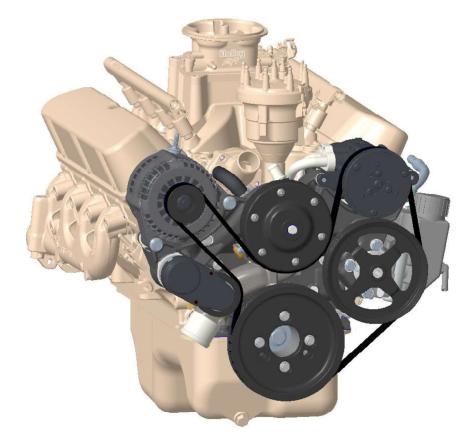


# **Complete Holley Mid-Mount Accessory Drive Kit**

289-351W Ford – Part Numbers: 20-370 (natural), 20-370BK (black)



Holley's Mid-Mount complete accessory system has all accessories pulled in tighter than other accessory drives. Among the many features is the bracket-less assembly that mounts all accessories to the timing chain cover directly and features a single serpentine multi V-belt.

#### Features:

- Bracket-less accessory mounting with ultra-easy assembly
- Hidden heater hose and bypass ports
- LT1 style premium alternator
- LT1 cartridge style water pump design
- Compact SD7 A/C compressor
- Type II power steering pump with baffled reservoir
- OE pulley ratios for optimal accessory performance
- Applicable to 289-351W engines built from 1963-2002
- Heater, P/S line adapters included, A/C lines sold separately
- Tensioner, alternator pulley and compressor pulley billet covers
- Billet crank pulley and/or pulley spacers could be machined to allow the addition of a crank trigger

# **Parts List:**

PICTURE	QTY	DESCRIPTION	REPLACEMENT MANUFACTURER & P/N	
	1	Holley R97-427 (natura Timing cover / Cooling manifold R97-428 (black) (Reference only, No replace		
	1	Front main seal and Gaskets, Timing Cover to Block and Oil Pan	27R1240	
	1	Front seal installation and Alignment tool	Holley R97-445 (Reference only, No replacement)	
	1	Water Pump Drive Assembly	Holley 97-200	
	1	Gasket, Water Pump Assembly	GM 12619770	
113	1	Belt, 6 Rib Serpentine	BANDO 6PK1570	
	1	Coolant Inlet adapter	Holley R97-431 (natural) Holley R97-449 (black) (Reference only, No replacement)	
Famey	1	Heater Port Adapter / Dipstick Hole Plug Kit	Holley R97-430 (Reference only, No replacement)	
	1	Alternator	Holley 197-302 (natural) / 197-303 (black) / 197-304 (polished)	
		Harness Pigtail, Alternator	Holley 197-400	
	1	Tensioner Assembly with Smooth Pulley	Holley 97-179 or Gates 38163	
	1	SD7 A/C Compressor	Holley P/N 199-102 (natural) / 199-104 (black) / 199-106 (polished)	

PICTURE	QTY	DESCRIPTION	REPLACEMENT MANUFACTURER & P/N	
	1	Crank Pulley (Reference only, No replace		
	1	P/S Pump with Reservoir	Holley 198-101	
	1	P/S Pressure Hardline to -6 AN, Banjo Bolt, crush washers (2), & Hardware	Holley 198-203	
	1	P/S Pulley	Holley 97-152	

HARDWARE	(P/N R97-433)		HARDWARE APPLICATION	
0	1	Oversized Washer, M8	Tensioner	
Management	1	Button Head Bolt, M8 X 1.25 X 70	Tensioner	
	6	Button Head Bolt, M6 X 1.0 X 20	Water Pump to Timing Cover	
	2	Socket Head Bolt, M8 X 1.25 X 95	A/C Mounting Bolts	
	1	Socket Head Bolt, M6 X 1.0 X 16	Coolant Inlet Adapter to Timing Cover	
	1	Socket Head Bolt, M6 X 1.0 X 35	Coolant Inlet Adapter to Timing Cover	
	2	Flange Head Bolt, 5/16-18 X 2.25"	Timing Cover to Block – bottom holes	
	2	Flange Head Bolt, 5/16-18 X 2"	Timing Cover to Block 2 <sup>nd</sup> from bottom	
	2	Flange Head Bolt, 5/16-18 X 2.5"	Timing Cover to Block 3rd from bottom	
		Flange Head Bolt, 5/16-18 X 3.5"	Timing Cover to Block 4th from bottom	
	2	Flange Head Bolt, 5/16-18 X 1"	Timing Cover to Block – top holes	
	2	Flange Head Bolt, M10 X 1.5 X 80	Alternator bolts	
	3	Flange Head Bolt, M8 X 1.25 X 30	Power Steering Pump (if applicable)	

