

Fitment and Required Components Guide and Assembly Instructions



Holley Accessory Drive Kit Part Number 20-159, 20-160, & 20-162

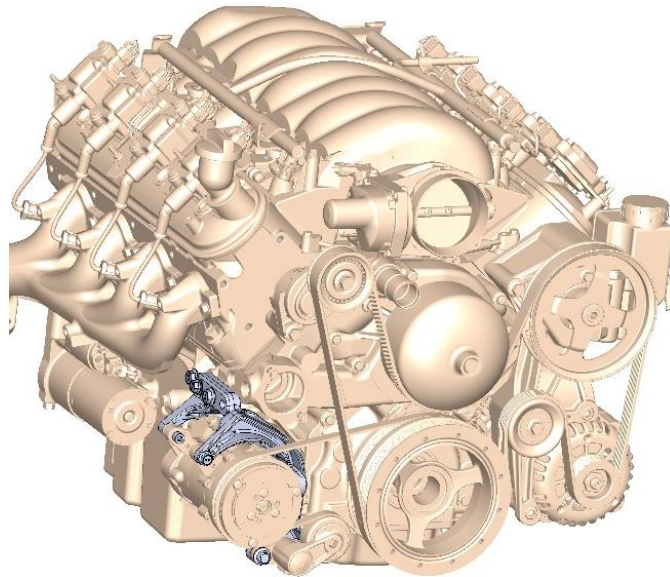
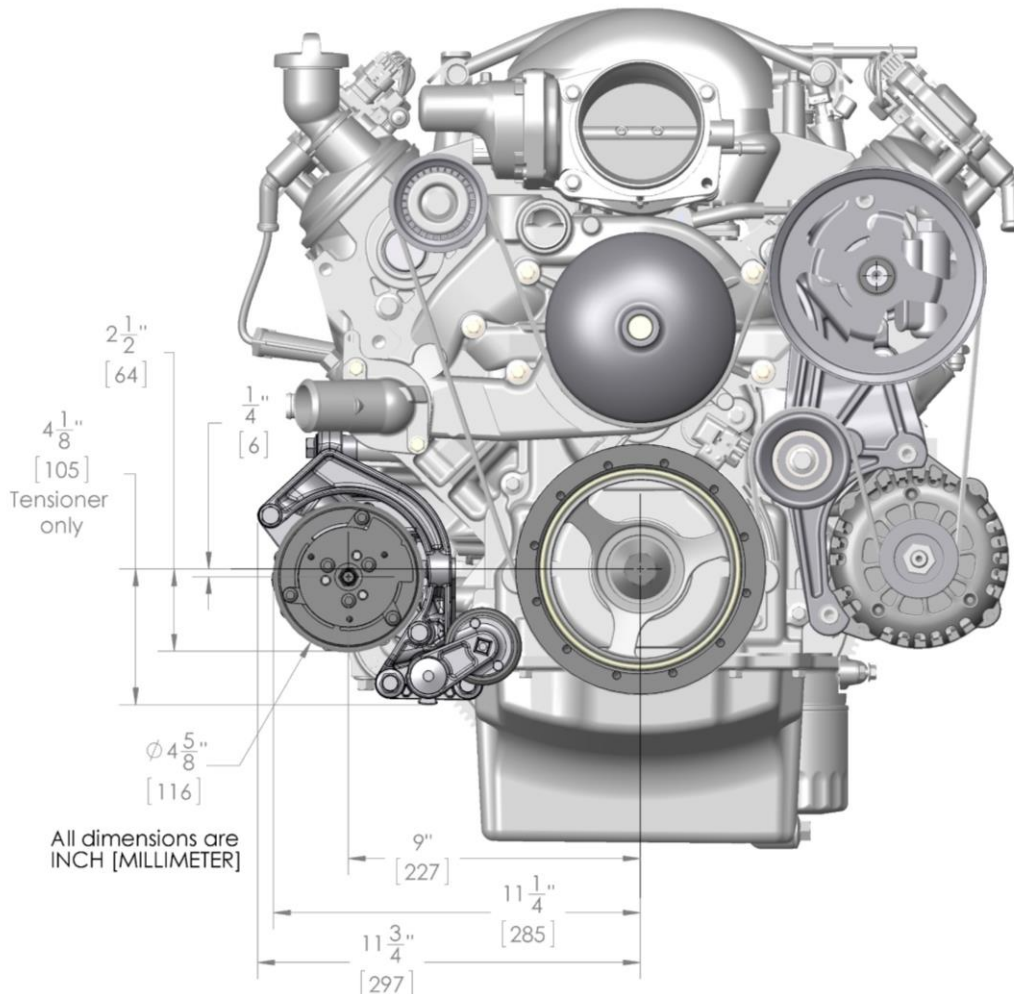
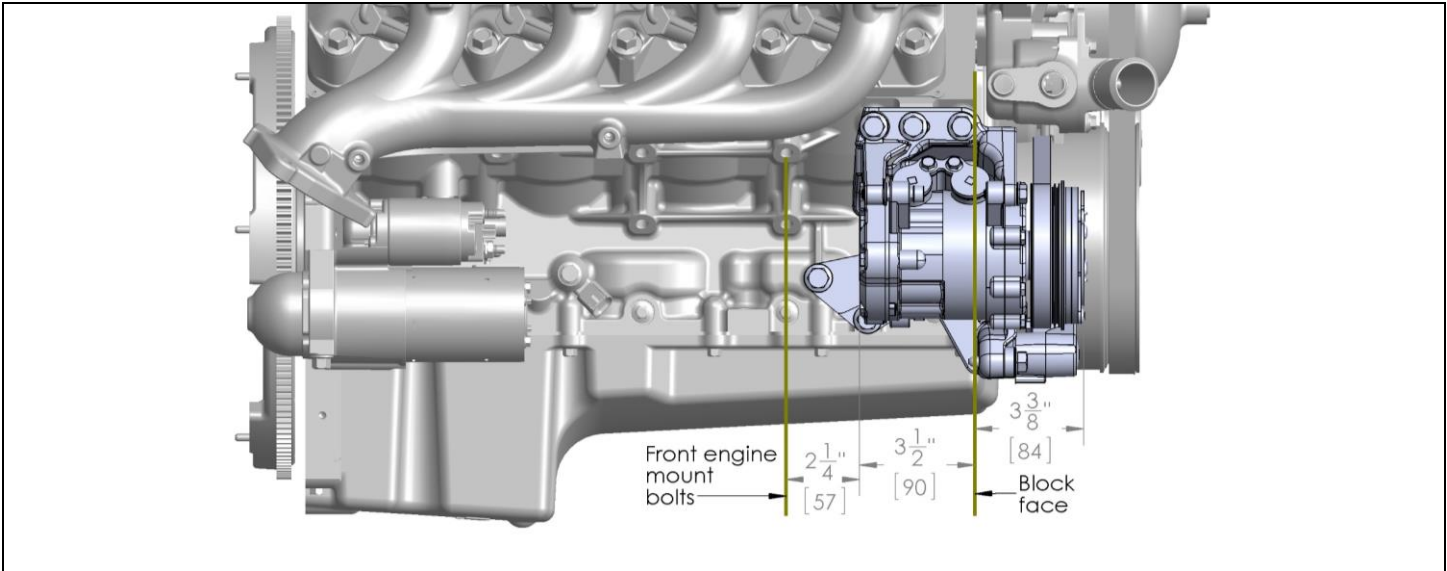


