. Using an 8mm socket and ratchet, loosen both clamps and remove the stock air duct.

NOTE: If you are installing the K&N air filter (PN: 33-2434), do so at this time.



5. On one end of the supplied LPE duct (PN:XX05312-0004), there should be a label that shows which end of the duct should be connected to the throttle body. Make sure that this end gets connected to the throttle body as the duct will not fit correctly with the other end going towards the throttle body.



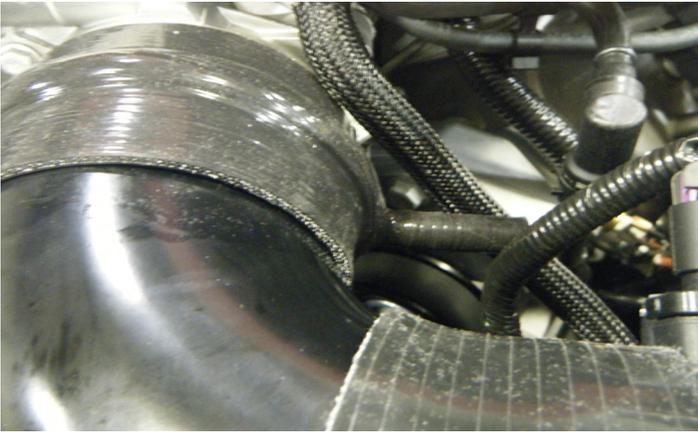
6. Using silicone lubricant and a hook tool, slide the 4" x 2.25" silicone hose (PN: XX05312-0005) onto the new air duct (PN: XX005312-0004), and then onto the airbox. Make sure that hose adequately engages the duct and airbox so that they can be secured using worm clamps later in the installation.

**CAUTION:** Silicone lubricant should be used sparingly. Avoid spraying silicone lubricant in close proximity of any sensor.

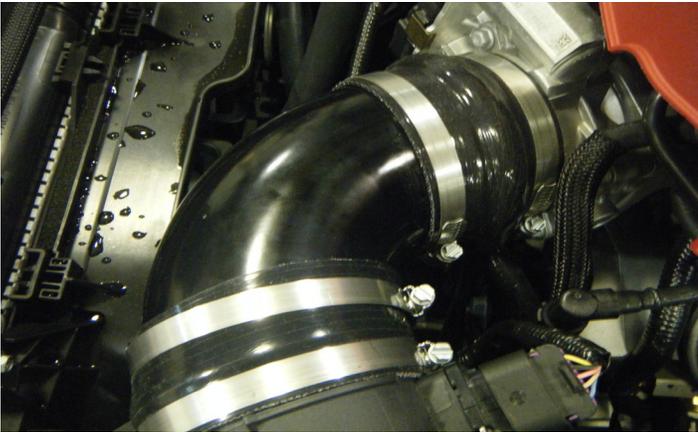


7. Using silicone lubricant and a hook tool, slide the 4" hump hose onto the air duct, and then onto the throttle body. Make sure that the hump hose adequately engages the duct and airbox so that they can be secured using worm clamps.

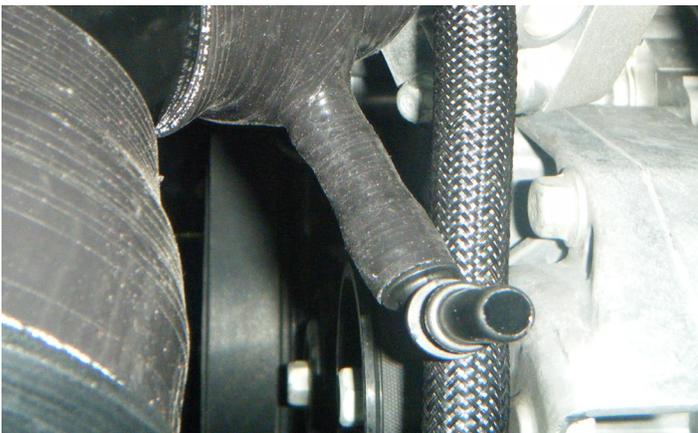
**CAUTION:** Silicone lubricant should be used sparingly. Avoid spraying silicone lubricant in close proximity of any sensor.



8. Clock the hump hose so that the breather is roughly at 3 o'clock, as shown in the adjacent illustration.



9. Secure the two hoses and air duct by installing the four (4) supplied hose clamps. Position the hose clamps as shown in the adjacent illustration.



10. Install the supplied 45 degree nipple connector into the breather hose. The nipple connector should be pointed straight up with respect to the hump hose breather.

