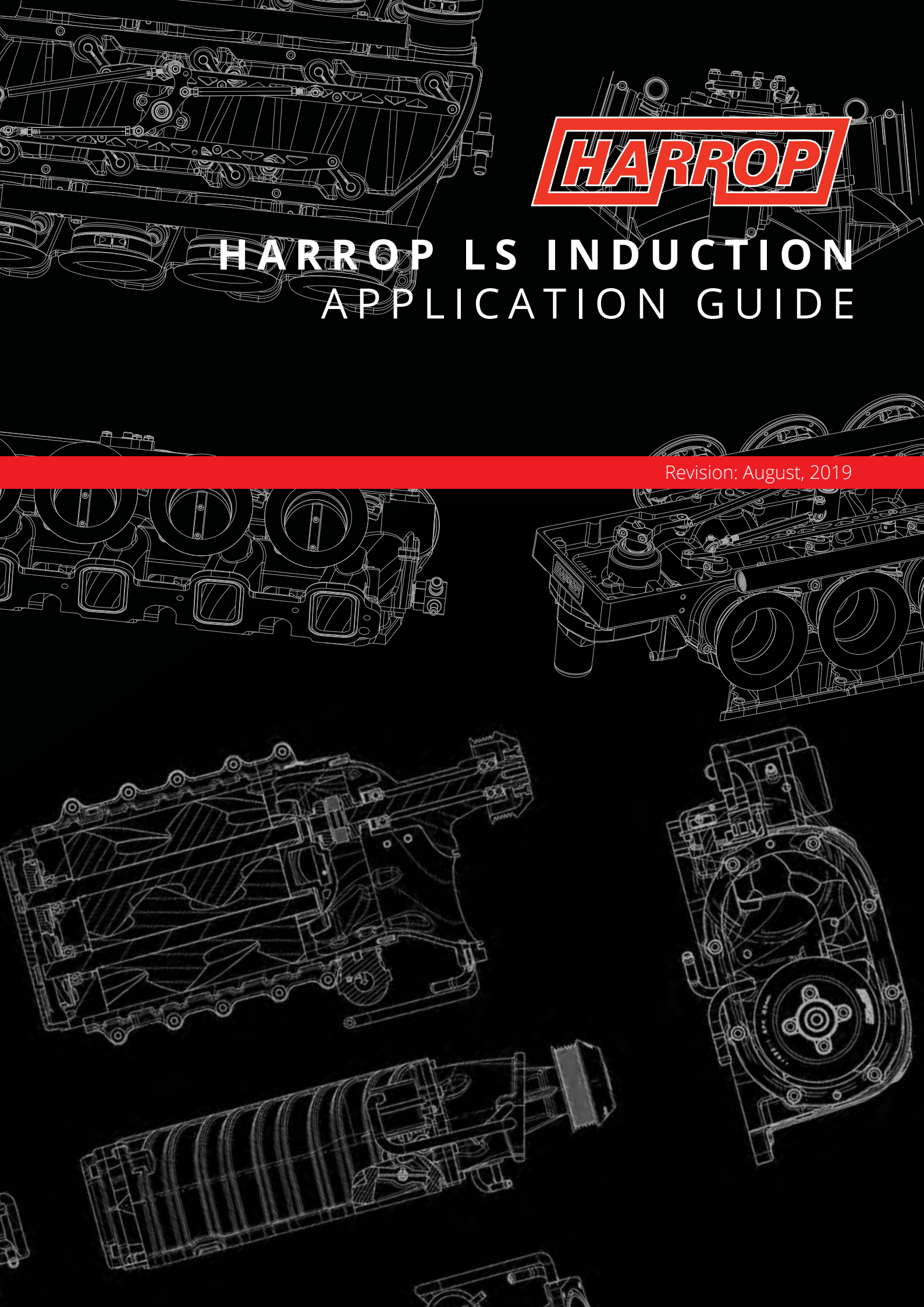




# HARROP LS INDUCTION APPLICATION GUIDE

Revision: August, 2019





## Introduction

Harrop Engineering is committed to manufacturing high performance products for OEM partners and the Automotive Aftermarket. Harrop designs and manufactures Superchargers for a variety of engine applications utilising Eaton TVS Technology to deliver more power and torque for uncompromising, high-performance driving. Harrop has a rich history as a key supply partner to OEM Supercharger programs including Ford Australia, Lotus UK and Toyota.

This document covers our range of TVS Superchargers and Inlet Manifolds for the popular V8 LS engine range, including the LSA, LS3, LS7 and the earlier LS1/LS2 including derivatives.

Our engineers have designed a TVS1900, TVS2300 and our largest TVS2650 Supercharger for these engines in a modular format that can be supplied as a complete kit to suit a vehicle or an engine kit given the popularity of LS swaps.

All Harrop TVS Superchargers come with a 36 month conditional product warranty, for more information please visit [www.harrop.com.au](http://www.harrop.com.au).

We hope this document helps you select the perfect Harrop Supercharger for your application so you can experience the joy of owning a Harrop Enhanced Ride.



Harrop FDFI Supercharger and drive systems for LSA Engines	2
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**LS1/LS2 PORT GEOMETRY**



**LS3/LSA PORT GEOMETRY**



**LS7 PORT GEOMETRY**



**TVS2650 RH INLET**



**TVS2650 FWD INLET**



**TVS2650 LH INLET**





The Harrop LSA Supercharger system is designed to provide an upgrade from the factory Eaton TVS1900 supercharger to the Harrop FDFI TVS2650 Supercharger.

Variant	TVS2650 Manifold Assembly	Install Kit	Supercharger Spacer Kit	Supercharger Drive Pulleys
HSV Gen-F 2013-2017	99-AMFD13822	99-AKIT13804	N/A	+16.8 offset
LSA engine - offset spacer (Camaro/CTSV)	99-AMFD13822	99-AKIT14211	99-ASPC14142 (Offset Spacer)	-8.2 offset
LSA engine (not vehicle specific)	99-AMFD13822	99-AKIT14211	N/A	+16.8 offset

Various drive ratios can be achieved using a combination of Supercharger Pulley and Crankshaft Pulley diameters.

Drive ratios available are from 2.34:1 to 3.60:1

The smallest recommended supercharger pulley is Ø70mm. Ø65mm pulleys are available; however this diameter can be prone to belt slip at high RPM. Ø85mm and Ø80mm pulleys will interfere with the inlet boot on a Harrop OTR.

The Eaton TVS2650 rotating group is validated up to 18,000 supercharger RPM. (Exceeding this supercharger speed will void the supercharger product warranty)

Where a drive ratio can be achieved using several different combinations, it is recommended to use a larger diameter Supercharger Pulley if possible.

Crankshaft Pulley	Diameter	Example Part Number
OEM LSA	Ø199mm	
5% Overdrive	Ø209mm	Power Bond PBO1662SS5
10% Overdrive	Ø219mm	Power Bond PBO1662SS10
18% Overdrive	Ø234mm	Power Bond PBO1662SS18

Supercharger Pulley Diameters
Ø65mm
Ø70mm
Ø75mm
Ø80mm
Ø85mm

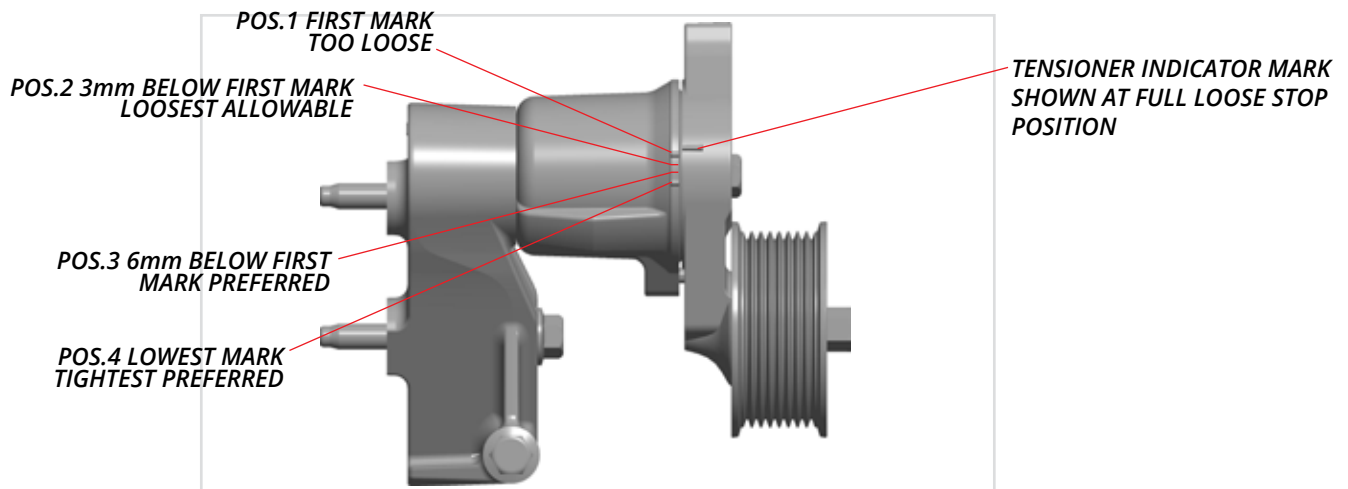
# HARROP LS INDUCTION APPLICATION GUIDE

## Harrop FDFI2650 LSA Tensioner Position & Belt Path

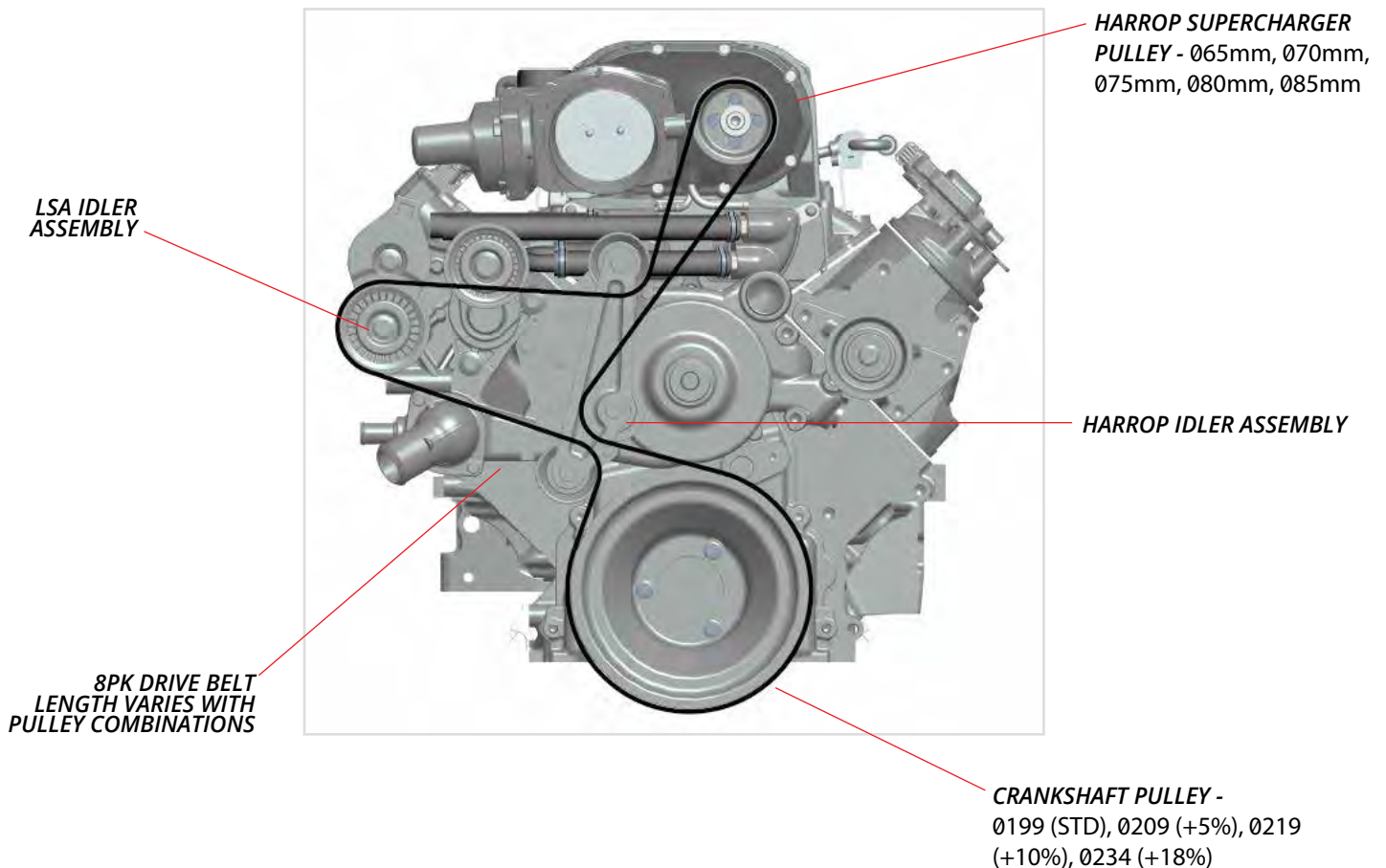


To check that the Tensioner is within its operating range of movement, look for the indicator mark on the RHS of the tensioner arm.