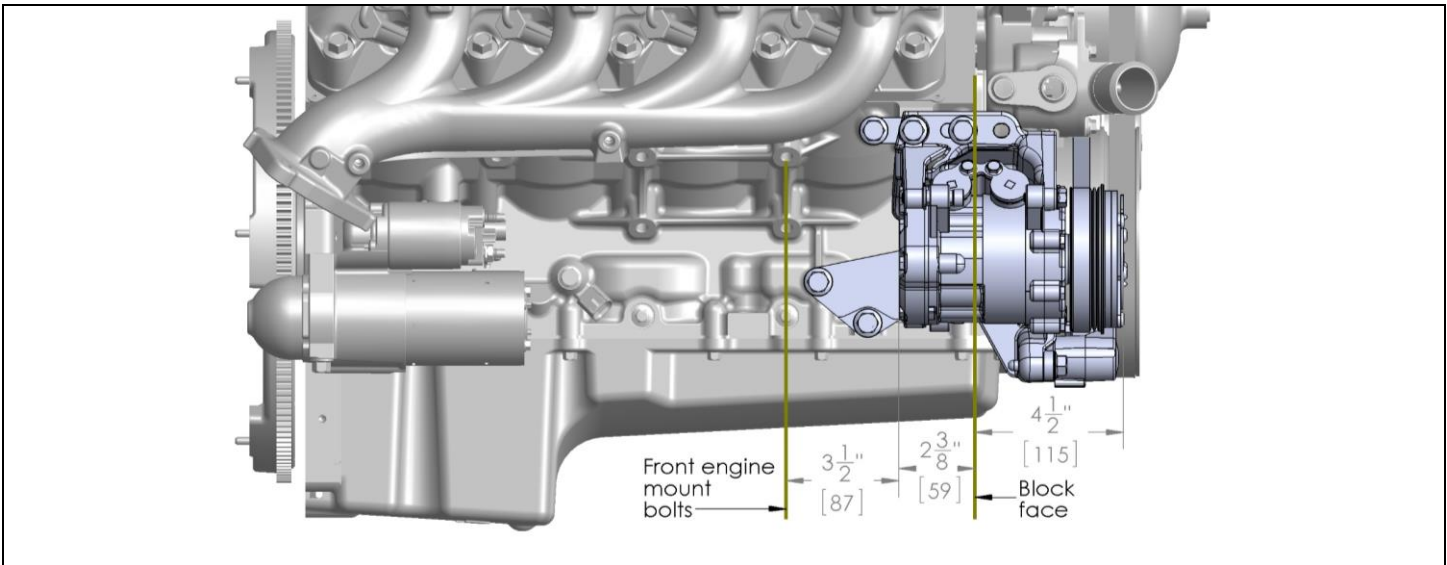
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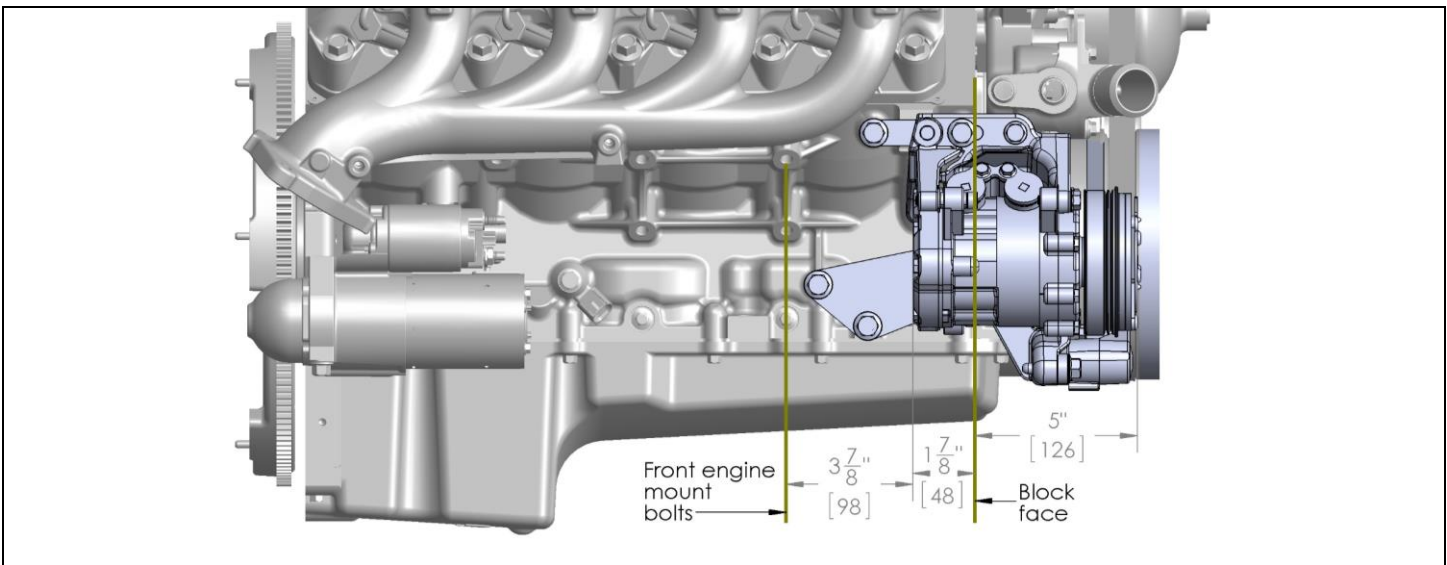




Standard Alignment



Middle Alignment



Long Alignment

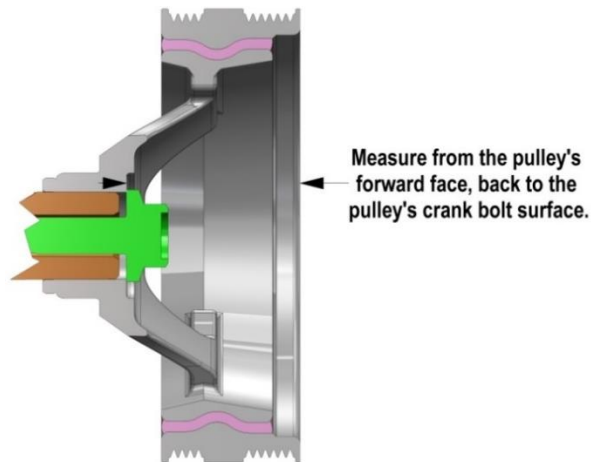
Introduction:

Holley's accessory drive kits offer clean, economical mounting of all LS engine accessories. These brackets look truly at home on any LS engine as if they came from the factory this way.

The first step is to determine which belt alignment you want to proceed with. This is determined by the crank pulley.

Note: All Corvette part application references in this guide are to NON-supercharged LS engines.

Crank Pulley Belt Alignment Determination:



See the below chart for reference dimensions.