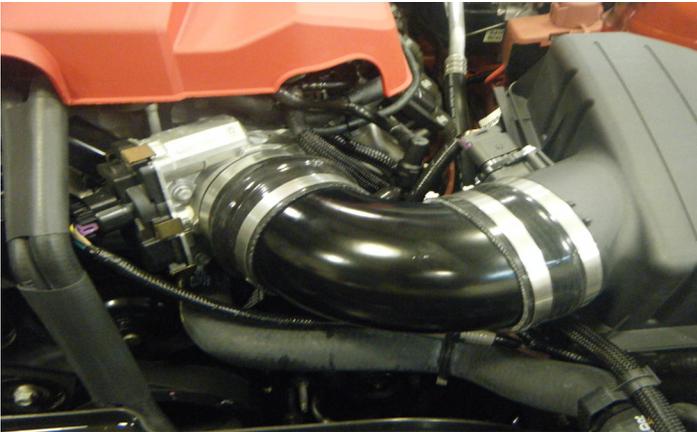
11. Reconnect the PCV connector that connects the air intake tube to the driver-side valve cover.



12. Add the Lingenfelter domed decal (PN: L920100000) to the duct if desired.



**Installation of the LPE ZL1 Camaro Air Intake Duct Kit is now complete.**



Many other items are available from LPE for your ZL1 Camaro including low temperature thermostats, intercooler fluid reservoirs, and much more. Contact LPE, visit our web site, or contact your LPE distributor for information about our other products.

**Table 1 - belt length and idler pulley diameters required for different LSA supercharger pulley and damper pulley combinations.**

Crank Pulley PN (Crank only OD%)	Supercharger Pulley	Supercharger Pulley PN	Belt	Belt PN	Upper Idler	Lower Idler	Idler Bracket (PN)	Pulley Ratio	Total OD%	SC Speed @ 6500 RPM
stock 7.8" (L220646509)	stock 3.0"	-	stock 1680mm	12628026	stock 90 mm	stock 70 mm	stock	2.6	N/A	16,900
	2.55" press-on	L220030709	1655mm/65.2"	8PK1655	stock 90 mm	stock 70 mm		3.1	18%	19,900
	2.55" 10 bolt	L220300709	1655mm/65.2"	8PK1655	stock 90 mm	stock 70 mm		3.1	18%	19,900
	2.38" 10 bolt	L220310709	1643mm/64.5"	K080645	stock 90 mm	stock 70 mm		3.3	26%	21,300
8.25" L22060709 (6%)	stock 3.0"	-	stock 1680mm	12628026	stock 90 mm	stock 70 mm	stock	2.8	6%	17,900
	2.55" press-on	L220030709	66.0"	K080660	stock 90 mm	stock 70 mm		3.2	25%	21,000
	2.55" 10 bolt	L220300709	66.0"	K080660	stock 90 mm	stock 70 mm		3.2	25%	21,000
	2.38" 10 bolt	L220310709	stock 1680mm	12628026	LPE 100 mm, 0.350" spacer, M10x1.5x60mm cap head screw	stock 70 mm		3.5	34%	22,500
8.66" L22070709 (11%)	stock 3.0"	-	67.5"	K080675	stock 90 mm	stock 70 mm	stock	2.9	11%	18,800
	2.55" press-on	L220030709	67.0"	K080670	stock 90 mm	stock 70 mm		3.4	31%	22,100
	2.55" 10 bolt	L220300709	67.0"	K080670	stock 90 mm	stock 70 mm		3.4	31%	22,100
	2.38" 10 bolt	L220310709	-	-	stock 90 mm	stock 70 mm		3.6	40%	23,700
9.17" L220170709 (18%)	stock 3.0"	-	67.5"	K080675	stock 90 mm	stock 70 mm	LPE (L220636509)	3.1	18%	19,900
	2.55" press-on	L220030709	67.0"	K080670	stock 90 mm	stock 70 mm		3.6	38%	23,400
	2.55" 10 bolt	L220300709	67.0"	K080670	stock 90 mm	stock 70 mm		3.6	38%	23,400
	2.38" 10 bolt	L220310709	-	-	stock 90 mm	stock 70 mm		3.9	48%	25,000
9.55" L220290709 (23%)	stock 3.0"	-	68.5"	K080685	stock 90 mm	stock 70 mm	LPE (L220636509)	3.2	23%	20,700
	2.55" press-on	L220030709	67.5"	K080675	stock 90 mm	stock 70 mm		3.8	44%	24,300
	2.55" 10 bolt	L220300709	67.5"	K080675	stock 90 mm	stock 70 mm		3.8	44%	24,300
	2.38" 10 bolt	L220310709	67.5"	K080675	stock 90 mm	stock 70 mm		4.0	54%	26,000
10.0" L220380709 (28%)	stock 3.0"	-	70.0"	K080700	stock 90 mm	stock 70 mm	LPE (L220636509)	3.3	28%	21,700
	2.55" press-on	L220030709	68.5"	K080685	stock 90 mm	stock 70 mm		3.9	51%	25,500
	2.55" 10 bolt	L220300709	68.5"	K080685	stock 90 mm	stock 70 mm		3.9	51%	25,500
	2.38" 10 bolt	L220310709	68.5"	K080685	stock 90 mm	stock 70 mm		4.2	62%	27,300
9.73" 10 rib L220450709 (requires 10 rib tensioner pulley)	2.70" 10 rib	XX03873-0004	67.5"	K100675	LPE 76 mm, 0.350 spacer, M10x1.5x60mm cap head screw	LPE 76 mm, 0.200 spacer, M10x1.5x60mm cap head screw	LPE (L220636509)	3.5	35%	22,800

Supercharger speeds above 23,000 RPM are not recommended. To calculate supercharger speed, multiply your maximum engine speed by the pulley ratio value listed above.