There will be some variation in installed tensioner position due to belt length, component machining and assembly tolerances.



**LSA TENSIONER INDICATOR MARKS  
VISUAL CHECK WHEN STATIC**



# HARROP LS INDUCTION APPLICATION GUIDE

## HARROP TVS2650 - LSA Engine Supercharger Systems

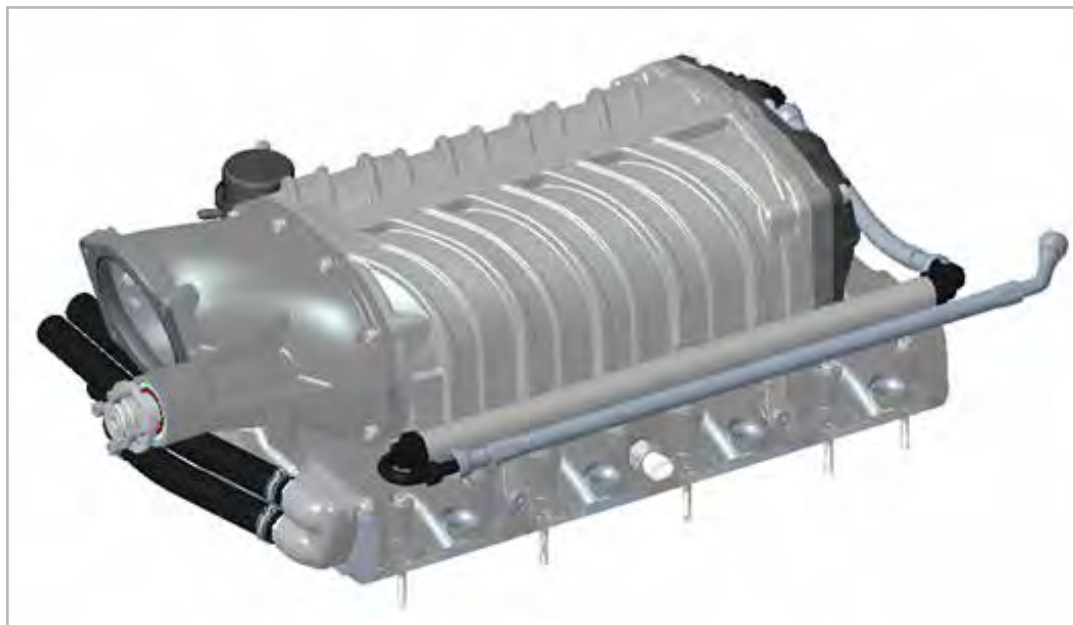


The table below defines the drive ratio, pulley diameters and belt lengths. With preferred combinations displayed with **bold** text and **red cells** indicating high Supercharger speed @ 7000 crank rpm – warranty becomes void in these instances.

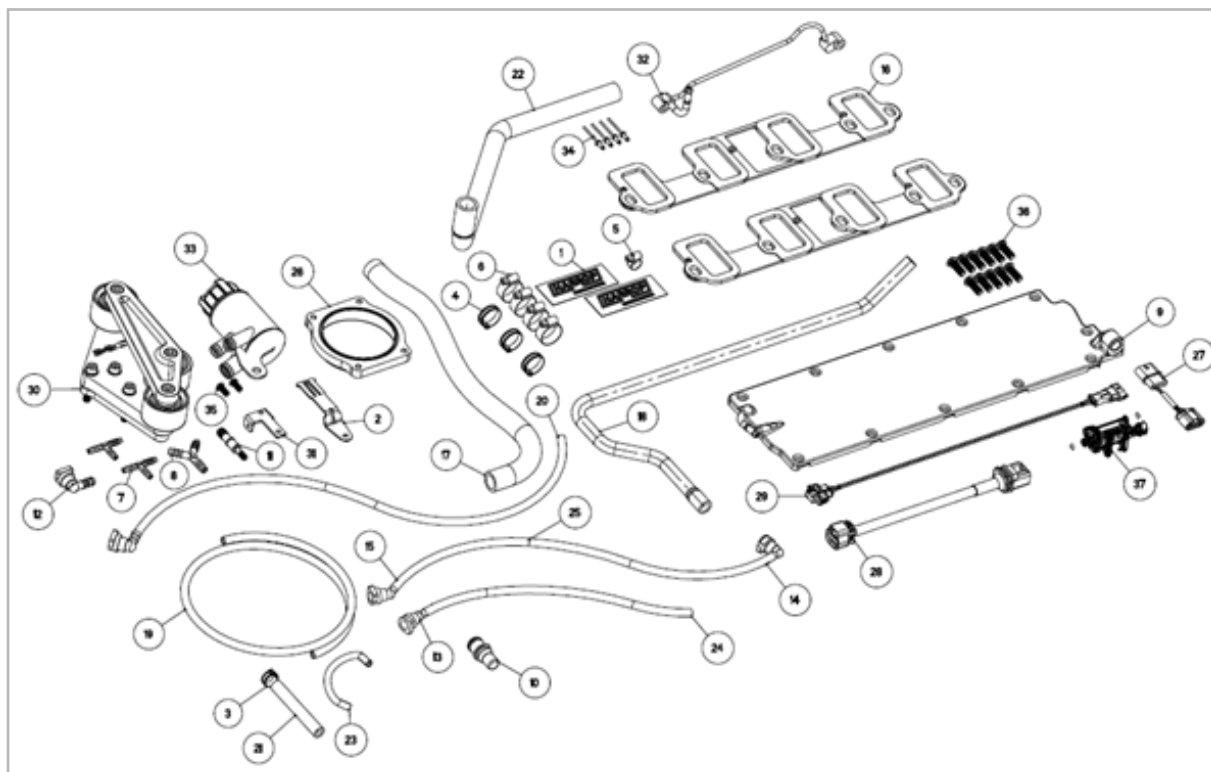
HARROP TVS2650 LSA DRIVE WITH MANIFOLD SPACER								
DRIVE RATIO	SUPERCHARGER SPEED AT 7000 CRANKSHAFT RPM	SUPERCHARGER PULLEY Ø	SUPERCHARGER PULLEY PART NUMBER	SUPERCHARGER PULLEY DESCRIPTION	CRANK PULLEY Ø	OVERDRIVE CRANK BALANCER	BELT LENGTH	TENSIONER POSITION
3.06	21431	65	99-PLY14216	Pulley S/Chrgr Ø65 LSA 8PK, 8.2 OFFSET	199	0%	1860	3
2.84	19900	70	99-PLY14217	Pulley S/Chrgr Ø70 LSA 8PK, 8.2 OFFSET	199	0%	1880	1
<b>2.65</b>	<b>18573</b>	<b>75</b>	<b>99-PLY14151</b>	<b>Pulley S/Chrgr Ø75 LSA 8PK, 8.2 OFFSET</b>	<b>199</b>	<b>0%</b>	<b>1890</b>	<b>2</b>
<b>2.49</b>	<b>17413</b>	<b>80</b>	<b>99-PLY14218</b>	<b>Pulley S/Chrgr Ø80 LSA 8PK 8.2 OFFSET</b>	<b>199</b>	<b>0%</b>	<b>1890</b>	<b>3</b>
2.34	16388	85	99-PLY14219	Pulley S/Chrgr Ø85 LSA 8PK, 8.2 OFFSET	199	0%	1907	1
3.22	22508	65	99-PLY14216	Pulley S/Chrgr Ø65 LSA 8PK, 8.2 OFFSET	209	5%	1880	3
<b>2.99</b>	<b>20900</b>	<b>70</b>	<b>99-PLY14217</b>	<b>Pulley S/Chrgr Ø70 LSA 8PK, 8.2 OFFSET</b>	<b>209</b>	<b>5%</b>	<b>1880</b>	<b>4</b>
<b>2.79</b>	<b>19507</b>	<b>75</b>	<b>99-PLY14151</b>	<b>Pulley S/Chrgr Ø75 LSA 8PK, 8.2 OFFSET</b>	<b>209</b>	<b>5%</b>	<b>1907</b>	<b>2</b>
<b>2.61</b>	<b>18288</b>	<b>80</b>	<b>99-PLY14218</b>	<b>Pulley S/Chrgr Ø80 LSA 8PK 8.2 OFFSET</b>	<b>209</b>	<b>5%</b>	<b>1907</b>	<b>3</b>
2.46	17212	85	99-PLY14219	Pulley S/Chrgr Ø85 LSA 8PK, 8.2 OFFSET	209	5%	1907	4
3.37	23585	65	99-PLY14216	Pulley S/Chrgr Ø65 LSA 8PK, 8.2 OFFSET	219	10%	1907	1
<b>3.13</b>	<b>21900</b>	<b>70</b>	<b>99-PLY14217</b>	<b>Pulley S/Chrgr Ø70 LSA 8PK, 8.2 OFFSET</b>	<b>219</b>	<b>10%</b>	<b>1910</b>	<b>2</b>
<b>2.92</b>	<b>20440</b>	<b>75</b>	<b>99-PLY14151</b>	<b>Pulley S/Chrgr Ø75 LSA 8PK, 8.2 OFFSET</b>	<b>219</b>	<b>10%</b>	<b>1920</b>	<b>2</b>
<b>2.74</b>	<b>19163</b>	<b>80</b>	<b>99-PLY14218</b>	<b>Pulley S/Chrgr Ø80 LSA 8PK 8.2 OFFSET</b>	<b>219</b>	<b>10%</b>	<b>1920</b>	<b>3</b>
2.58	18035	85	99-PLY14219	Pulley S/Chrgr Ø85 LSA 8PK, 8.2 OFFSET	219	10%	1940	2
3.60	25200	65	99-PLY14216	Pulley S/Chrgr Ø65 LSA 8PK, 8.2 OFFSET	234	18%	1940	2
<b>3.34</b>	<b>23400</b>	<b>70</b>	<b>99-PLY14217</b>	<b>Pulley S/Chrgr Ø70 LSA 8PK, 8.2 OFFSET</b>	<b>234</b>	<b>18%</b>	<b>1945</b>	<b>3</b>
<b>3.12</b>	<b>21840</b>	<b>75</b>	<b>99-PLY14151</b>	<b>Pulley S/Chrgr Ø75 LSA 8PK, 8.2 OFFSET</b>	<b>234</b>	<b>18%</b>	<b>1945</b>	<b>4</b>
<b>2.93</b>	<b>20475</b>	<b>80</b>	<b>99-PLY14218</b>	<b>Pulley S/Chrgr Ø80 LSA 8PK 8.2 OFFSET</b>	<b>234</b>	<b>18%</b>	<b>1965</b>	<b>3</b>
2.75	19271	85	99-PLY14219	Pulley S/Chrgr Ø85 LSA 8PK, 8.2 OFFSET	234	18%	1975	3



