

Late Model Hemi EFI Selection Guide

Holley offers complete plug and play harnesses for 2003-2010 5.7L and 6.1L factory Chrysler Hemi engines (non-VVT only), as well as 6.4L "392" and Gen III 426 crate engines. Between 2005 and 2008, depending on the vehicle model, engines changed crank/cam sensor, coil, and drive-by-wire pedal/throttle configurations. The best way to determine if your engine has "early" or "late" configurations is to use the following selector guide. Holley offers harnesses for all of these applications.

Step 1 - Determine ECU – Factory HEMI applications all utilized a drive-by-wire throttle body/pedal. If you are retaining the drive-by-wire and its associated advantages, you must run a Dominator ECU. Cable throttle body applications can utilize the HP ECU. A Dominator ECU may be required if the input and outputs used exceed those available on the HP ECU.

554-114 - Dominator ECU

554-113 - HP ECU

558-308 - ECU Main Power Cable (Required with HP or Dominator ECU's above)

Step 2 - Determine Main Harness – determine by looking at crank and cam sensors.

558-106 - HEMI Main Harness, Early

558-107 - HEMI Main Harness, Late

Step 3 - Determine Injector Harness – determine by fuel injector connector type.

558-210 - HEMI Injector Harness, USCAR

558-211 - HEMI Injector Harness, Jetronic/Minitimer



Early Crank



Early Cam



Late Crank



Late Cam



USCAR EV6 Style Connector



Jetronic/Minitimer Bosch Style Connector

Late Model Hemi EFI Selection Guide (continued)



Early Coil

Step 4 - Determine Coil Adapter Harness – determine by looking at ignition coils.



Late Coil

558-310 – HEMI Coil Harness, Early Coils

558-311 – HEMI Coil Harness, Late Coils

The following is **REQUIRED** in addition. This is a “dumb coil” driver module that plugs into the main harness, which is needed when running the factory coils. Part number 554-122 contains two 4-channel drivers, required on an eight cylinder engine.

554-122 – Coil Driver Module

Step 5 - Drive-By-Wire Harness – Determined by the throttle pedal connector type.

558-417 – DBW Harness, Early

558-418 – DBW Harness, Late

558-419 – Manual throttle body harness with IAC/TPS connections



Early Pedal



Late Pedal



Continue on at step 7 on the main component selection guide on page 24

HP and Dominator Component Selection Guide

Use when building Dominator Systems or Custom HP Systems

Step 1 (required)

Choose your ECU & Main Power Harness

554-114 - Dominator ECU only

554-113 - HP ECU only

558-308 - Main Power harness

Notes: ECUs include USB communications cable, mounting hardware and software CD.

When purchasing an HP or Dominator ECU separately, a main power harness is required.

Step 2 (required)

Choose Your Main Harness

558-100 - 4BBL TBI Main Harness Only

558-101 - TPI/SR Harness

558-102 - LS1 Harness

558-103 - LS2 Harness

558-104 - Universal MPFI

558-105 - Unterminated Harness

558-414 - Terminator Main Wiring Harness

558-106 - Hemi, Early

558-107 - Hemi Late

Notes: Select one that meets customers needs.

558-100 - Designed for Holley 4 bbl TBI systems

558-101 - Designed for Holley Stealth Ram Systems and factory GM TPI engines (speed density)

558-102 - Designed for 24x crank and 1x rear mount cam sensor. Connects to factory coil harnesses and all factory sensors

558-103 - Designed for 58x crank and 4x front mount cam sensor. Connects to factory coil harnesses and all factory sensors.

558-104 - Fully terminated. Designed for single plane style EFI intake manifolds and Holley MPFI intakes

558-105 - 15' harness length. Fully terminated and populated at ECU connections only. User must terminate all sensor ends. Includes a variety of sensor connectors and pins but end user may have to supply sensor pins and connectors suited for their specific application

558-100 - Designed for Holley Terminator TBI systems

558-106 - Designed for early Hemi crank and cam sensor. Connects to all factory sensors

558-107 Designed for late Hemi crank and cam sensor. Connects to and all factory sensors

Step 3 (required)

Choose Your Injector Harness

558-200 - V8 Injector harness

558-201 - LSx Inj Harness

558-202 - Universal 4 Cyl Inj Harness

558-203 - Universal 6 Cyl Inj Harness

558-204 - Universal Unterminated Inj

558-205 - 4 Bbl Holley TBI

558-206 - Terminated 2x4 Holley TBI

558-207 - Unterminated 16 injector MPFI

558-208 - Unterminated 24 injector MPFI

558-209 - Ford V8 Injector Harness

558-210 - HEMI (EV6 style) inj. harness

558-211 - HEMI (Bosch style) inj. harness

558-415 - Terminator Throttle Body Sub Harness

Notes: 558-200/203 - Universal "Y" style harness using standard Jetronic (Bosch style) injector connectors

558-201 - "Y" style harness for any V8 engine using USCAR (EV6 style) of injector.