Overview of Parts Needed (but NOT included with 20-159 bracket kit):

Components with specific belt alignments

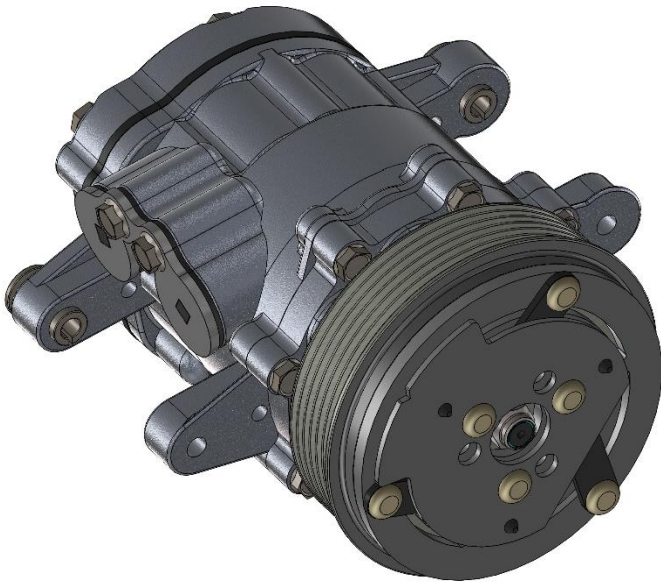
Belt Alignment Group	LS Application (Alignment Specific)	Crank Pulley (Reference Dimension)		Belt required for Low A/C bracket Kit	Works with: Holley driver's side bracket/spacer Kit	Works with: Original Equipment driver's side accessory drive
						GM # (Numerous)
Standard	Corvette / CTS-V / G8	1.5"	37 MM	4PK370	20-135	Many LS driver's side accessory systems can be used with this kit, but only in conjunction with the original belt alignment.
Middle	F-body / GTO	2.25"	55 MM	4PK370	20-135 w/21-2, 20-155	
Long	Camaro ('10-UP) / Truck (all)	3"	75 MM	4PK378	20-135 w/21-3, 20-155 w/21-4	

Components that will work with all belt alignments

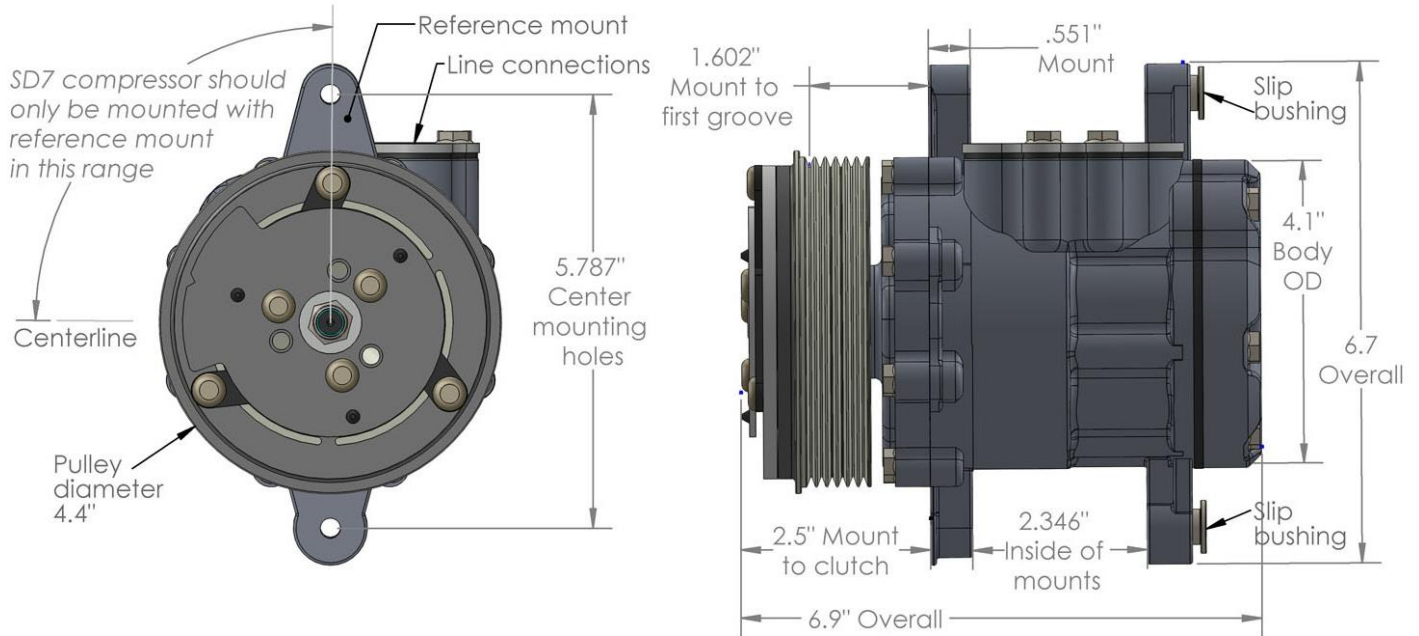
Tensioner Assembly	A/C Compressor (Sanden Types)
Holley # / GM #	Holley # / Sanden #
97-156 / 12580196	199-102 / SD7, SD7B10-7176 & similar

After reviewing the components needed for your specific application, parts can be sourced and the Holley kit can be installed. See the included assembly instructions for installation procedures.

A/C Compressors Options:



Sanden SD7 Compressor
Holley part # 199-102
Sanden #s SD7, SD7B10-7176
Vintage Air #s 04670-MTA, 04670-MTQ, & 046705

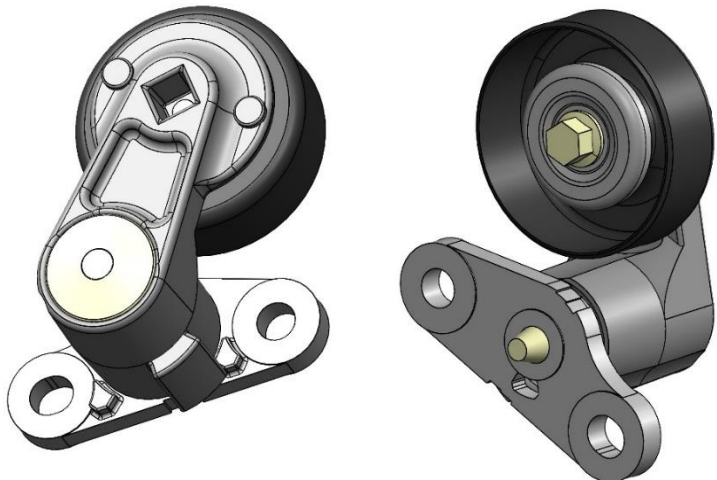


HELPFUL HINTS:

This bracket will work with most SD7 compressors commonly available in the aftermarket. This bracket does not work with the original Sanden compressor found on LS engines or aftermarket SD5 compressors. If your compressor has more than six grooves, make certain the rearward four grooves are aligned to the belt.

There is typically a one wire connection to the Sanden A/C clutch. This wire will activate the clutch when connected to 12 volts positive. Negative ground is through the case of the compressor. If painting or powder coating the brackets, **make certain** there is a good ground path to the engine block.