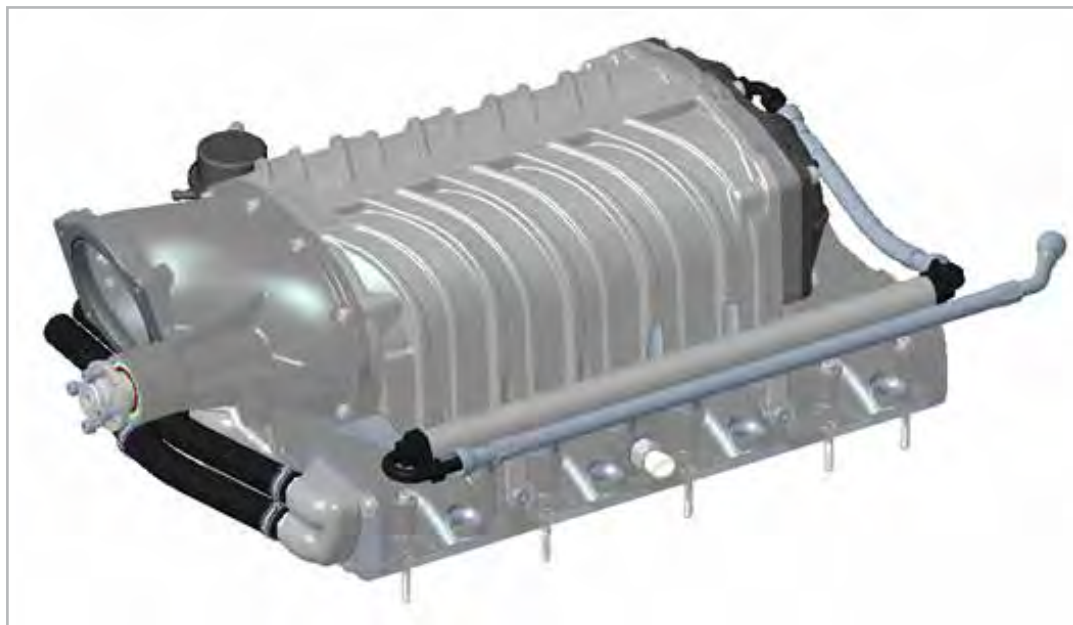
99-EK-A13822-LSA HSV GEN-F OR CHEVY SS



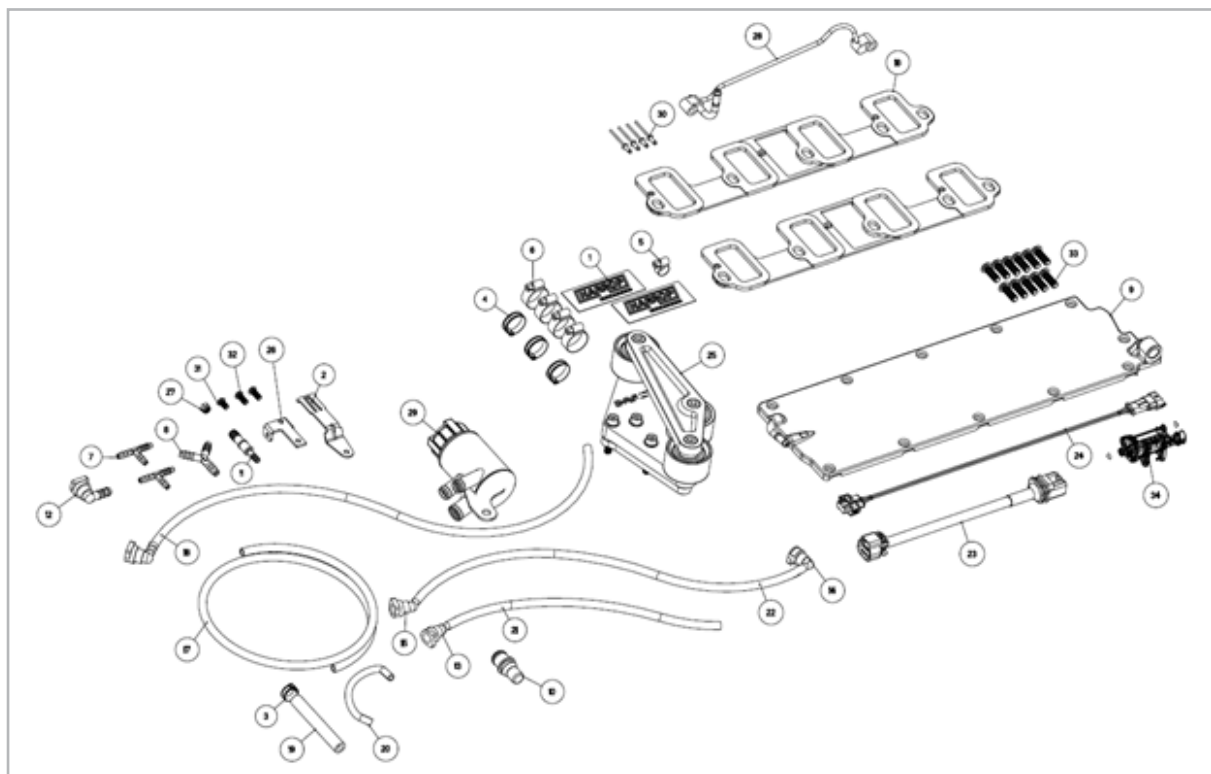
INSTALL KIT - 99-AKIT13804: FDFI INSTALL KIT  
TO SUIT LSA HSV GEN-F OR CHEVY SS



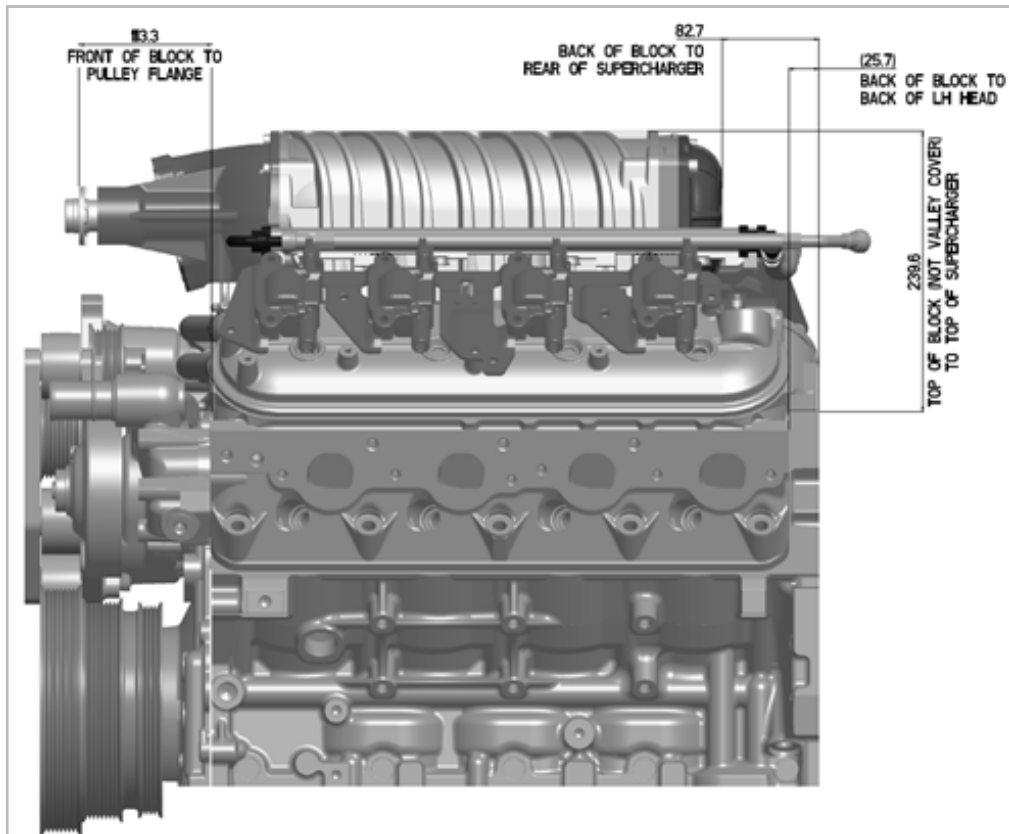
**99-EK-A13822-LSA ENGINE KIT WITH 99-ASPC14142**



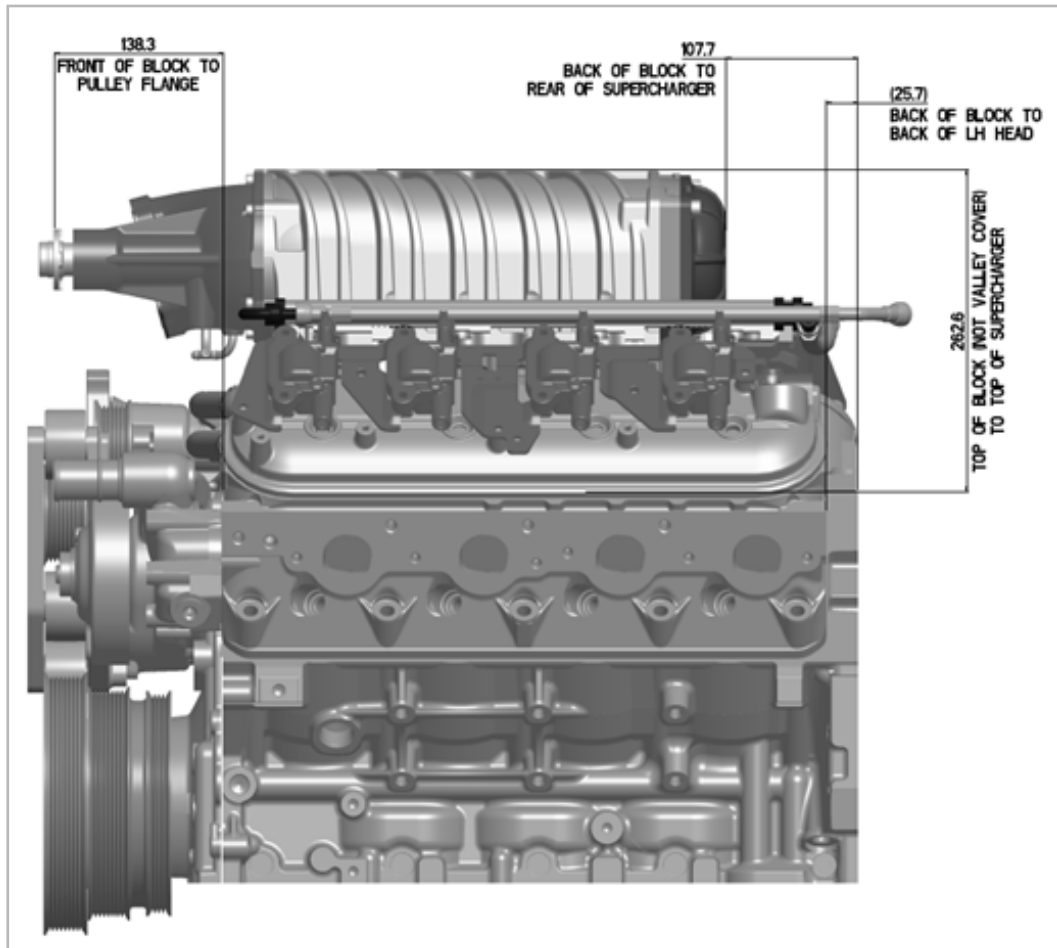
**INSTALL KIT - 99-AKIT14211: FDFI INSTALL KIT TO SUIT  
LSA ENGINE NOT VEHICLE SPECIFIC**



99-EK-A13822-LSA-US SUPERCHARGER LAYOUT



99-EK-A13822-LSA-US SUPERCHARGER LAYOUT -  
 INCLUDING 99-ASPC14142 OFFSET SUPERCHARGER SPACER



The Harrop LS3 Supercharger system is designed to provide a modular positive displacement boosting solution.

There are two supercharger drive options, both keep the factory belt position in order to maximise bonnet clearance. The 6PK system has fewer overall components and is suitable for low to moderate boost. The Optional 8PK system has been designed to reduce belt slip and improve durability in moderate to highly boosted engines.

### Applications:

Holden VE/ HSV E-Series/ Pontiac G8

Holden VF/ Chevy SS

LS3, L76, L77 and L98

Variant	TVS 2300 manifold assembly	Install kit	6PK	8PK Supercharger drive pulleys
LS3 TVS1900	A10952	A11362	-23.2 offset	-19.8 offset
LS3 TVS2300	A10953	A11362	-23.2 offset	-19.8 offset
LS3 TVS2650	A13822	A11362	-23.2 offset	-19.8 offset

Various drive ratios can be achieved using a combination of Supercharger Pulley and Crankshaft Pulley diameters.

8pk kit 99-AKIT13784 uses the LSA GM tensioner on the LS3 FEAD belt run, with an 8pk belt.

Drive ratios available are from 1.96:1 to 3.15:1

The smallest recommended supercharger pulley is Ø70mm. Ø65mm pulleys are available; however this diameter can be prone to belt slip at high RPM. Ø85mm pulleys and above will interfere with the inlet boot on a Harrop OTR, as well as the Bonnet liner on a Holden VE (Pontiac G8).