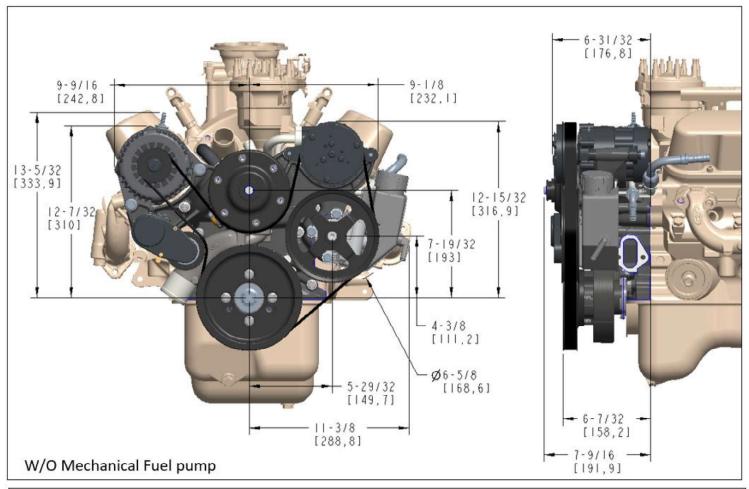
Included With: All Part Numbers				
0 0	1	Alternator Pulley Cover & O-ring	Holley 97-187 (black)	
			Holley 97-185 (black) / 97-186 (polished)	
	1	Tensioner Cover & Hardware	Holley 97-158 (black) / 97-157 (polished)	

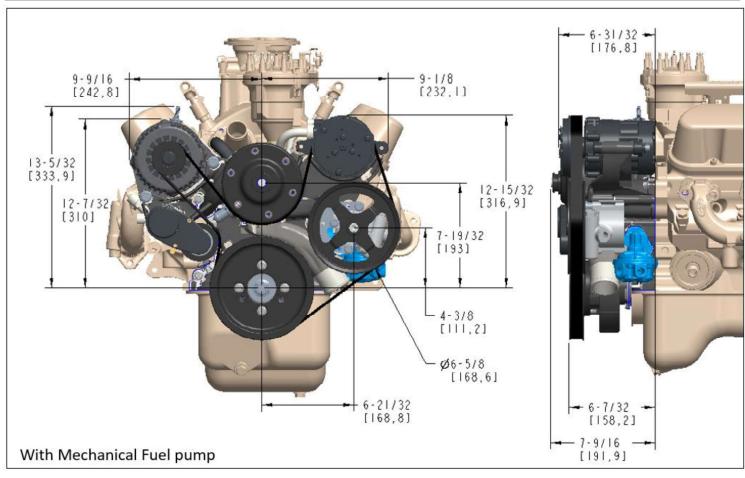
Additional parts that may be required depending on your application				
Picture	Qty	Description / Application	MANUFACTURER & P/N	
	1	A/C line assembly / Routes A/C line connections to the driver side	Holley 97-443	
	1	A/C line assembly / Routes A/C line connections to the passenger side	Holley 97-444	
	1	Remote P/S kit / If using mechanical fuel pump, includes Bando 6PK1580 belt	Holley 97-436	
	1	Crank pulley spacer kit / used with 3.875" length damper (See selection chart below)	Holley 97-446	
	1	Crank pulley spacer kit/ Used with 3.375" length damper (See selection chart below)	Holley 97-447	
	1	Crank pulley spacer kit/ Used with 3.00" length damper (See selection chart below)	Holley 97-448	
	1	Dipstick / If using Timing cover dipstick location	Lokar ED-5004	
	1	Gasket, Oil pan	Mr. Gasket 5890	

Small Block Ford Harmonic Damper Spacer Selection Chart				
Engine	Damper length	Model Year	Spacer Kit	3 or 4 bolt pulley
289/302/351W	3.00"	1963-1969	97-448	3-bolt
351W/351C/400M	3.375"	1970-1980	97-447	4-bolt
351 HO (351W)	3.875"	1991-2001	97-446	4-bolt
351W/302	3.875"	1981-2001	97-446	4-bolt
302/5.0L	3.950"	1970-2001	None requred	4-bolt
351W	3.950"	1981-2001	None requred	4-bolt



NOTE: The 3.875" Dampers are used with engines equipped with Ford Racing .917" Crank Sprocket.

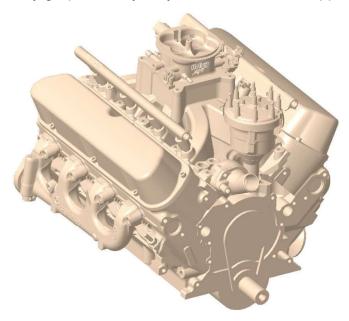




**IMPORTANT NOTE IF PAINTING COMPONENTS:** The alternator and A/C compressor ground through the water pump manifold. If painting or coating the manifold, the mating surfaces must all be bare metal allowing a ground path from the accessories' mounting feet to the engine block and ultimately the negative terminal on the battery.

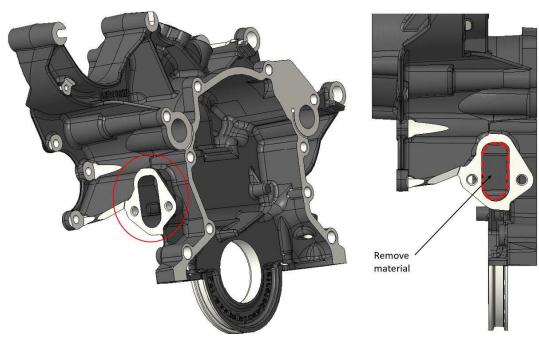
# **Assembly Instructions**

**NOTE:** Instructions assume you have already removed your factory timing cover, oil pan and cleaned gasket surfaces on block and oil pan. It is recommended to remove oil pan prior to assembly. Components in assembly graphics may vary some from those supplied for your application.