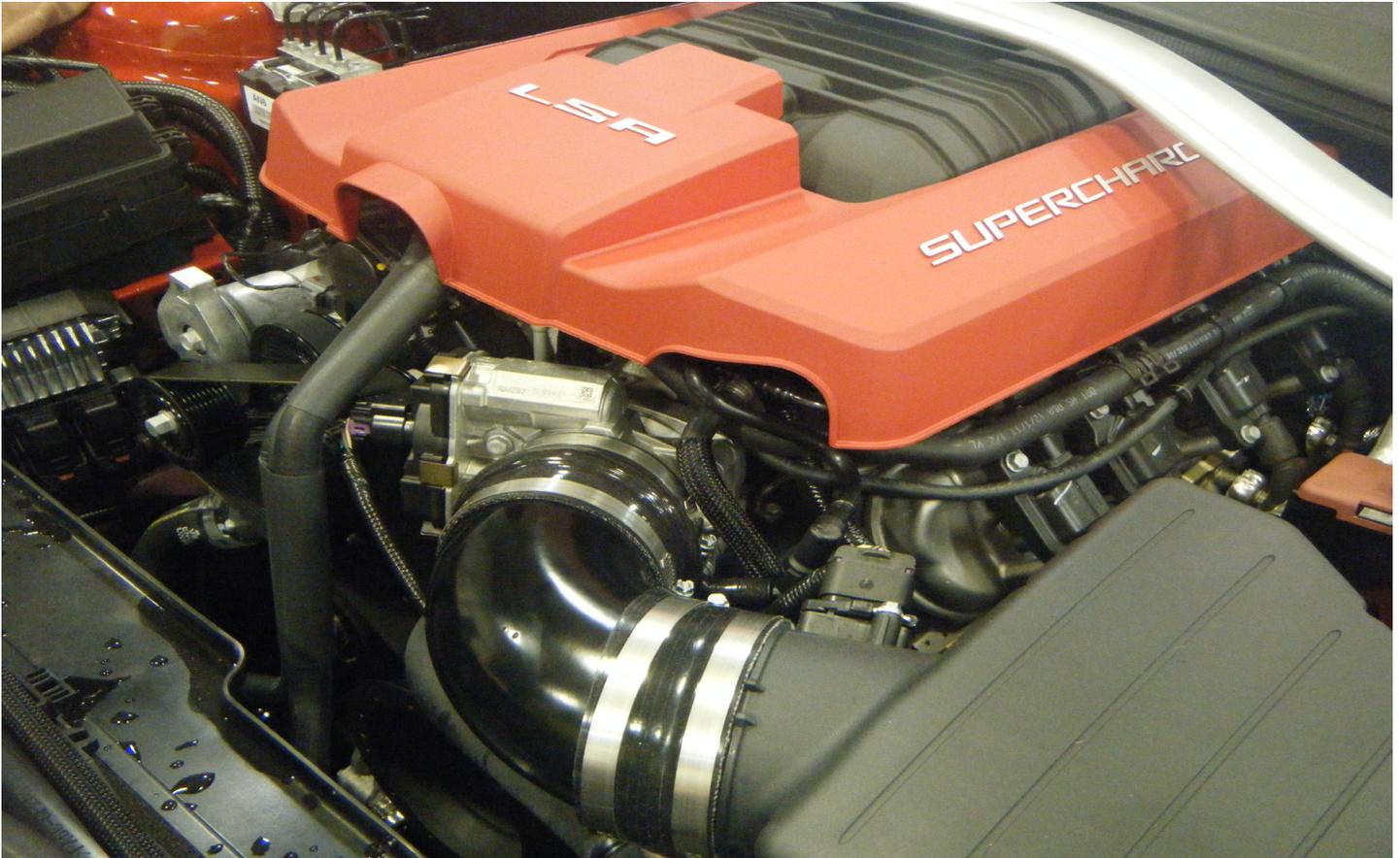
Pulley ratios above 35% should only be used in applications with proportionally lower maximum engine speeds (below 6500 RPM).

For applications where the crank pulley diameter is greater than or equal to 9.17", LPE idler relocation bracket (PN: L220636509) is required in order to provide enough clearance between the crank pulley and the lower idler pulley. For bearing durability reasons LPE does not recommend using idler pulleys smaller than 70mm.

An LPE idler pulley is required for these pulley/belt combinations.

For additional product installation information and technical support, contact LPE or your LPE products distributor. You can also find technical support and usage discussions regarding this product and many other LPE products in our Internet forums:

<http://www.lingenfelter.com/LPEforumfiles>



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