The Eaton TVS rotating group is validated up to 18,000 supercharger RPM. (Exceeding this supercharger speed will void the supercharger product warranty)

Where a drive ratio can be achieved using several different combinations, it is recommended to use a larger diameter Supercharger Pulley if possible.

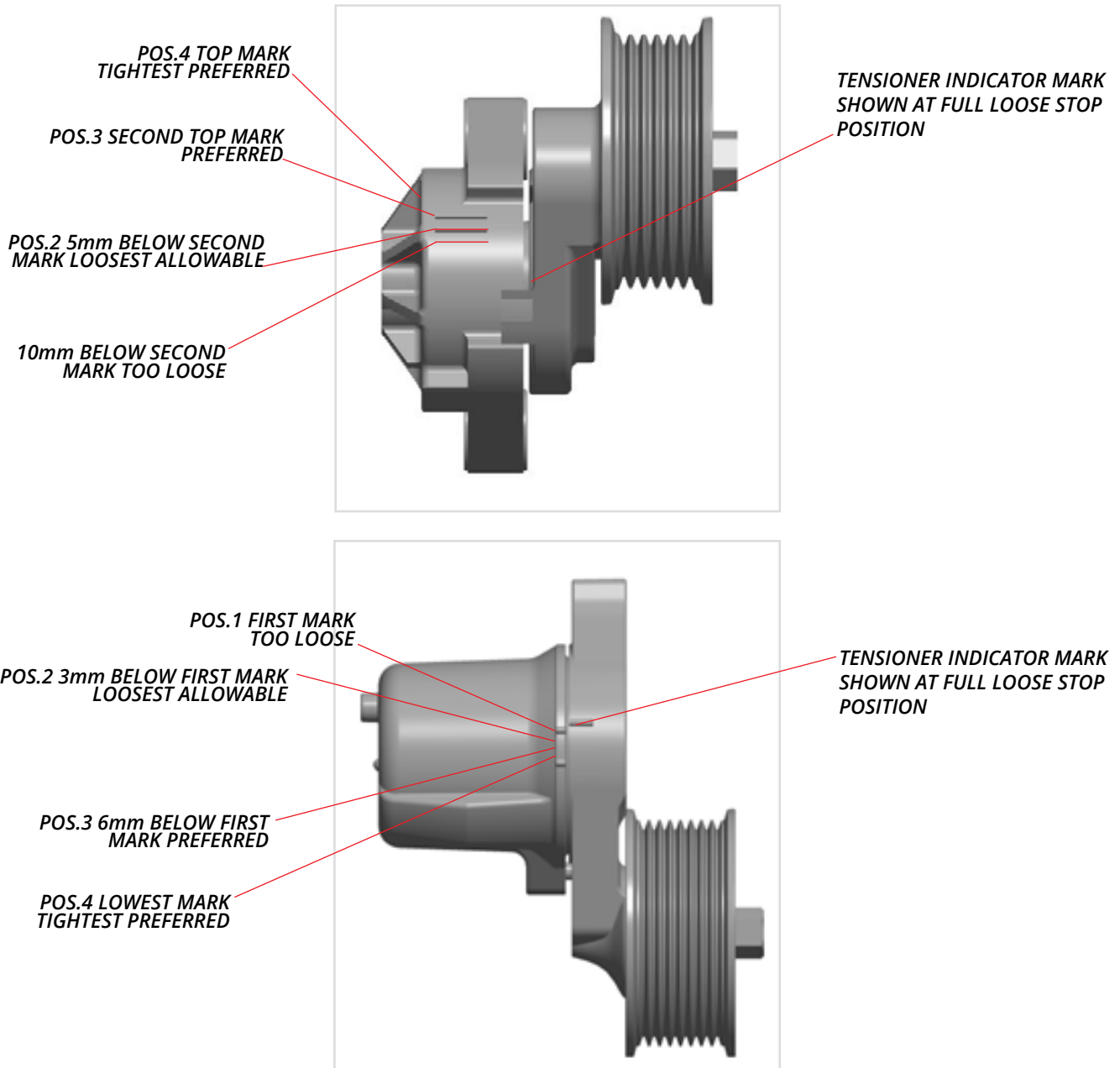
Crankshaft Pulley	Diameter	Example Part Number
OEM LS3	Ø186mm	
8PK	Ø186mm	65-PB81117-SC
10% Overdrive	Ø205mm	65-PB081117-SC10

Supercharger Pulley Diameters
Ø65mm
Ø70mm
Ø75mm
Ø80mm
Ø85mm
Ø90mm
Ø95mm

## Tensioner Position & Belt Path

To check that the Tensioner is within its operating range of movement, look for the indicator mark on the tensioner arm.

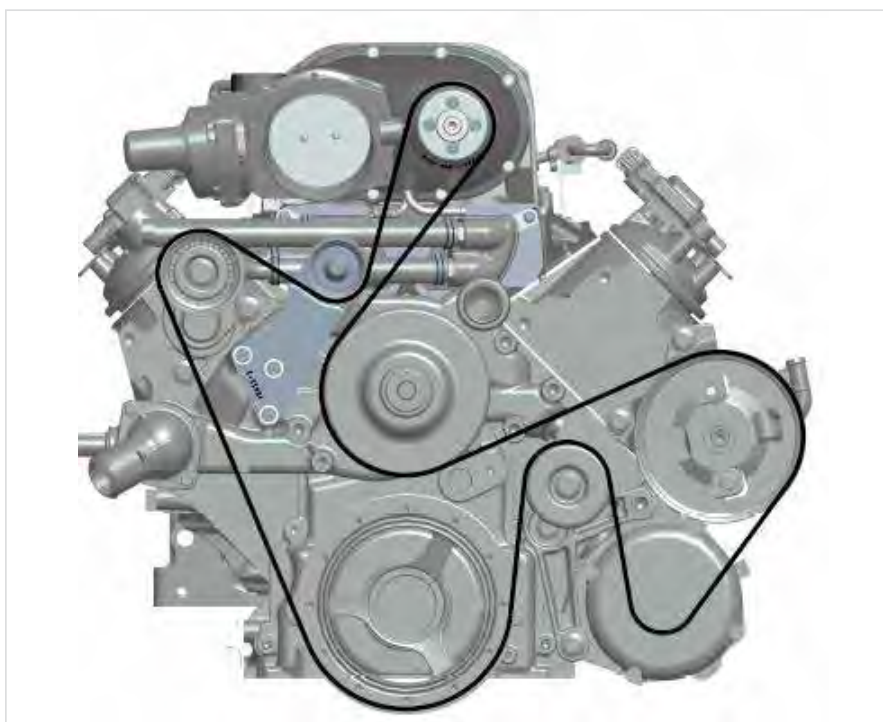
There will be some variation in installed tensioner position due to belt length, component machining and assembly tolerances.



### LS3 TENSIONER INDICATOR MARKS

#### VISUAL CHECK WHEN STATIC

When a belt is tight to fit on, the best way is to fit the belt over the water-pump pulley last while holding the tensioner at full travel.



*LS3 6PK FEAD with Power steering pump  
Holden VE / Pontiac G8*



*LS3 6PK FEAD without Power steering pump  
Holden VF / Chevy SS*

# HARROP LS INDUCTION APPLICATION GUIDE

## FDI2650 6PK/8PK suits VE/G8 combinations



The tables below define the drive ratio, pulley diameters and belt lengths. Preferred combinations are highlighted in bold text. Red highlighted cells indicate high Supercharger speed @ 7000 crank rpm – warranty void.

6PK LS3 1900-2300 DRIVE HOLDEN VE/ PONTIAC G8								
DRIVE RATIO	SUPERCHARGER SPEED AT 7000 CRANKSHAFT RPM	SUPERCHARGER PULLEY Ø	SUPERCHARGER PULLEY PART NUMBER	SUPERCHARGER PULLEY DESCRIPTION	CRANK PULLEY Ø	POWER STEER PULLEY Ø	BELT LENGTH	TENSIONER POSITION
2.86	<b>20031</b>	65	99-PLY13099	Pulley Drive Frt 6PK 65x30x23.2 FDFI	186	145	2465	3
<b>2.66</b>	<b>18600</b>	<b>70</b>	<b>99-PLY11625</b>	<b>Pulley Drive Frt 6PK 70x30x23.2 FDFI</b>	<b>186</b>	<b>145</b>	<b>2465</b>	<b>4</b>
2.48	17360	75	99-PLY11624	Pulley Drive Frt 6PK 75x30x23.2 FDFI	186	145	2490	2
2.33	16275	80	99-PLY11623	Pulley Drive Frt 6PK 80x30x23.2 FDFI	186	145	2490	3
2.19	15318	85	99-PLY11622	Pulley Drive Frt 6PK 85x30x23.2 FDFI	186	145	2490	4
2.07	14467	90	99-PLY12655	Pulley Drive Frt 6PK 90x30x23.2 FDFI	186	145	2510	3
1.96	13705	95	99-PLY12901	Pulley Drive Frt 6PK 95x30x23.2 FDFI	186	145	2510	4

6PK LS3 2650 DRIVE HOLDEN VE/ PONTIAC G8								
DRIVE RATIO	SUPERCHARGER SPEED AT 7000 CRANKSHAFT RPM	SUPERCHARGER PULLEY Ø	SUPERCHARGER PULLEY PART NUMBER	SUPERCHARGER PULLEY DESCRIPTION	CRANK PULLEY Ø	POWER STEER PULLEY Ø	BELT LENGTH	TENSIONER POSITION
2.86	<b>20031</b>	65	99-PLY13099	Pulley Drive Frt 6PK 65x30x23.2 FDFI	186	145	2465	3.5
<b>2.66</b>	<b>18600</b>	<b>70</b>	<b>99-PLY11625</b>	<b>Pulley Drive Frt 6PK 70x30x23.2 FDFI</b>	<b>186</b>	<b>145</b>	<b>2465</b>	<b>4.5</b>
2.48	17360	75	99-PLY11624	Pulley Drive Frt 6PK 75x30x23.2 FDFI	186	145	2490	3
2.33	16275	80	99-PLY11623	Pulley Drive Frt 6PK 80x30x23.2 FDFI	186	145	2490	3.5
2.19	15318	85	99-PLY11622	Pulley Drive Frt 6PK 85x30x23.2 FDFI	186	145	2510	3
2.07	14467	90	99-PLY12655	Pulley Drive Frt 6PK 90x30x23.2 FDFI	186	145	2510	3.5
1.96	13705	95	99-PLY12901	Pulley Drive Frt 6PK 95x30x23.2 FDFI	186	145	2515	3.5

### Recommended for Holden VE / Pontiac G8 utilising Harrop OTR:

Part Number	Description
99-EK-A12026-LS3	S/Charger Eng Kit FDFI2300 LS3 W/Pump
99-AKIT11362	Kit Install VE 1900-2300 FDFI Harrop

N.B. Belt, Supercharger Pulley and Injectors are additional items to be defined at time of order.

# HARROP LS INDUCTION APPLICATION GUIDE

## FDI2650 6PK suits Holden VF/ Chevy SS combinations



The tables below define the drive ratio, pulley diameters and belt lengths. Preferred combinations are highlighted in bold text. Red highlighted cells indicate high Supercharger speed @ 7000 crank rpm – warranty void.