## Timing Cover:

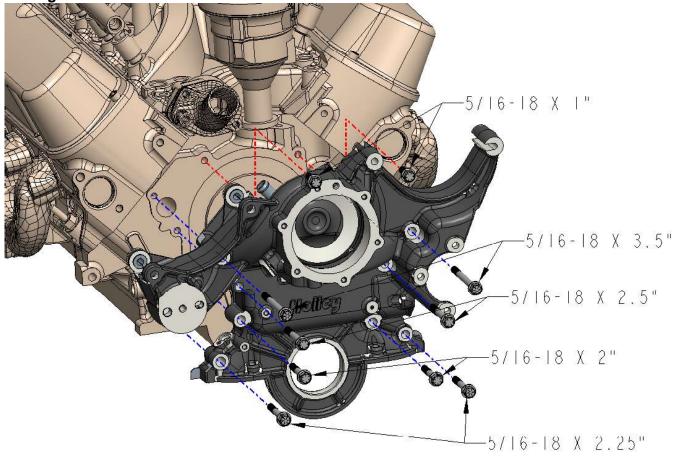
**IMPORTANT NOTE**: The timing cover includes a mount for a mechanical fuel pump. If using a mechanical fuel pump and a power steering pump, the cast wall must be removed prior to installing the timing cover. The casting is thinner in this area to allow for easier removal. Remove enough material to allow clearance for the fuel pump lever. Clean any metal shavings from inside cover.



**Timing Cover Gasket:** Apply a thin layer of RTV to both sides of timing cover gasket and locate on timing cover.

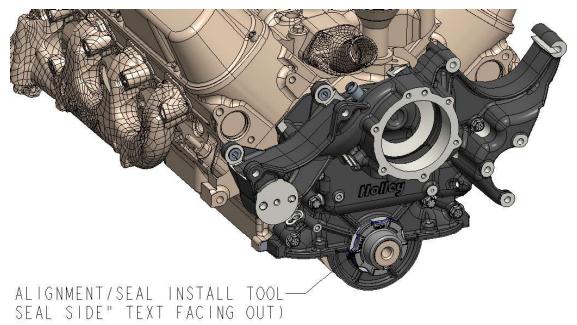


Timing cover to Block:



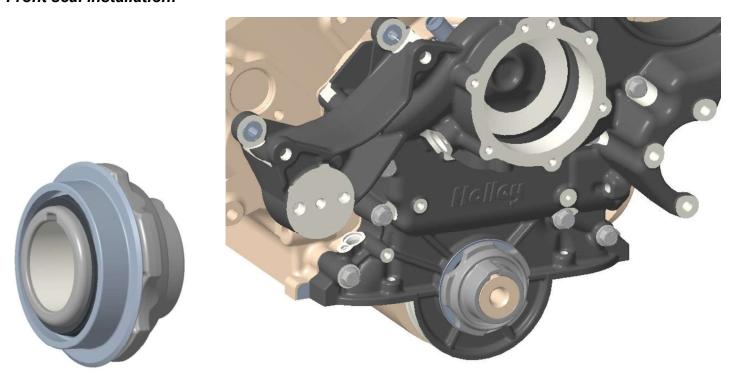
Assemble timing cover and gasket to block using fasteners shown above. Make sure gasket remains in the place while assembling. **Do not Tighten fasters at this time**.

# Align Timing cover to crankshaft:



Use the included Alignment tool to center the timing cover to the crankshaft. Snug timing cover fasteners making sure alignment is maintained. Torque Fasteners to 12 ft/lbs. Double check alignment.

#### Front seal installation:

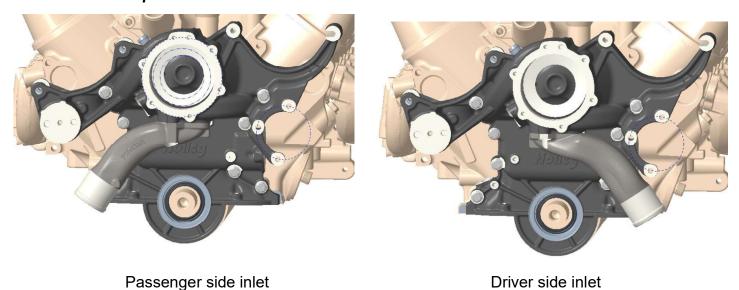


Lubricate seal and place on seal installation tool.

Slide tool and seal onto crankshaft.