Tensioner Assembly Options:



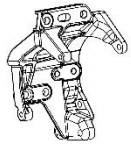
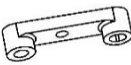
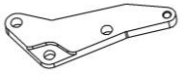
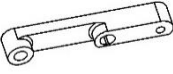
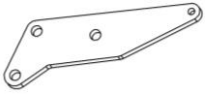
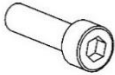
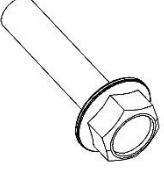
Tensioner assembly with pulley
Holley part # 97-156
Application: '99 Silverado 1500
GATES: W0133-1687091
GM # 12580196

The above is the only style of tensioner that will work with this Holley bracket kits. GM tension # 12580196 found on many 1999-2008 Chevrolet trucks and SUVs may be used if salvaged from the donor accessory drive, but confirm the tensioner pulley properly aligns with the belt after installation.

Parts List:

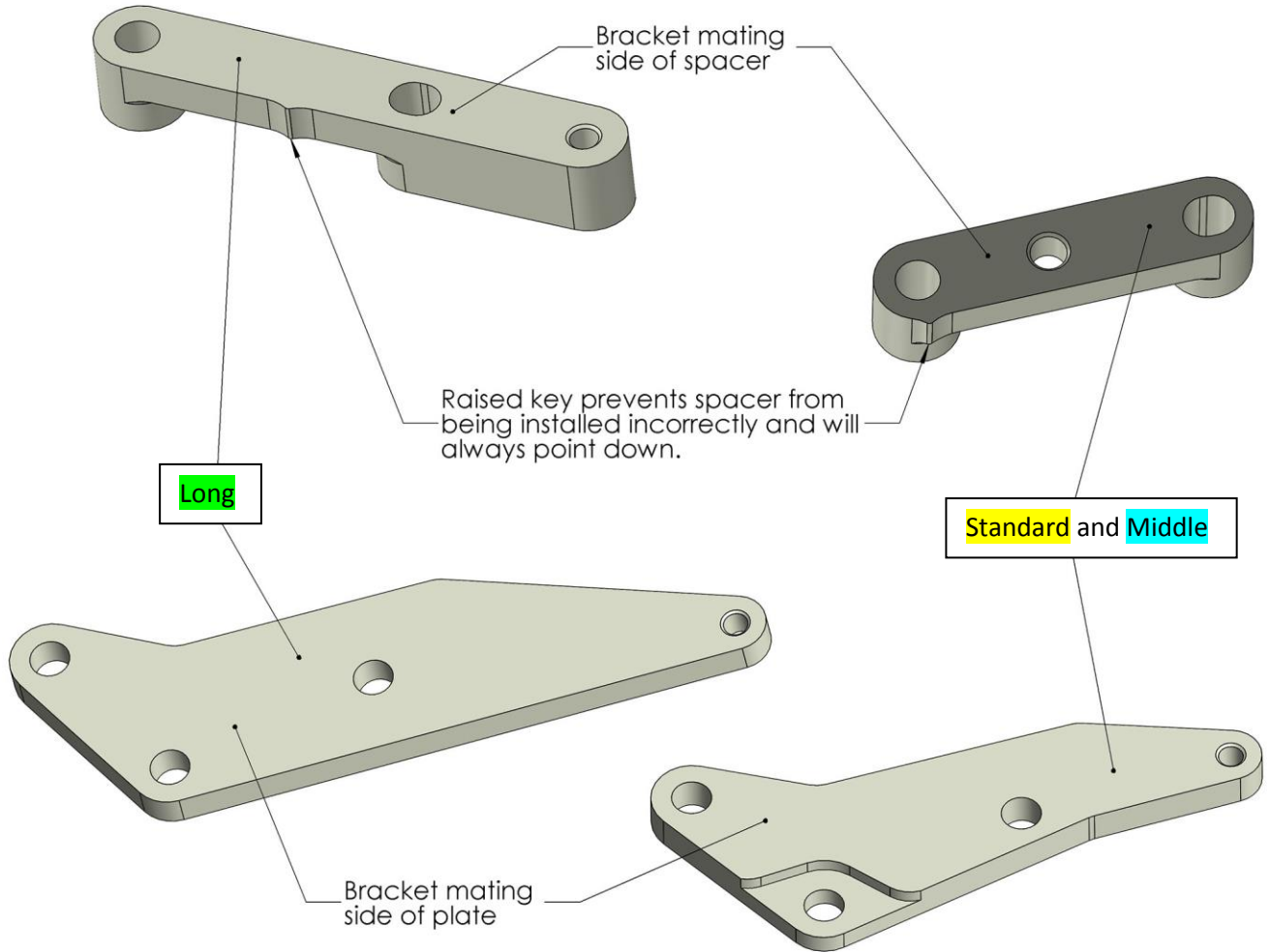
- This bracket will work with Standard, Middle, and Long alignment.

Parts included with 20-159 bracket kit:

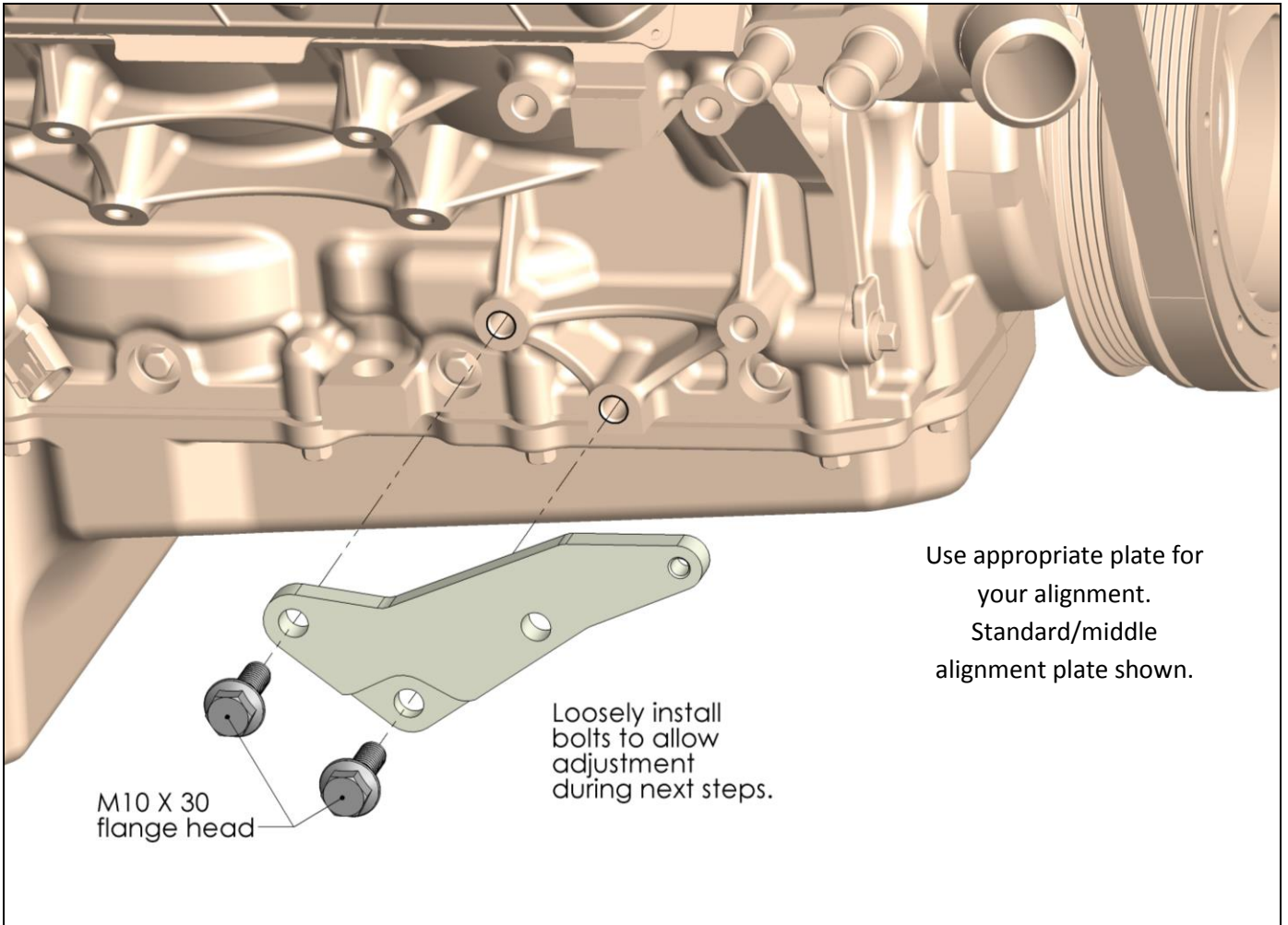
PICTURE	QTY	DESCRIPTION	APPLICATION
	1	Passenger's Side Bracket	A/C Compressor
	1	Upper Spacer	Use with Standard and Middle Belt Alignment
	1	Lower Engine Plate	Use with Standard and Middle Belt Alignment
	1	Upper Spacer	Use with Long Belt Alignment
	1	Lower Engine Plate	Use with Long Belt Alignment
	2	Socket Head Cap Bolt, M8 x 1.25 x 40	Rear A/C Compressor to Bracket
	1	Socket Head Cap Bolt, M10 x 1.5 x 40	Bracket through Plate to Block
	2	Flange Head Cap Bolt, M8 x 1.25 x 20	(1) Front of Bracket to Plate (1) Front of Bracket to Spacer (Not used with Standard and Middle)
	2	Flange Head Cap Bolt, M8 x 1.25 x 25	Front Bracket to A/C Compressor
	1	Flange Head Cap Bolt, M10 x 1.5 x 20	Bracket to Spacer (Not used with Standard and Long)
	4	Flange Head Cap Bolt, M10 x 1.5 x 30	(2) Rear of Plate to Block (2) Tensioner to Bracket
	1	Flange Head Cap Bolt, M10 x 1.5 x 40	Through Spacer to Block (Not used with Standard)
	2	Flange Head Cap Bolt, M10 x 1.5 x 50	Bracket through Spacer to Block (One NOT used with Middle and Long)

Application Specific Parts and Assembly:

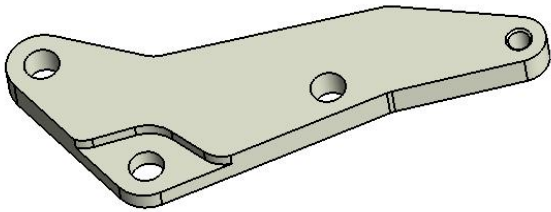
Chose the spacer and plate for your application. The spacer and plate for the additional application(s) will not be used.



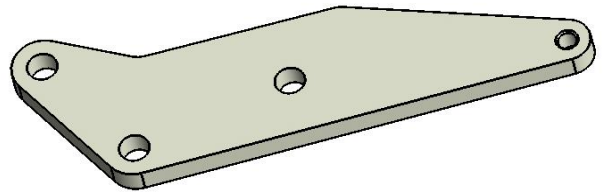
Lower Plate Installation:



Standard / Middle plate



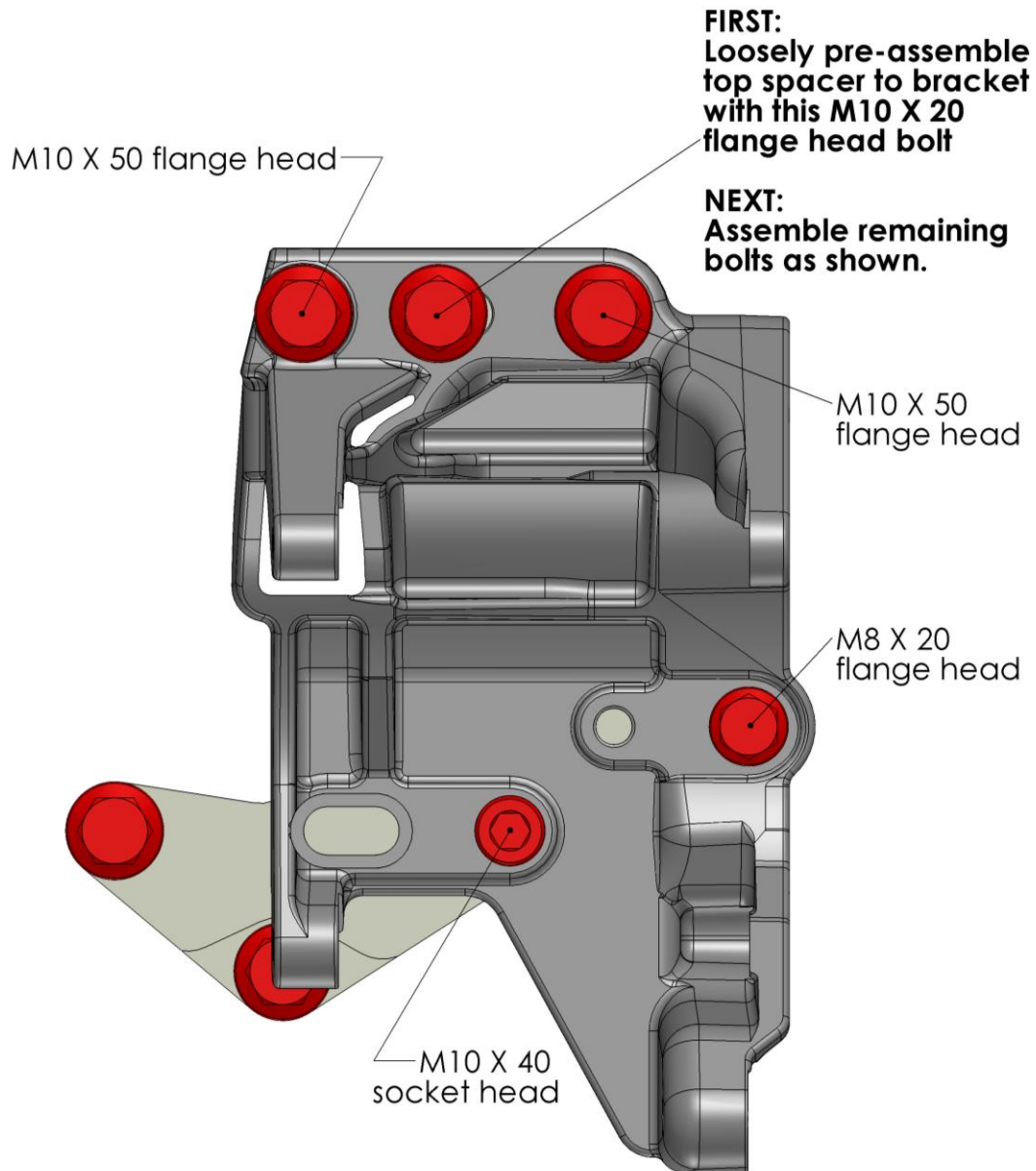
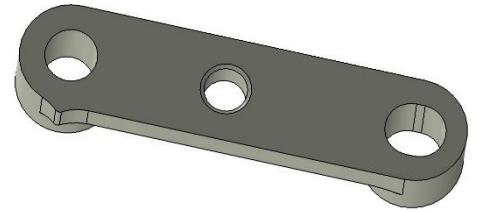
Long plate



Standard Belt Alignment Assembly:

Standard spacer

Orientate assembly as shown.