6PK LS3 1900-2300 DRIVE Holden VF/ Chevy SS								
DRIVE RATIO	SUPERCHARGER SPEED AT 7000 CRANKSHAFT RPM	SUPERCHARGER PULLEY Ø	SUPERCHARGER PULLEY PART NUMBER	SUPERCHARGER PULLEY DESCRIPTION	CRANK PULLEY Ø	POWER STEER PULLEY Ø	BELT LENGTH	TENSIONER POSITION
2.86	20031	65	99-PLY13099	Pulley Drive Frt 6PK 65x30x23.2 FDFI	186	77.5	2345	4
2.66	18600	70	99-PLY11625	Pulley Drive Frt 6PK 70x30x23.2 FDFI	186	77.5	2360	3
2.48	17360	75	99-PLY11624	Pulley Drive Frt 6PK 75x30x23.2 FDFI	186	77.5	2375	3
2.33	16275	80	99-PLY11623	Pulley Drive Frt 6PK 80x30x23.2 FDFI	186	77.5	2385	3
2.19	15318	85	99-PLY11622	Pulley Drive Frt 6PK 85x30x23.2 FDFI	186	77.5	2400	3
2.07	14467	90	99-PLY12655	Pulley Drive Frt 6PK 90x30x23.2 FDFI	186	77.5	2400	3.5
1.96	13705	95	99-PLY12901	Pulley Drive Frt 6PK 95x30x23.2 FDFI	186	77.5	2415	3

6PK LS3 2650 DRIVE Holden VF/ Chevy SS								
DRIVE RATIO	SUPERCHARGER SPEED AT 7000 CRANKSHAFT RPM	SUPERCHARGER PULLEY Ø	SUPERCHARGER PULLEY PART NUMBER	SUPERCHARGER PULLEY DESCRIPTION	CRANK PULLEY Ø	POWER STEER PULLEY Ø	BELT LENGTH	TENSIONER POSITION
2.86	20031	65	99-PLY13099	Pulley Drive Frt 6PK 65x30x23.2 FDFI	186	77.5	2375	2.5
2.66	18600	70	99-PLY11625	Pulley Drive Frt 6PK 70x30x23.2 FDFI	186	77.5	2375	3
2.48	17360	75	99-PLY11624	Pulley Drive Frt 6PK 75x30x23.2 FDFI	186	77.5	2385	3
2.33	16275	80	99-PLY11623	Pulley Drive Frt 6PK 80x30x23.2 FDFI	186	77.5	2400	3
2.19	15318	85	99-PLY11622	Pulley Drive Frt 6PK 85x30x23.2 FDFI	186	77.5	2415	2
2.07	14467	90	99-PLY12655	Pulley Drive Frt 6PK 90x30x23.2 FDFI	186	77.5	2415	3
1.96	13705	95	99-PLY12901	Pulley Drive Frt 6PK 95x30x23.2 FDFI	186	77.5	2415	3.5

### Recommended for Holden VF / Chevy SS:

Part Number	Description
99-EK-A12026-LS3	S/Charger Eng Kit FDFI2300 LS3 W/Pump
99-AKIT12024	Kit Install VF 1900-2300 FDFI Harrop

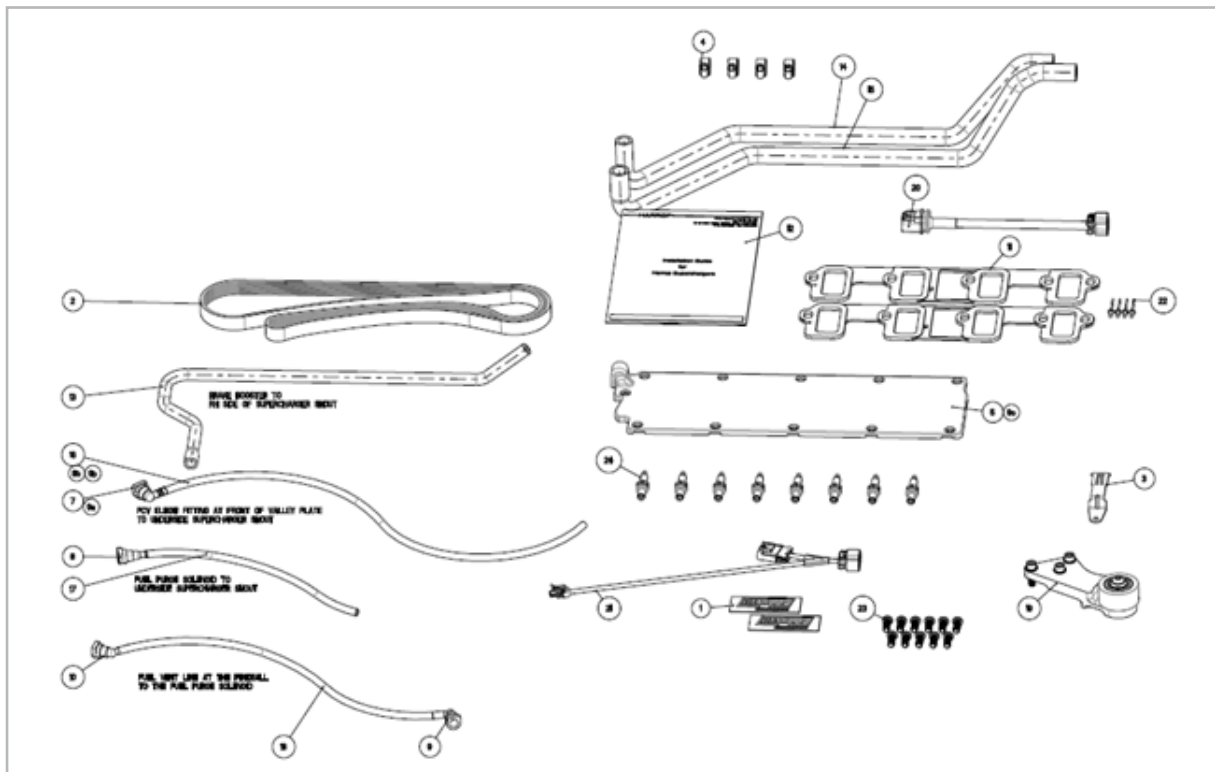
N.B. Belt, Supercharger Pulley and Injectors are additional items to be defined at time of order.