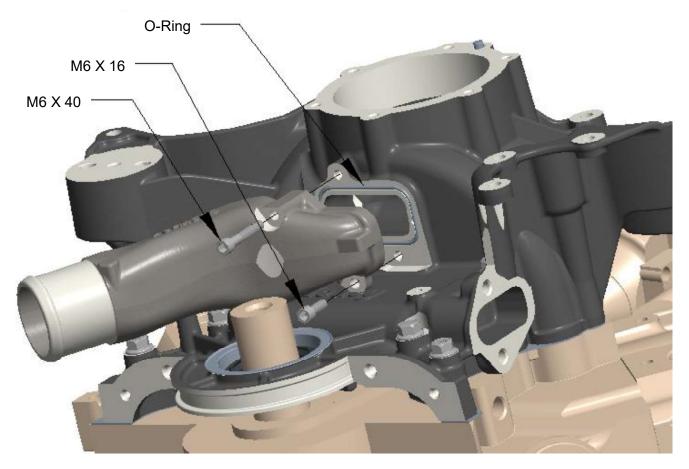
Use a harmonic balancer installation tool to press seal into timing cover.

# Coolant inlet adapter:



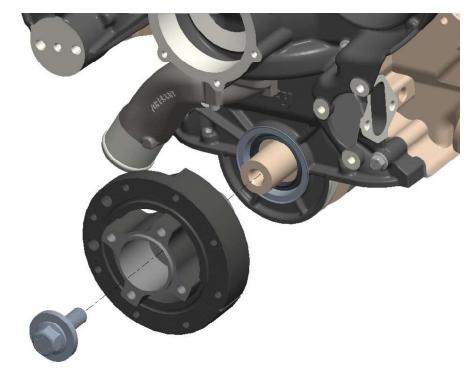
Determine which side you want your coolant inlet on:

Coolant inlet can be assembled to enter from either side, whichever works best for your application.



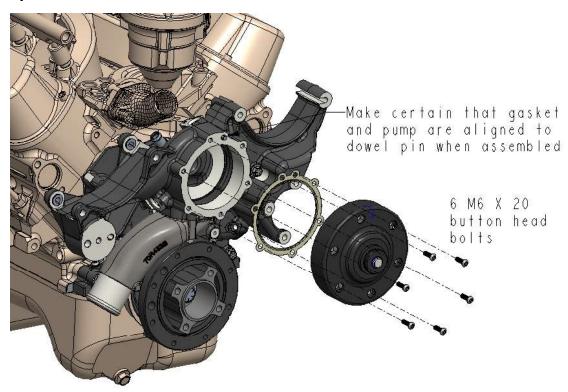
Ensure adapter O-Ring seal is still in place on timing cover. Torque M6 socket heads to 85 in/lbs.

#### Harmonic balancer installation:



Use harmonic balancer installation tool to install damper. Torque damper bolt to 70 - 90 ft/lbs. Reassemble oil pan using new gaskets. Follow same procedure as OE small block Ford.

# Water Pump and Gasket Installation:



**NOTE:** Torque M6 button head bolts to 85 in/lbs. Use a standard 3mm hex tool. Do not use a ball hex tool. **Do not overtighten.** 

# A/C Compressor/ A/C lines Installation:

The A/C lines you ordered with your kit will determine the order of assembly for this step.

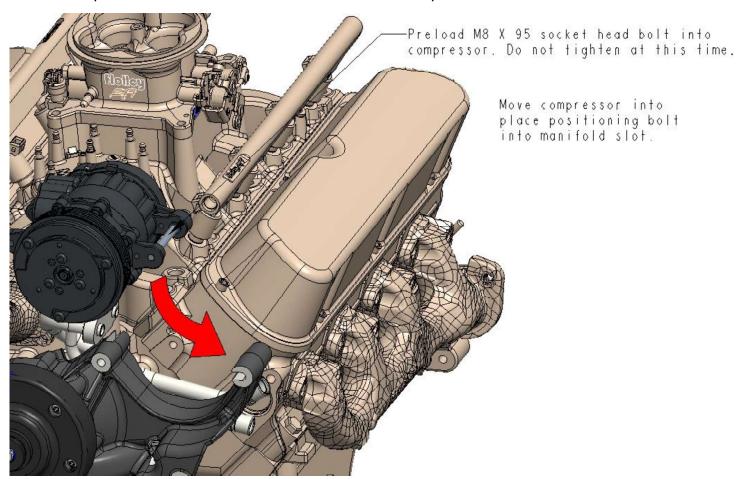
A/C lines are sold separately.

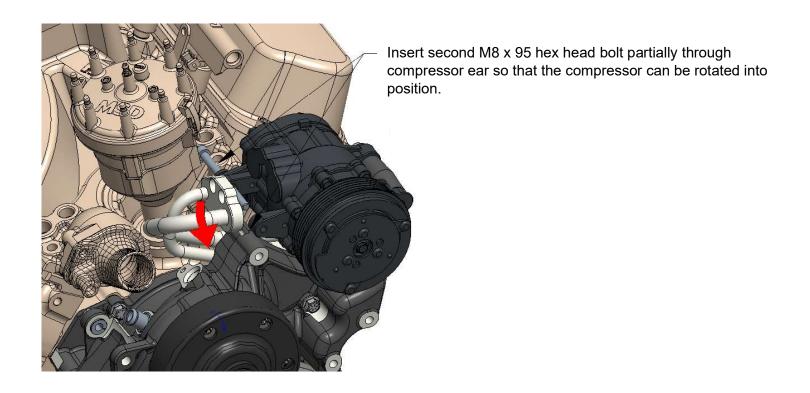
#### Driver side A/C lines:



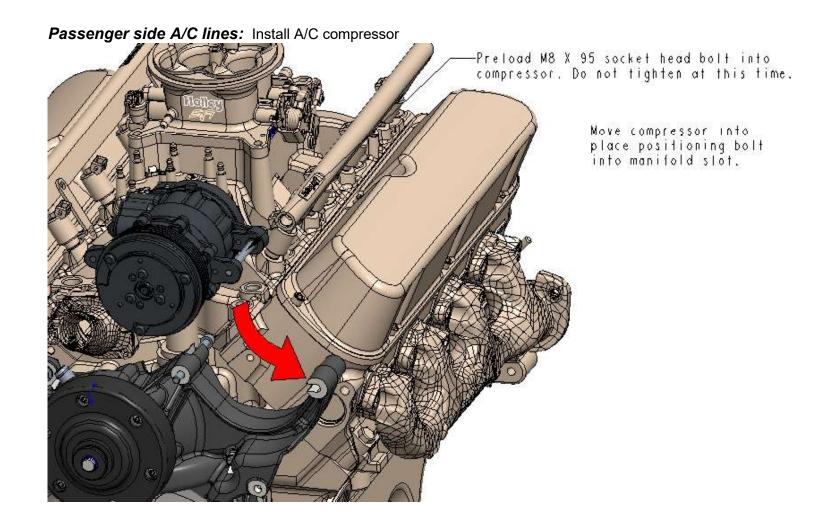
Install the 3 A/C line bolts as shown above. (bolts are included with A/C line kit). Make certain the 2 O-ring seals are inside the compressor grooves.

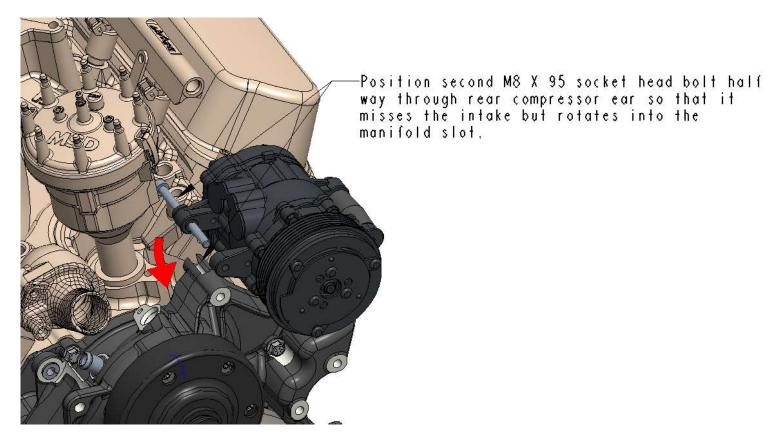
NOTE: Torque the 2 M8 socket head bolts to 18 ft./lbs. Torque the M6 to 85 in./lbs.



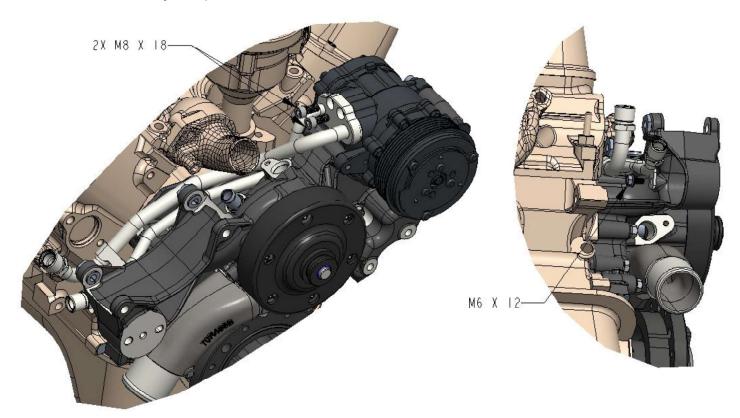


**NOTE:** After assembly, torque both M8 bolts to 18 ft./lbs.





NOTE: After assembly, torque both M8 bolts to 18 ft./lbs.



Assemble the passenger side A/C lines as shown above. Make certain the 2 O-ring seals are inside the compressor grooves. Install the 3 A/C line bolts. (bolts are included with A/C line kit). Torque the 2 M8 socket head bolts to 18 ft./lbs. Torque the M6 bolt to 85 in./lbs.

#### Alternator Installation:



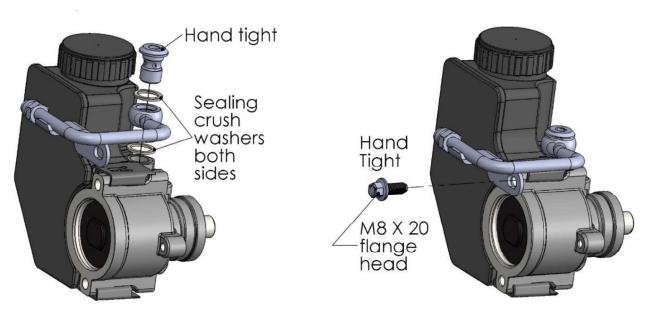
NOTE: Torque M10 bolts to 36 ft./lbs.