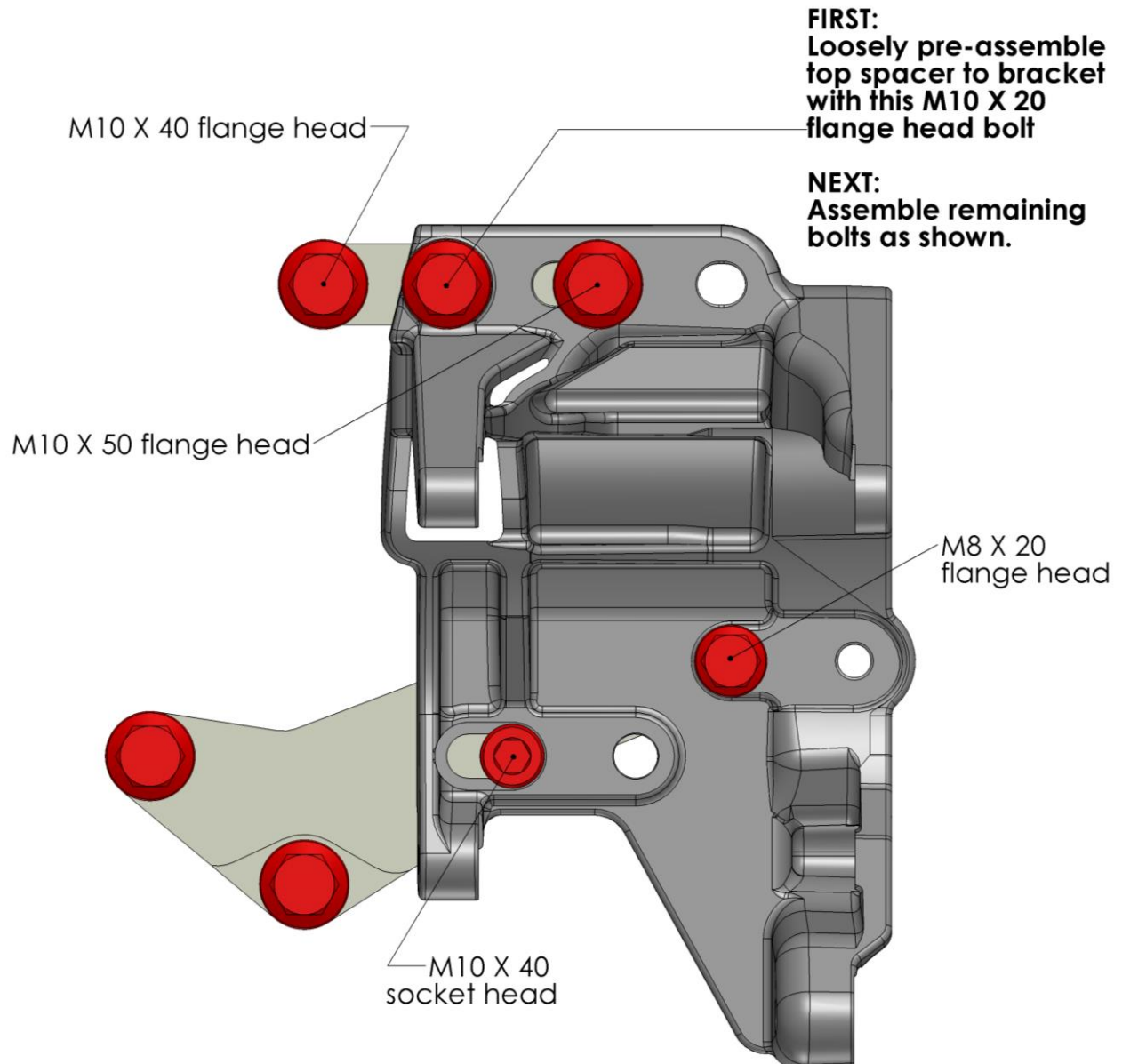
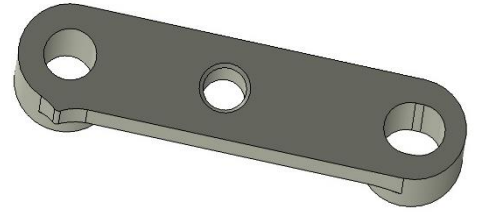


At this time torque M8 bolts to 18 ft./lbs. and M10 bolts to 36 ft./lbs.

Middle Belt Alignment Assembly:

Middle spacer

Orientate assembly as shown.