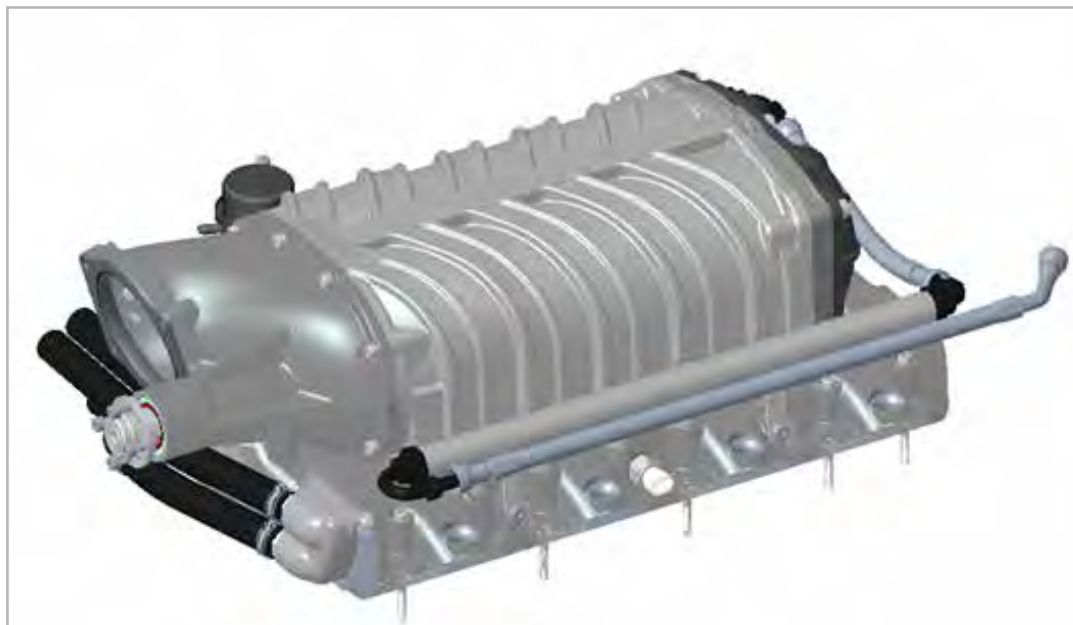
99-EK-A13822-LS3



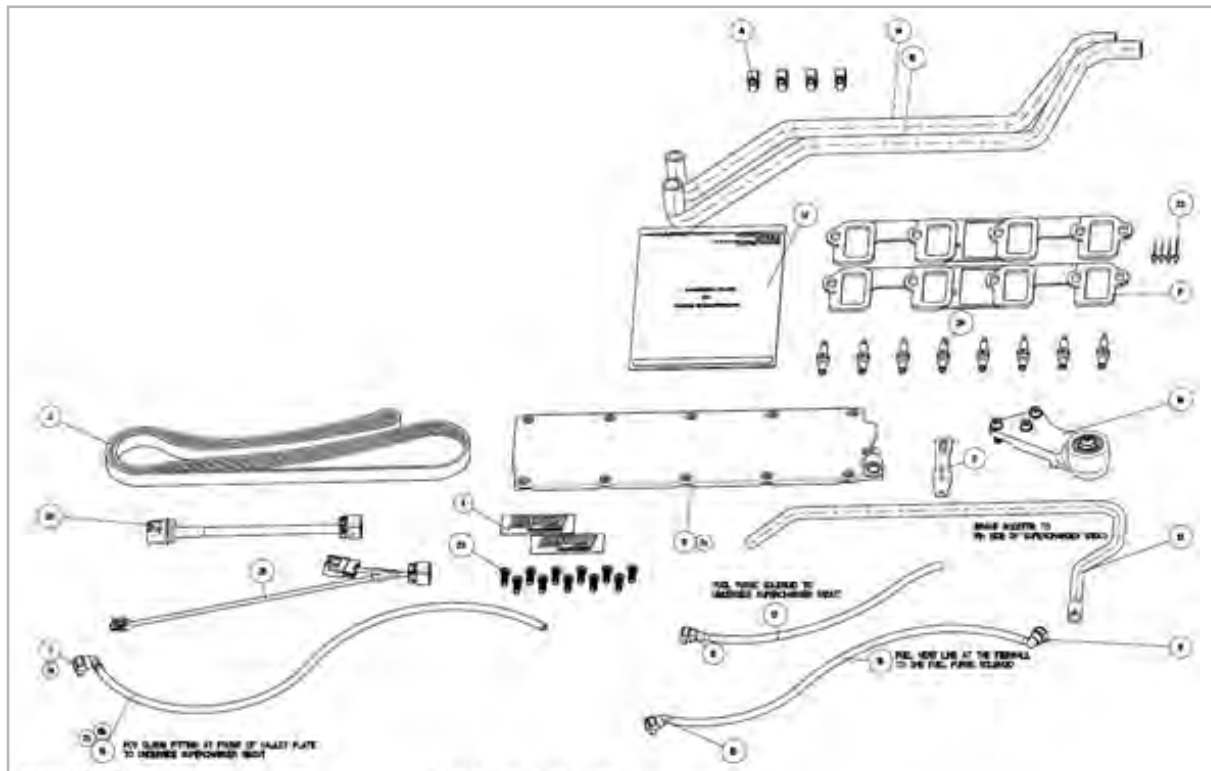
INSTALL KIT - 99-AKIT11362: FDFI INSTALL KIT TO SUIT  
 HOLDEN VE / PONTIAC G8



99-EK-A13822-LS3



INSTALL KIT - 99-AKIT12024: FDFI INSTALL KIT TO SUIT  
HOLDEN VF / CHEVY SS

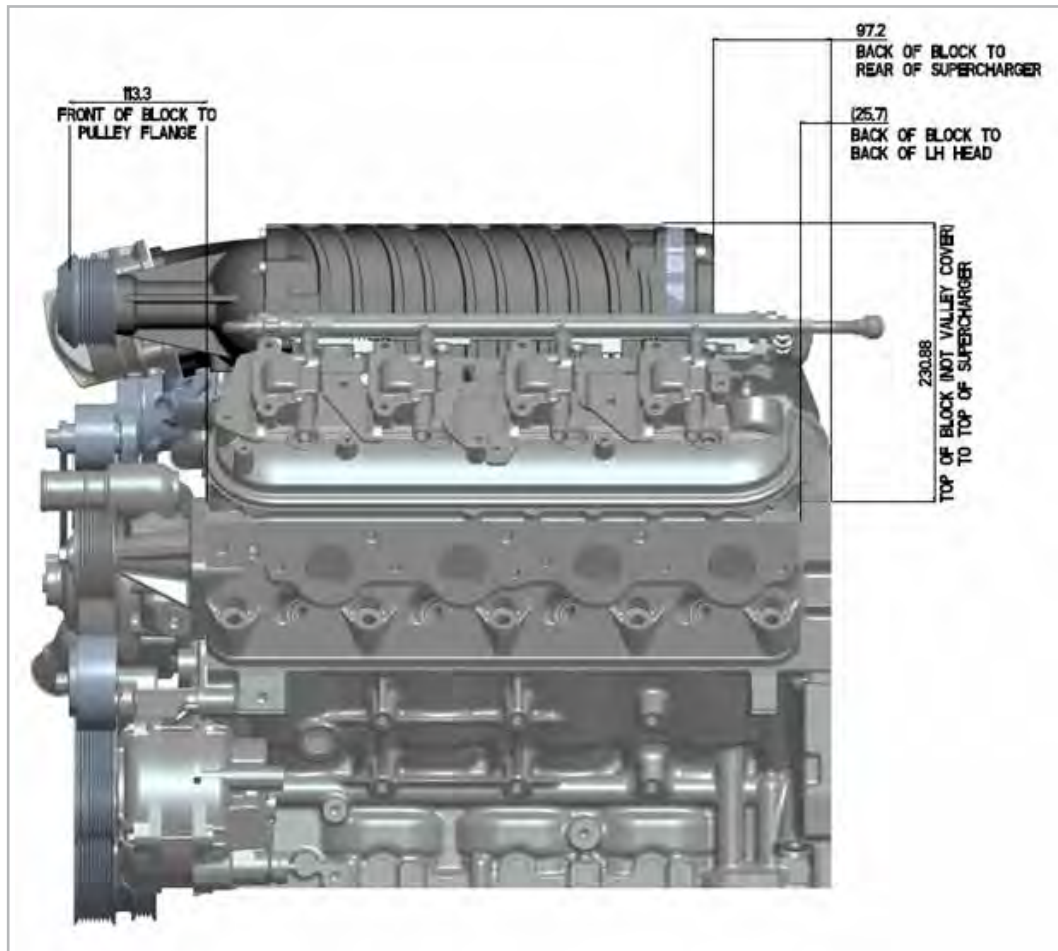


# HARROP LS INDUCTION APPLICATION GUIDE

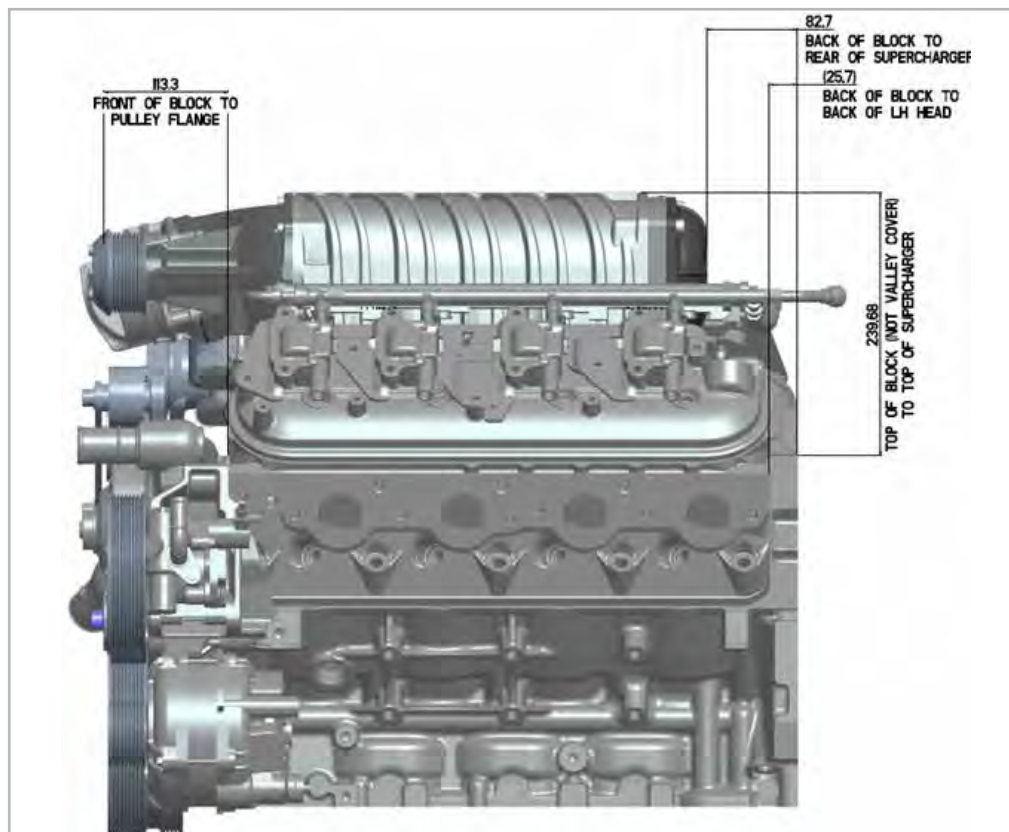
## HARROP TVS2300/2650 - LS3 Engine Supercharger Layout



99-EK-A12026-LS3 2300 SUPERCHARGER LAYOUT



99-EK-A13822-LS3 2650 SUPERCHARGER LAYOUT





The Harrop LS1 Supercharger system is designed to provide a modular positive displacement boosting solution.

There are two supercharger drive options, both keeping the factory belt position in order to maximise bonnet clearance. The 6PK system has fewer overall components and is suitable for low to moderate boost. The optional 8PK system has been designed to reduce belt slip and improve durability in moderate to highly boosted engines.

**Applications:** Engine Kit only – all require Bonnet modification to provide clearance.

HSV VT Series II, VX/VU, Y-series, Z-series and HSV Coupé GTO

Holden VT Series II, VX, VY, VZ (with LS1 engine), Monaro V2, VZ

Pontiac GTO, Vauxhall Monaro, Chevrolet Lumina SS

LS1/LS2 Cathedral Port engines

Variant	Manifold Assembly	Install Kit	6PK Supercharger Drive Pulleys	8PK Supercharger Drive Pulleys
LS1/LS2 TVS2300	A14380	N/A	-1.4 offset	+2.2 offset
LS1/LS2 TVS2650	A14635	N/A	-1.4 offset	+2.2 offset

Various drive ratios can be achieved using a combination of Supercharger Pulley and Crankshaft Pulley diameters.

Drive ratios available are from 1.96:1 to 3.15:1

The smallest recommended supercharger pulley is Ø70mm. Ø65mm pulleys are available; however, this diameter can be prone to belt slip at high RPM.

The Eaton TVS rotating group is validated up to 18,000 supercharger RPM. (Exceeding this supercharger speed will void the supercharger product warranty)

Where a drive ratio can be achieved using several different combinations, it is recommended to use a larger diameter Supercharger Pulley if possible.

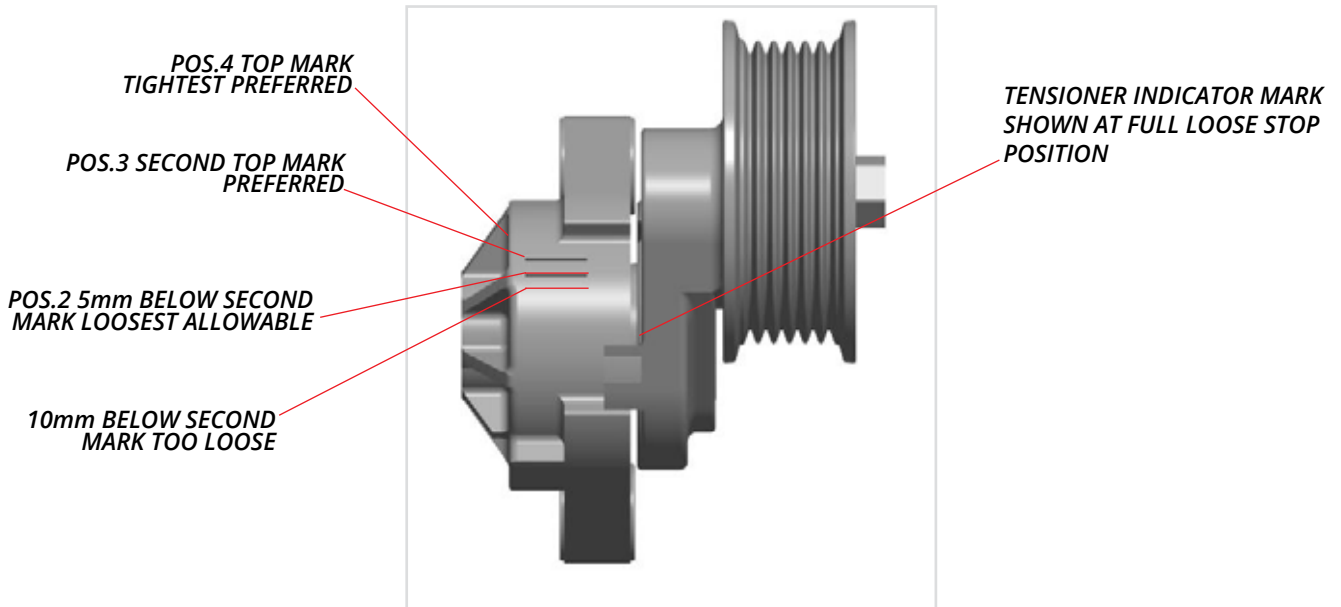
Crankshaft Pulley	Diameter	Example Part Number
OEM 6PK LS1	Ø186mm	
8PK LS1	Ø186mm	Power Bond PBO81480-SC
5% Overdrive	Ø195mm	Power Bond PB081480-SS5
10% Overdrive	Ø205mm	Power Bond PB081480-SC10

Supercharger Pulley Diameters
Ø65mm
Ø70mm
Ø75mm
Ø80mm
Ø85mm
Ø90mm

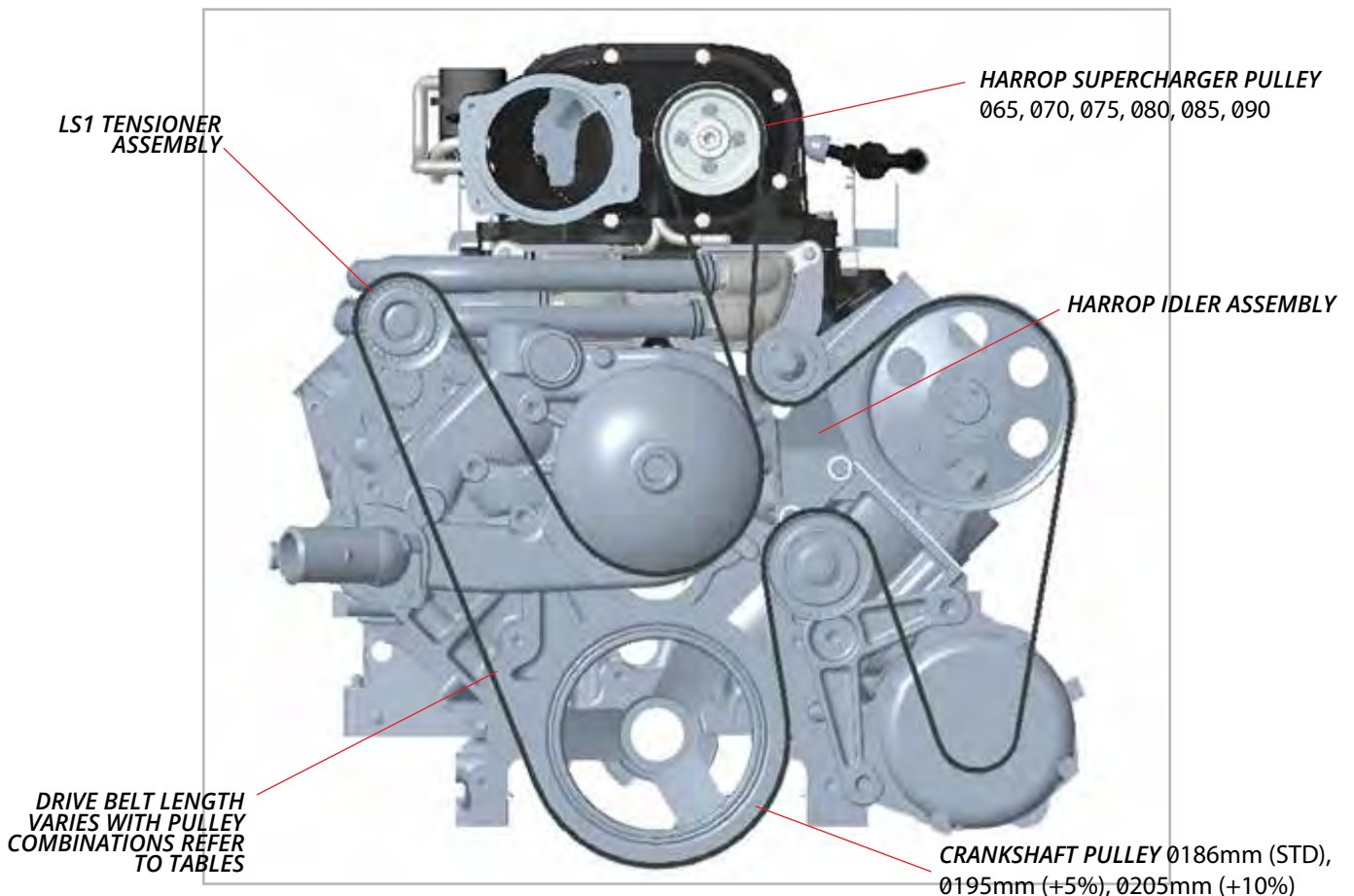
## Harrop LS1/LS2 Tensioner/Standard Position & Belt Path

To check that the Tensioner is within its operating range of movement, look for the indicator mark on the tensioner arm.