ALTERNATOR WIRING: See instructions included with the alternator for wiring directions.

# Power Steering considerations:

If using a mechanical fuel pump, you will need to use the remote power steering kit 97-436 that allows for P/S clearance to the fuel pump. Fuel pump must be installed before P/S pump.

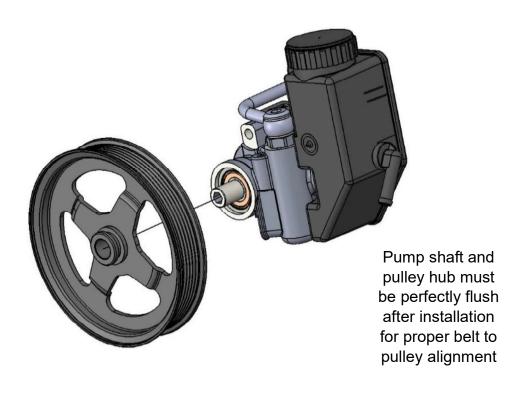
# P/S Pump -6 AN Adapter Assembly (for versions with P/S):



NOTE: After assembly torque M8 bolts to 18 ft./lbs. and banjo bolt to 25 ft./lbs.

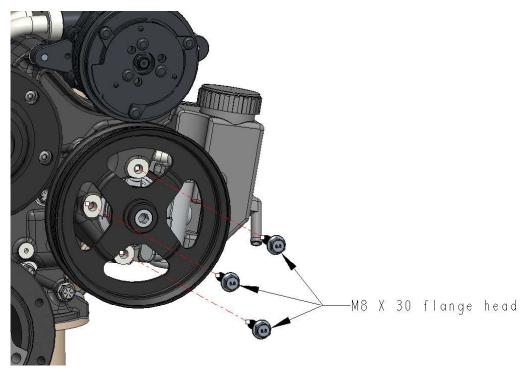
## P/S Pump Pulley Installation (for versions with P/S only):





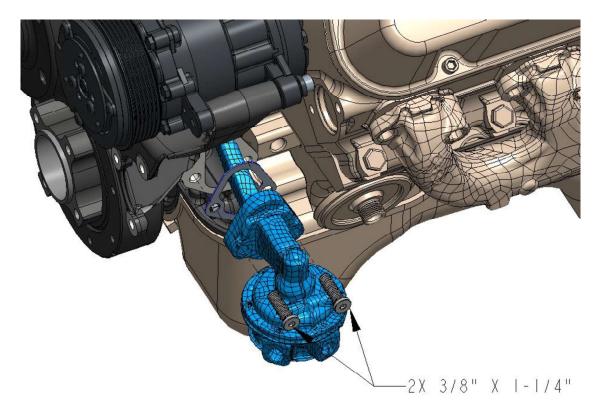
**HELPFUL HINT:** Pulley installation tools are available for rent at most auto parts stores.

P/S Assembly Installation (for versions with P/S only): Without Mech Fuel pump

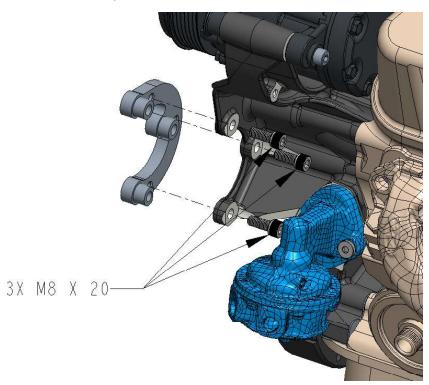


**NOTE:** Torque M8 bolts to 18 ft./lbs.

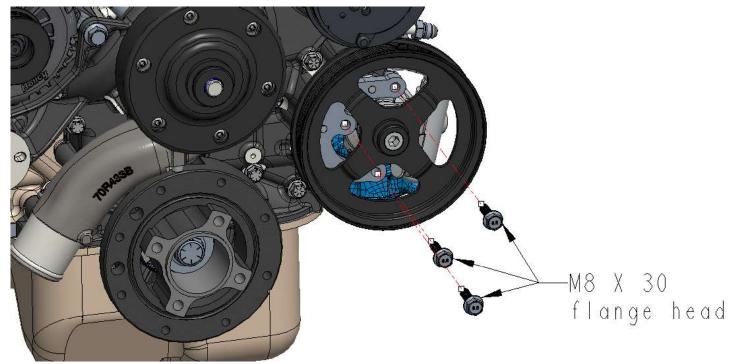
P/S Assembly Installation with Mech Fuel pump (for versions with P/S only): \*Requires purchase of Holley Remote P/S kit 97-436.



Assemble fuel pump using a new gasket and the 2 3/8" Low profile Socket head screws included with the 97-436 kit. **NOTE:** Torque screws to 25 ft./lbs.