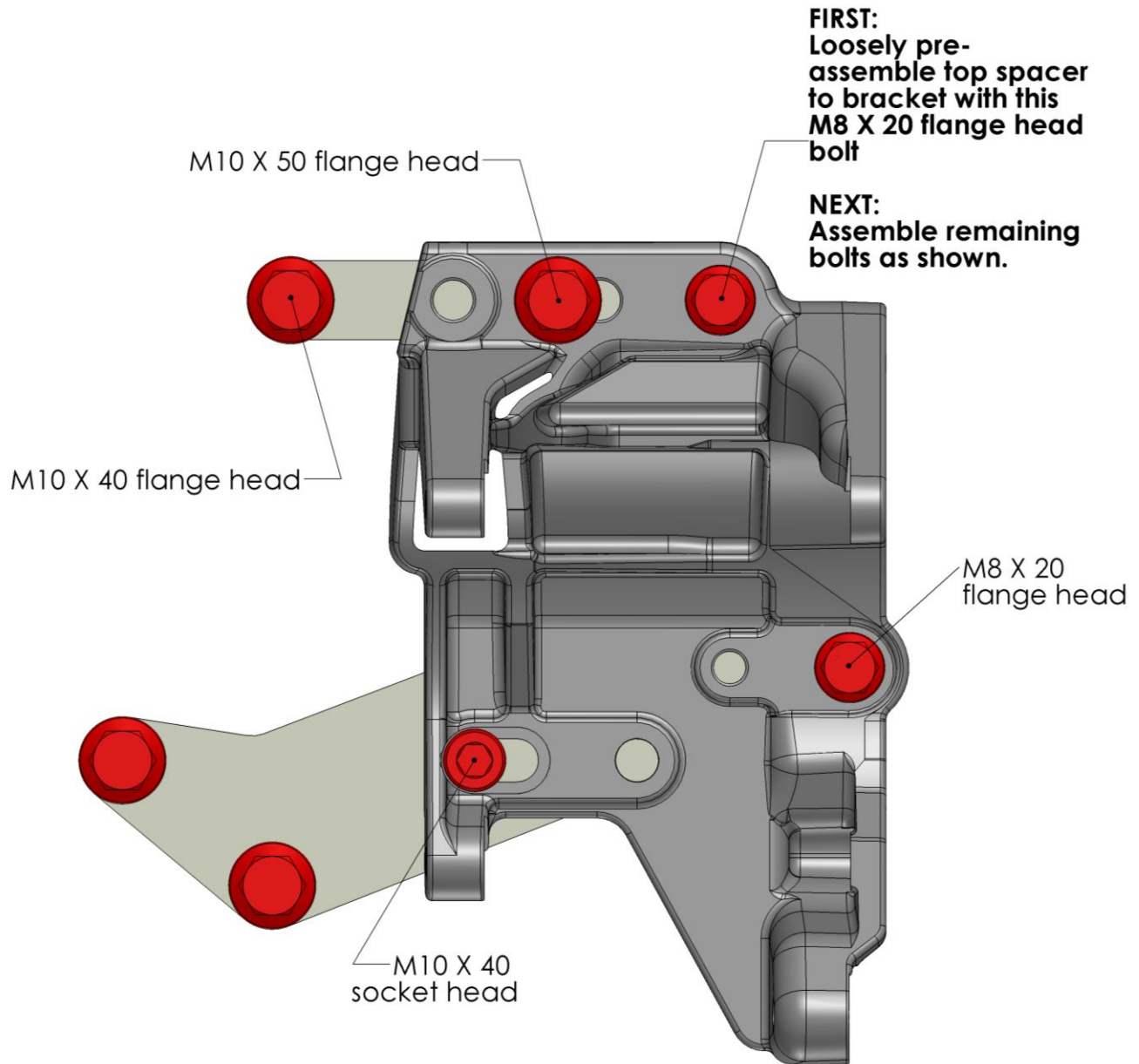
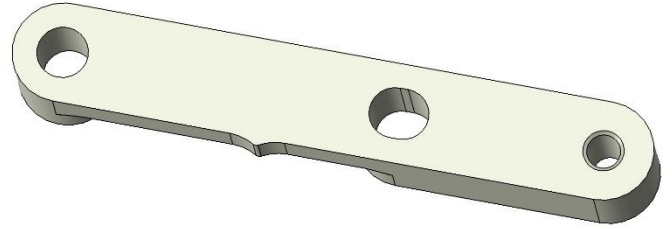


At this time torque M8 bolts to 18 ft./lbs. and M10 bolts to 36 ft./lbs.

Long Belt Alignment Assembly:

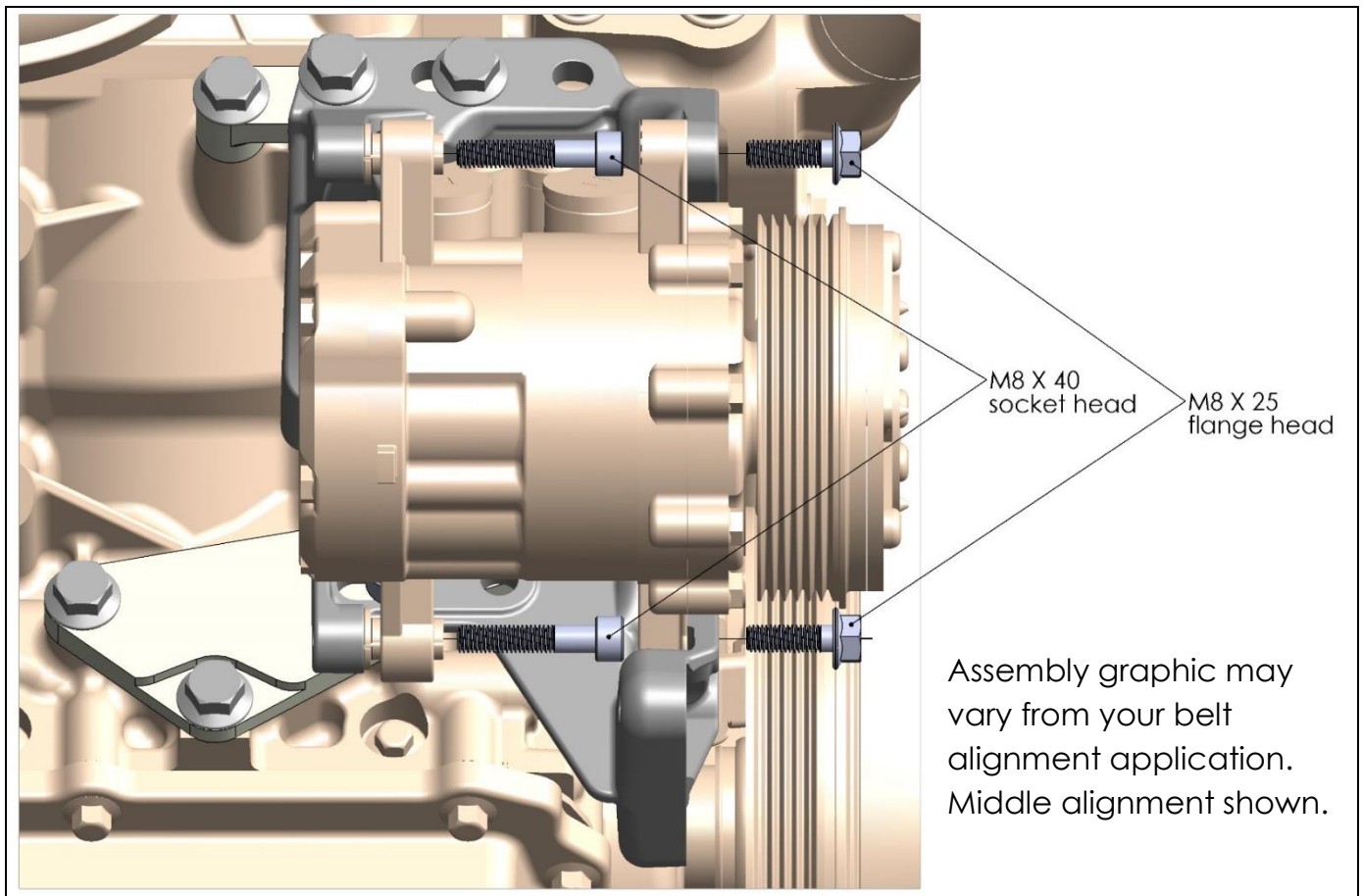
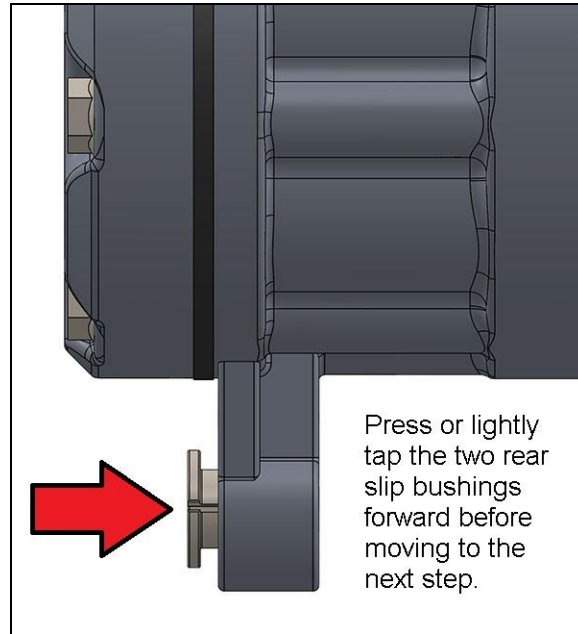
Long spacer

Orientate assembly as shown.