There will be some variation in installed tensioner position due to belt length, component machining and assembly tolerances.



### LS1 TENSIONER INDICATOR MARKS VISUAL CHECK WHEN STATIC



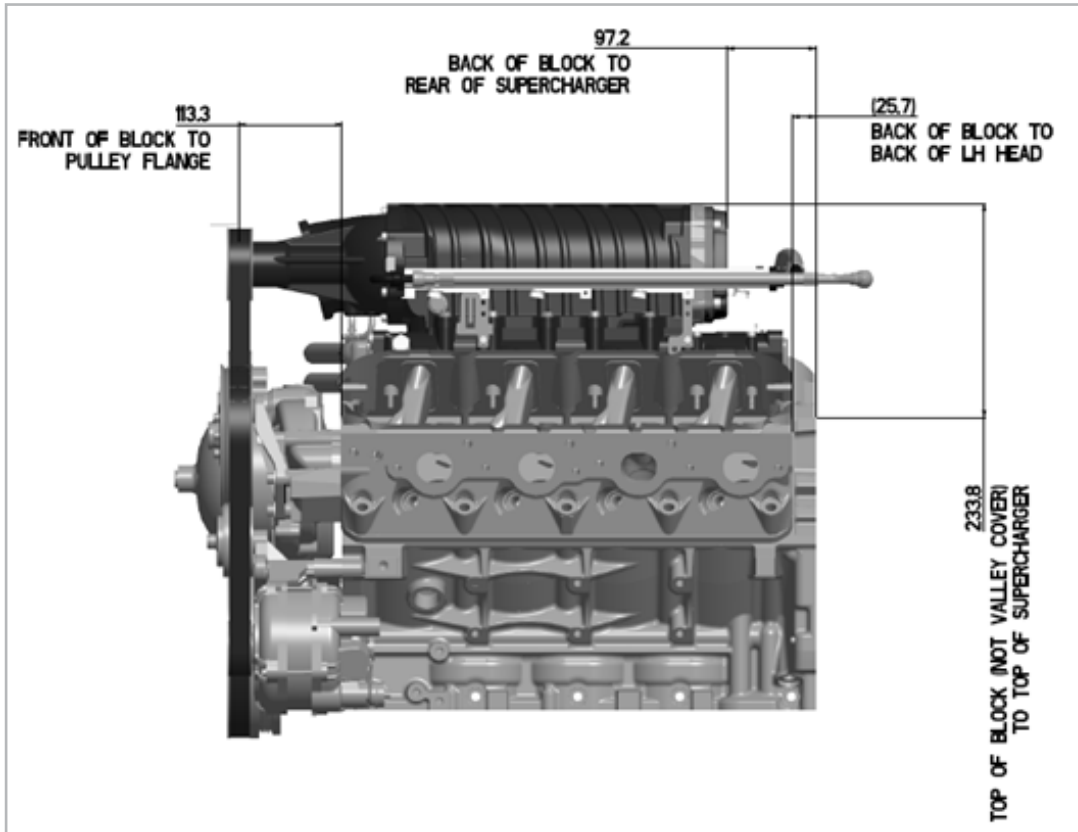


The tables below define the drive ratio, pulley diameters and belt lengths. Preferred combinations are highlighted in bold text. Red highlighted cells indicate high Supercharger speed @ 7000 crank rpm – warranty void.

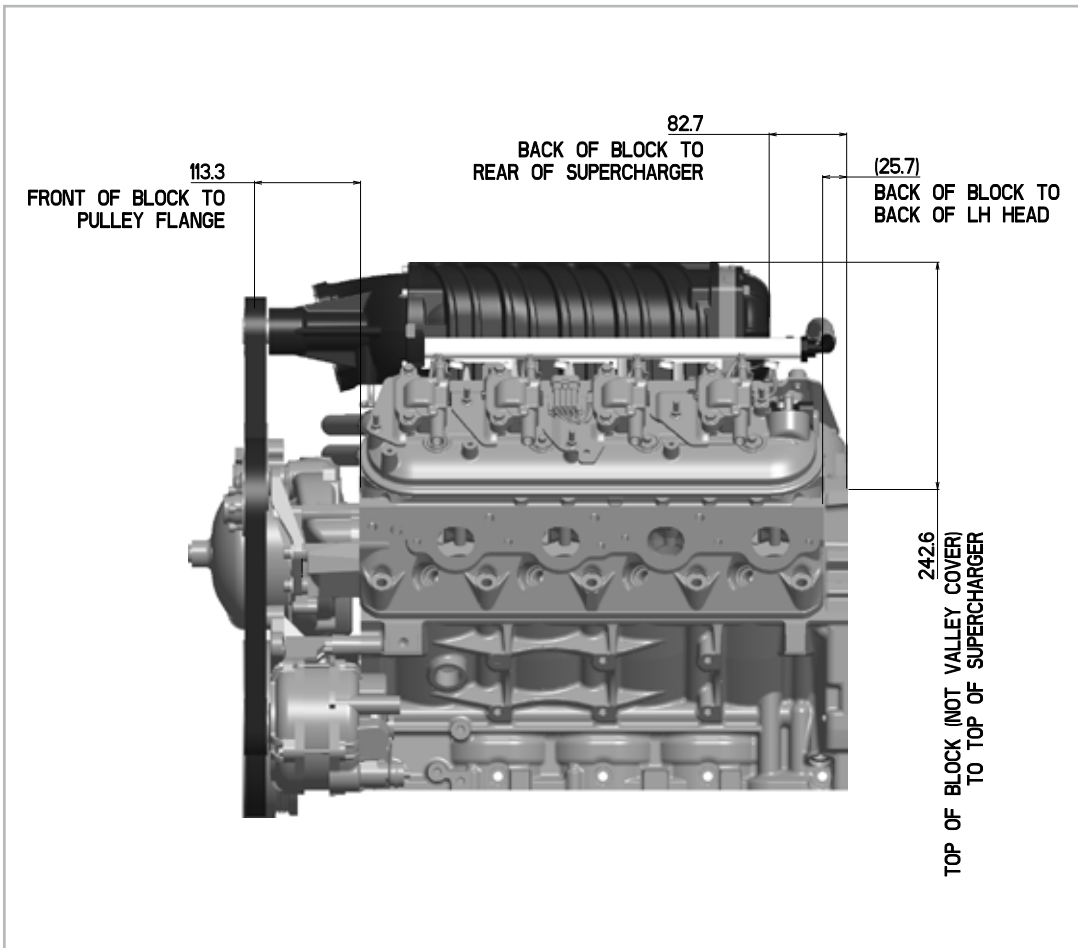
6PK LS1 FDFI 2300 VZ									
DRIVE RATIO	SUPERCHARGER SPEED AT 7000 CRANKSHAFT RPM	SUPERCHARGER PULLEY Ø	SUPERCHARGER PULLEY PART NUMBER	SUPERCHARGER PULLEY DESCRIPTION	CRANK PULLEY Ø	TENSIONER PULLEY Ø	POWER STEERING PULLEY Ø	BELT LENGTH	TENSIONER POSITION
2.86	20031	65	99-PLY11581	Pulley Drive Frt 6PK 65x30x1.4 FDFI	186	68	152	2520	3
2.66	18600	70	99-PLY11582	Pulley Drive Frt 6PK 70x30x1.4 FDFI	186	68	152	2530	3
2.48	17360	75	99-PLY11583	Pulley Drive Frt 6PK 75x30x1.4 FDFI	186	68	152	2530	4
2.33	16275	80	99-PLY11584	Pulley Drive Frt 6PK 80x30x1.4 FDFI	186	68	152	2555	2
2.19	15318	85	99-PLY11585	Pulley Drive Frt 6PK 85x30x1.4 FDFI	186	68	152	2555	3
<b>3.00</b>	<b>21000</b>	<b>90</b>	<b>99-PLY14268</b>	<b>Pulley Drive Frt 6PK 65x30x1.4 FDFI</b>	<b>195</b>	<b>68</b>	<b>152</b>	<b>2555</b>	<b>4</b>
<b>2.79</b>	<b>19500</b>	<b>95</b>	<b>99-PLY14267</b>	<b>Pulley Drive Frt 6PK 70x30x1.4 FDFI</b>	<b>195</b>	<b>68</b>	<b>152</b>	<b>2570</b>	<b>3</b>
<b>2.60</b>	<b>18200</b>	<b>65</b>	<b>99-PLY11581</b>	<b>Pulley Drive Frt 6PK 75x30x1.4 FDFI</b>	<b>195</b>	<b>68</b>	<b>152</b>	<b>2585</b>	<b>3</b>
<b>2.44</b>	<b>17063</b>	<b>70</b>	<b>99-PLY11582</b>	<b>Pulley Drive Frt 6PK 80x30x1.4 FDFI</b>	<b>195</b>	<b>68</b>	<b>152</b>	<b>2599</b>	<b>3</b>
<b>2.29</b>	<b>16059</b>	<b>75</b>	<b>99-PLY11583</b>	<b>Pulley Drive Frt 6PK 85x30x1.4 FDFI</b>	<b>195</b>	<b>68</b>	<b>152</b>	<b>2599</b>	<b>3</b>
3.15	22077	80	99-PLY11584	Pulley Drive Frt 6PK 65x30x1.4 FDFI	205	68	152	2585	3
2.93	20500	85	99-PLY11585	Pulley Drive Frt 6PK 70x30x1.4 FDFI	205	68	152	2585	4
2.73	19133	90	99-PLY14268	Pulley Drive Frt 6PK 75x30x1.4 FDFI	205	68	152	2599	3
2.56	17938	95	99-PLY14267	Pulley Drive Frt 6PK 80x30x1.4 FDFI	205	68	152	2599	4
2.41	16882	85	99-PLY14625	Pulley Drive Frt 6PK 85x30x1.4 FDFI	205	68	152	2605	4

N.B. Belt, Supercharger Pulley and Injectors are additional items to be defined at time of order.