Assemble P/S offset bracket with 3 M8 socket head bolts included with the 97-436 kit. **NOTE:** Torque M8 bolts to 18 ft./lbs.



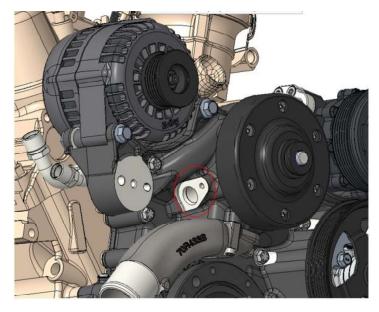
Remove reservoir from P/S pump and assemble using 3 M8 X 30 flange head bolts. **NOTE:** Torque M8 bolts to 18 ft./lbs.

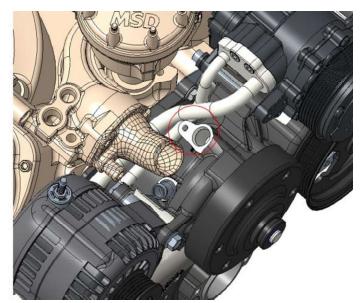
**IF USING MECHANICAL FUEL PUMP OR IF THERE IS RESERVOIR INTERFERENCE:** In a few applications, the supplied reservoir may interfere with the vehicle. In these cases, use Holley P/N PS0001ERL (included with 97-436) to adapt the supplied P/S pump's inlet to a connection appropriate for use with most remote reservoirs. Reservoir options include Holley P/N 198-211 and 198-212.

**HYDRO-BOOST BRAKE APPLICATIONS:** These applications often require an additional reservoir inlet. Use PS0001ERL adapters with either 198-211 or 198-212 Holley reservoirs for these applications.

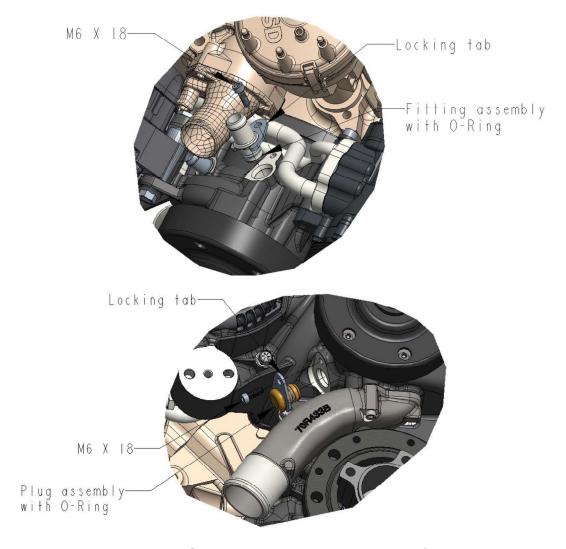
## Heater line connection:

There are 2 options for connecting the heater return line to the Timing cover. One will get a fitting and the other will be plugged. Both the plug and fitting are included in the kit.





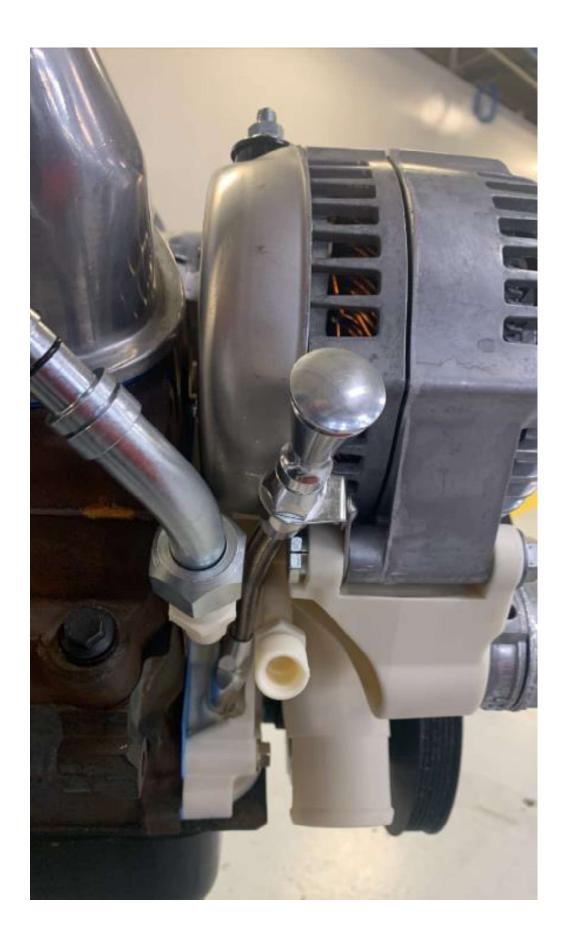
In this example we will be placing a fitting in the upper hole and plugging the lower hole.