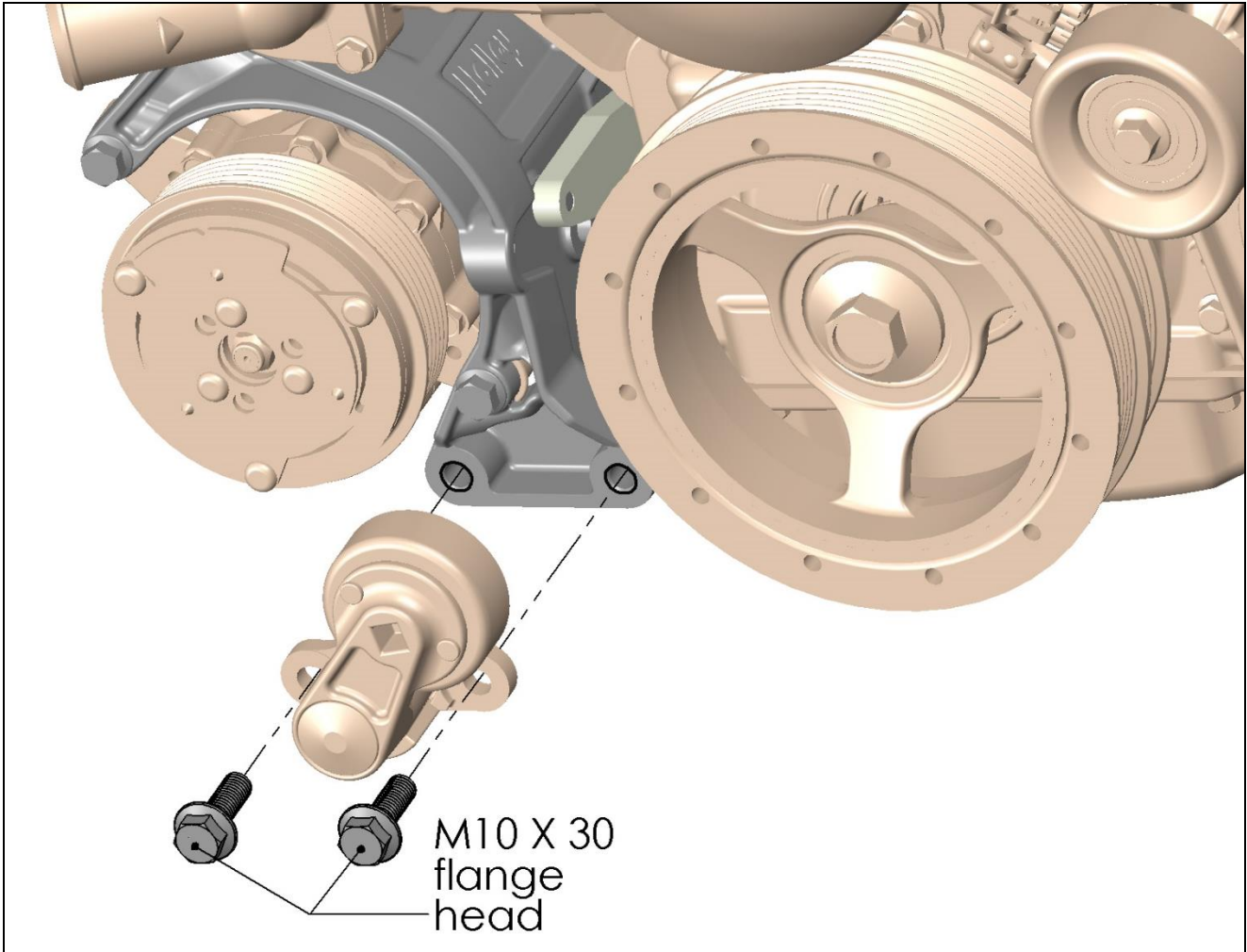
At this time torque M8 bolts to 18 ft./lbs. and M10 bolts to 36 ft./lbs.

Compressor Mounting:



Torque M8 bolts to 18 ft./lbs. and M10 bolts to 36 ft./lbs.

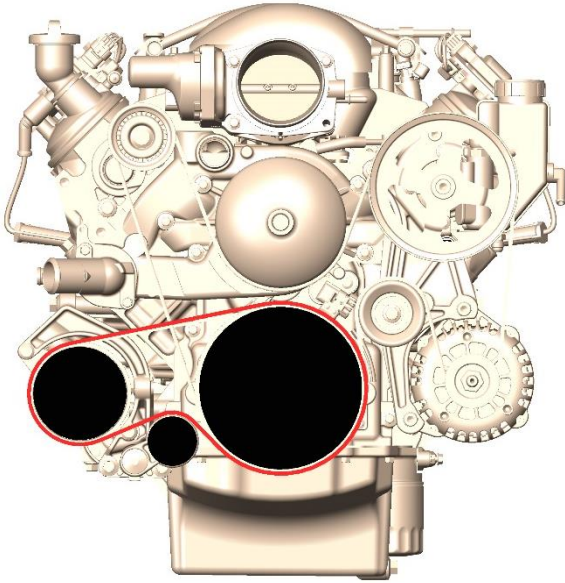
Tensioner assembly:



Torque M8 bolts to 18 ft./lbs. and M10 bolts to 36 ft./lbs.

Belt Routing & Length Calculation:

HELPFUL HINT: If installed, remove main accessory belt. When installing compressor belt, route around both ribbed pulleys. Then while fully rotating the tensioner arm, slip the belt on the tensioner's smooth pulley and slowly release. Reinstall main accessory belt.



When using the factory crank pulley use the below belt lengths:

Belt sizes
Standard and Middle alignments: 4PK940
Long alignment: 4PK962
Dry Sump/LS7 applications: 4PK965

Both application belt alignment and pulley diameters will directly affect belt length.

When using an aftermarket or under drive crank pulley, perform the following to acquire the measurement for the correct belt:

After the bracket and components are installed, route masking tape or string around the belt path. Leave the tensioner in the un-sprung position for this measurement. Mark or cut the tape/string to length and remove from the pulleys. Subtract 5/8" (16 mm) from the measured length to compensate for the un-sprung tensioner position. You will need to convert belt length to millimeters if measured in inches (inches X 25.4 = mm). Go to any auto parts store and ask for a 4PK000 belt with the "000" being the length in millimeters. For example, if you measured 365 mm and then subtracted 16 mm, you would get 349 mm, and the part number would be 4PK349.