99-EK-A14380-LS1 2300 SUPERCHARGER LAYOUT

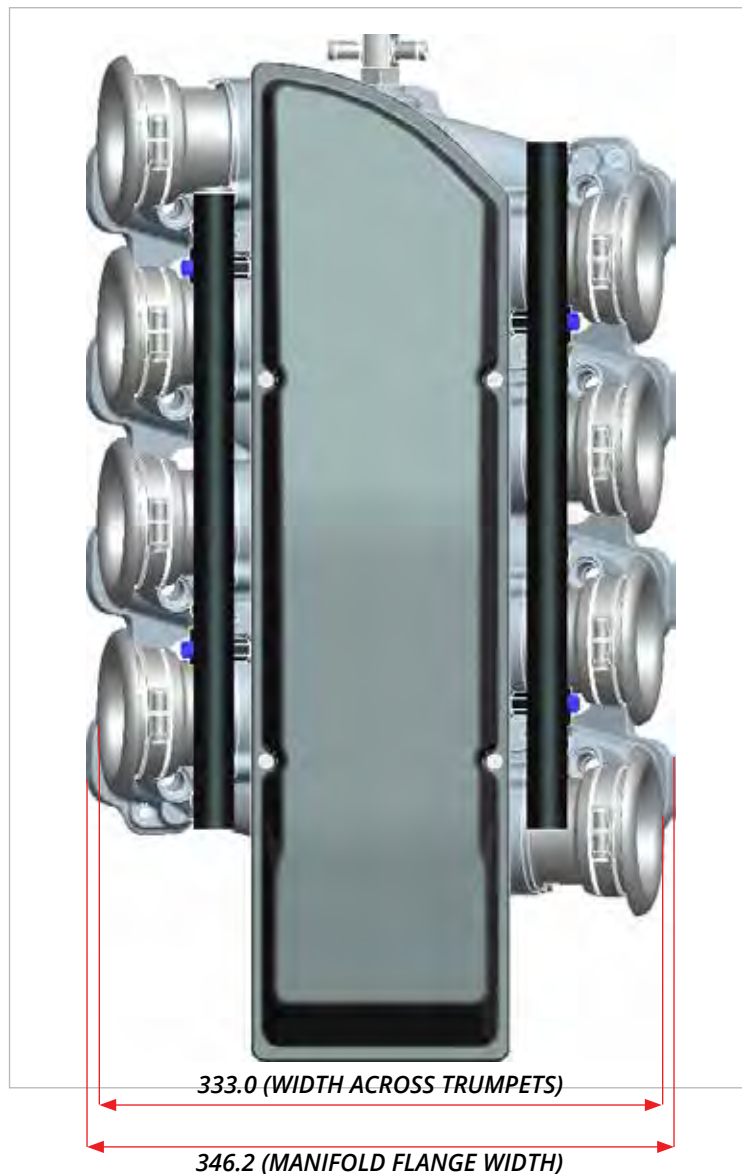
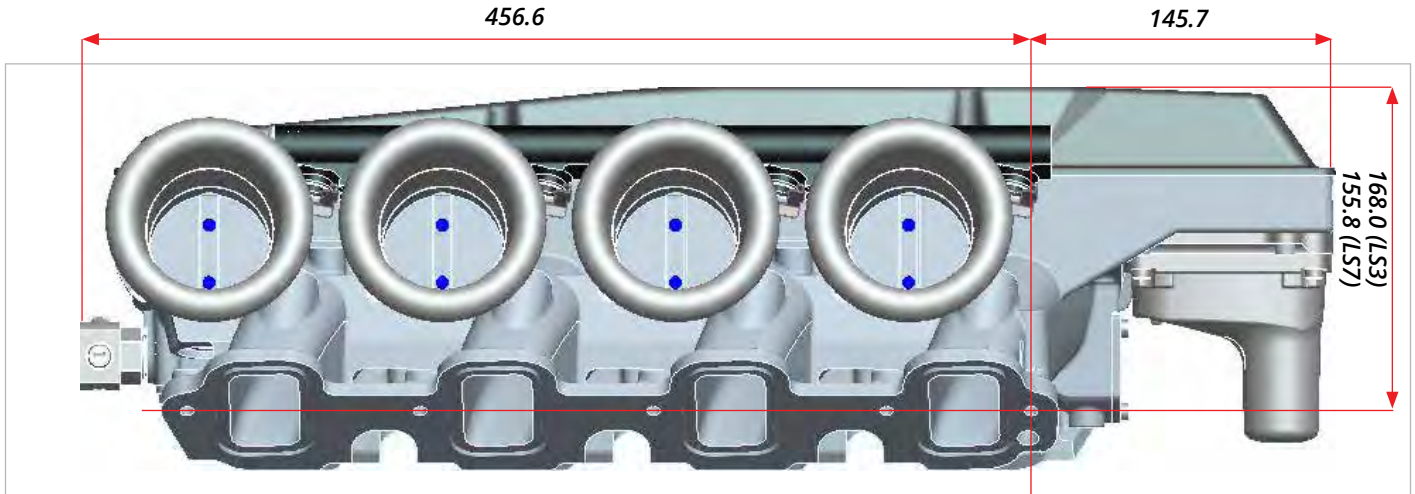


99-EK-A14635-LS1 2650 SUPERCHARGER LAYOUT



## Harrop LS3/LS7 Hurricane Manifold

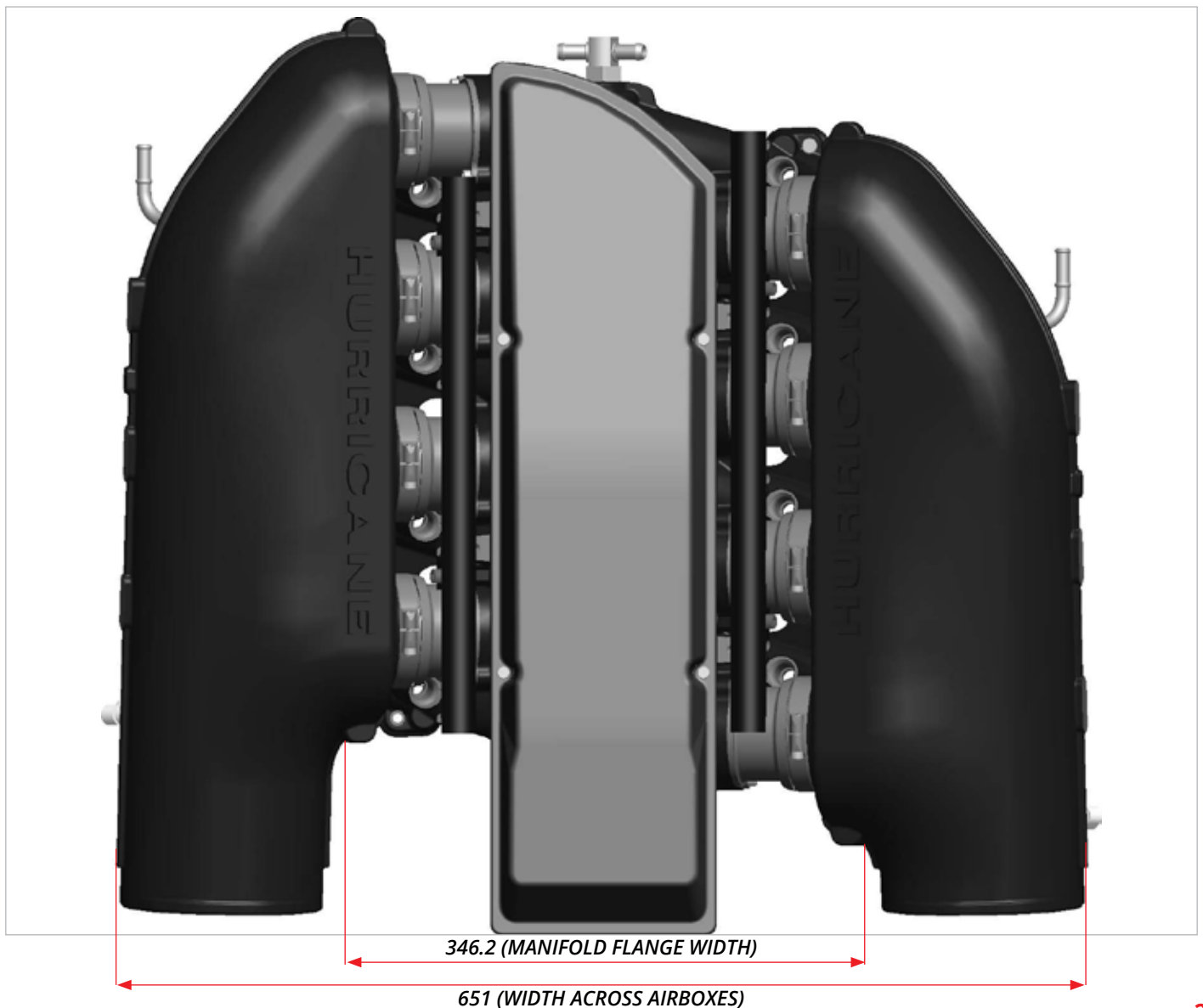
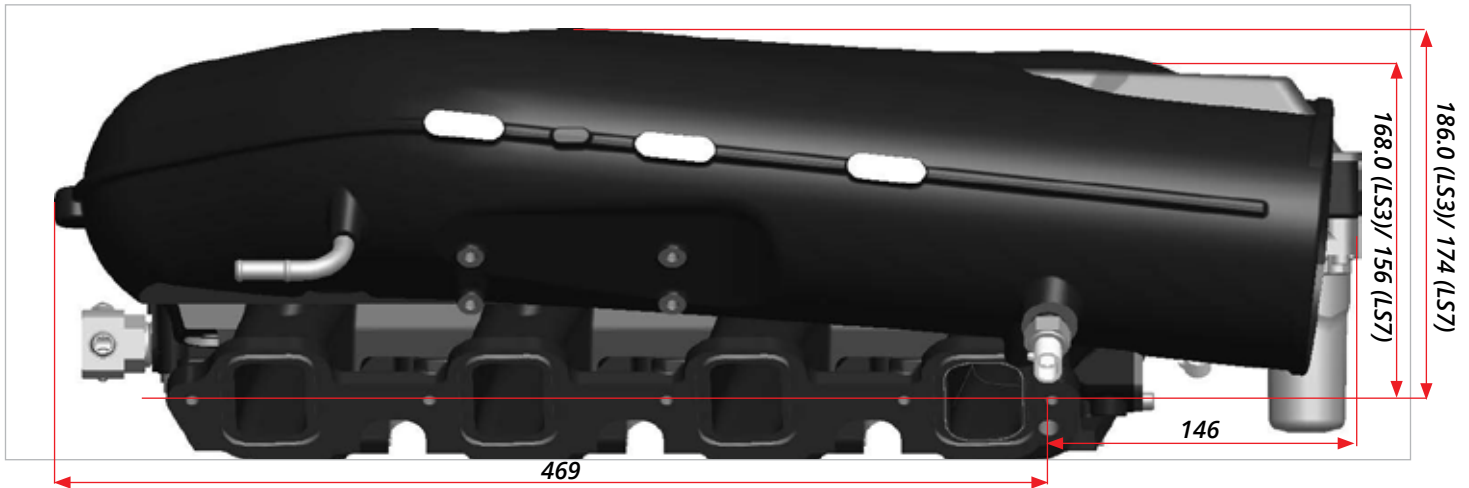
The Harrop Hurricane manifold is the perfect option for enthusiasts with LS3/LS7 engine combinations wishing to remain naturally aspirated with fly by wire throttle integration and cable actuation also available.





## Harrop LS3/LS7 Hurricane Airboxes

The Harrop Hurricane manifold can be supplied with cast airboxes, increasing air flow to the engine by providing a restriction free path from filter to throttle blade.



# HARROP LS INDUCTION APPLICATION GUIDE

## Harrop LS3/LS7 Hurricane Application Matrix



Hurricane Airbox Price Sheet:

Part	LS3 with OE heads and OE rocker covers	LS3 with OE heads and high ratio rockers (T&D 1.8:1)	LS7 with OE heads and OE rocker covers	LS7 with OE heads and high ratio rockers (T&D 1.8:1)	LS3 with Tall heads (MAST)
Hurricane Airbox, LH & RH	Required	Required	Required	Required	Required
Coil Relocation Kit	Required	Required	Required	Required	Required
Smith's Racing Coil Extension Loam	Optional	Optional	Optional	Optional	Optional
PCV Fitting	Required	N/A	Optional for dry sump engines	N/A	N/A
Flat Oil Cup	Required	Optional	Optional for dry sump engines	N/A	N/A
Harrop Tall Rocker Covers, LH & RH	Optional	Required	Optional	Required	N/A
Harrop Flat Rocker Cover	N/A	N/A	N/A	N/A	Required
K&N Pod Filter	Optional	Optional	Optional	Optional	Optional
Air Temp Sensor	Optional	Optional	Optional	Optional	Optional
Fuel Lines	Optional	Optional	Optional	Optional	Optional

Supplier part number	Qty required per part number
99-ABX12308	1 Pair
99-ABX12309	2 Each
99-ABKT12433	2 Each
100DM-GM-023-LMTO	2 Each
99-FIT13108	1 Each
99-CAP12310	1 Each
99-CVR13439	1 Pair
99-CVR13440	1 Pair
99-CVR13432	1 Pair
65-RU-5147	2 Each
65-25037388	1 set of 2 ea
98-HOS-HUR-13892	1 ea

### Key Points:

- Suits LS7 and LS3 Hurricane Manifolds, both Ø58 and Ø60 butterflies, cable and ETC
- Does not suit early LS1 Hurricane Manifolds
- Replaces 8x bell-mouth sections of trumpet
- Suits OE rocker covers. However may not fit with some aftermarket rocker covers. Harrop tall rocker covers (for use with high ratio rocker arms), and flat rocker covers (for tall heads e.g MAST) are optional.
- K&N Pod filter #RU5147 fits on the end of each airbox.
- Fits under the bonnet/hood of VE-VF Commodore including GTs.
- Airboxes can result in slight loss of peak power and torque
- Harrop testing has shown a minor peak power gain along with less than 3% peak torque loss when running these air-boxes compared to engines that previously had the Hurricane trumpets with mesh or foam sock filters.





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