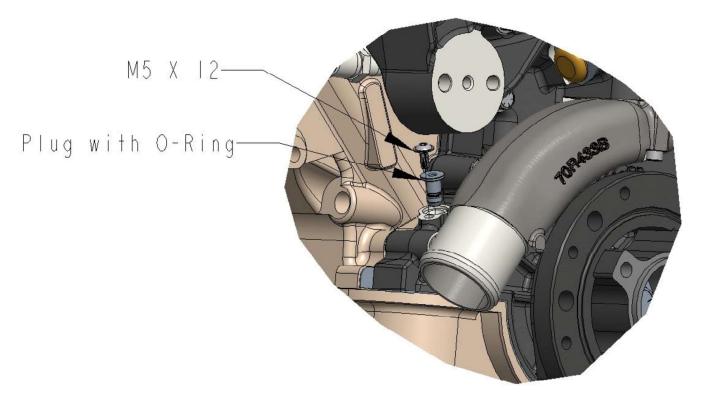
NOTE: Torque M6 screws to 85 in./lbs.

#### Dipstick Hole:

The timing cover includes provisions for a dipstick. If you plan to use this hole you will have to purchase an aftermarket dipstick similar to a Lokar ED-5004. You will also have to fabricate a bracket and attach it to the alternator mount as shown below. If using the dipstick hole in the block, use the included plug to plug this hole.

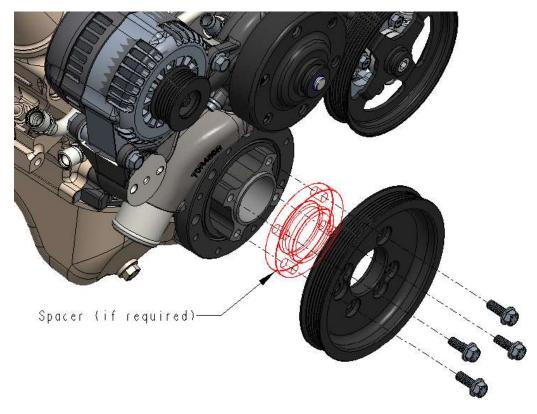


# Dipstick hole plug option:



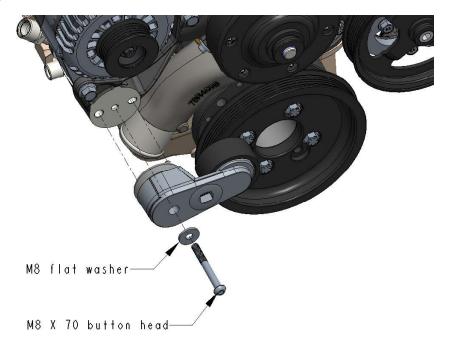
NOTE: Torque M5 screw to 50 in./lbs.

Crank Pulley Installation: See page 4 for spacer requirements



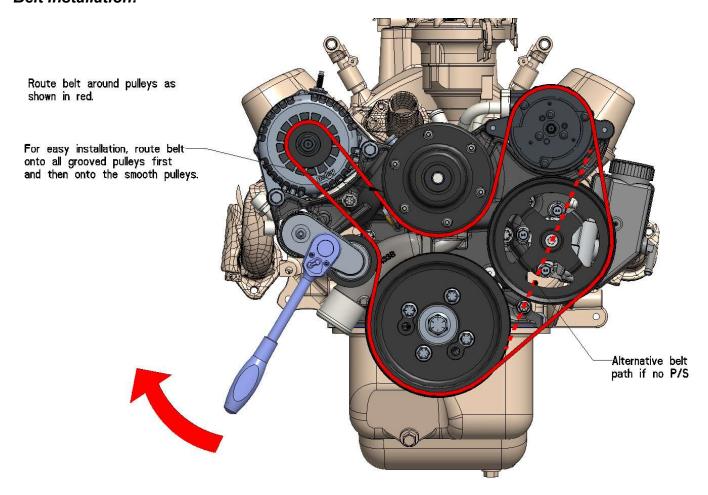
Assemble crank pulley (and spacer if required) with the appropriate 3/8ths bolts supplied either with this kit or that came with your pulley spacer kit. NOTE: Torque the 3/8 bolts to 23-28 ft./lbs.

#### Tensioner Installation:



NOTE: Torque M8 bolt to 18 ft./lbs.

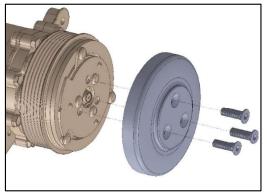
#### Belt Installation:

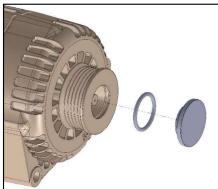


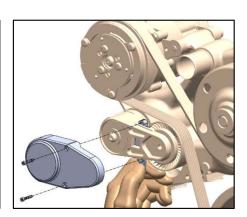
After routing the belt, use a 1/2" square drive wrench to pull the tensioner all the way down and work the belt on.

#### Accessory and tensioner covers:

Cosmetic covers are included with most kits. If not included, these can be purchased individually. See instructions included with cover for installation procedures.







## Final inspection:

Before starting the vehicle, confirm all plumbing and wiring is complete, fluids have been added, and the belt is properly fitted to all pulleys. Start the engine. After running for a few minutes but before driving, check for any leaks.

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