558-202 - Fully terminated 4 cylinder harness using standard Bosch style injector connectors

558-204/207/208 - Terminated at injector connectors (Bosch style). Harness must be assembled and requires crimping Metripak 150 connectors. Includes all connectors, pins, terminals. Loom needed.

558-206 - Fully terminated harness when using two 4bbl Holley TBI units

On factory LS based engines, the LSX harness should be used on LS2/LS7 engines. It utilizes the EV6 connector. The V8 Injector harness should be used on LS1/LS6 engines. It utilizes the Bosch style connector. Truck engines may have three different connectors. The EV6, Bosch and a GM Multec 2. Currently we do not have a harness for the Multec 2. If the customer has swapped injectors or is unsure of what they have, it is best to call Holley Tech to determine the correct harness.

Step 4 (required)

Choose Your Ignition Harness

558-303 - Mag Pickup Ign Harness

558-304 - HEI Ign Harness

558-305 - Ford TFI Ign Harness

558-306 - Universal Unterm Ign Harness

558-307 - Universal Coil On Plug (COP) Ign. Harness.

558-309 - Holley LS 24x or 58x main harness to Holley waste-fire DIS coils

558-130 - Holley HP Smart coils sub harness

558-410 - Crank/Cam Ign Harness

558-310 - Hemi early coil harness

558-311 - Hemi late coil harness

Notes: Select one that meets customers needs if controlling timing.

Notes: If choosing a DIS system in STEP 12 you will skip STEP 4. (DIS system includes ignition harness)

558-303 - Used to connect to a magnetic pickup distributor or crank trigger. Customer must supply sensor connectors/pins.

558-304 - Connects to small cap computer controlled GM HEI

558-305 - Connects to Ford 86-93 HO TFI distributors

558-306 - Semi-terminated. Includes all wiring to hook up to any crank and cam sensor. Shield/ground cable used. Customer must supply crank/cam pins and connectors for their specific sensor and may have to crimp metripak 150 pins.

558-307 - allows the use of GM LSx coils or Holley HP smart coils on a non-LS engine, specifically the ECU to coil harness wiring. The customer has to supply either the factory GM coil sub-harnesses. for LS coils or 558-130 sub-harness for Holley HP smart coils

558-410 - Fully terminated harness. Connects to Holley 60-2 crank sensor and GM Cam-Sync Distributor AC Delco PN 213-350 or eficonnection.com sync pulse distributor.

558-310 - Designed for early Hemi crank and cam sensor. Connects to and all factory sensors

558-311 - Designed for late Hemi crank and cam sensor. Connects to and all factory sensors

Step 5 (optional)

Choose Your Transmission Control

558-405 - 4L60/80 Harness

Notes: Transmission control with Dominator ECU ONLY

558-405 - Fully terminated harness for GM

4L60/65/70/80/55E transmissions

Step 6 (optional)

Choose Your Throttle Body/ Drive-By-Wire Control

558-411 - Dual GM DBW Harness

558-406 - GM DBW Harness

558-417 - Hemi Early DBW TB

558-418 - Hemi Late DBW Pedal

558-419 - HEMI Manual TB adapter harness, TPS IAC

Notes: DBW control with Dominator ECU only! GM applications only work with the following throttle bodies and DBW pedal assembly

Approved GM throttle body part numbers

GM P/N - 12570800

GM P/N - 12570790

GM P/N - 12580760

GM Throttle pedal Assy part numbers
GM P/N - 10379038

Step 7 (optional)

Choose your Auxiliary Harness

534-199 - Wideband Oxygen Sensor Extension Cable, 4'

558-400 - J1A/B I/O Cnctr. Dom & HP

558-401 - J2A Cnctr. & Harness, Dom only

558-402 - J2B Cnctr. & Harness, Dom only

558-403 - J3 Cnctr. & Harness, Dom only

558-404 - J4 Cnctr. & Harness, Dom only

558-408 - J2-J4 Cnctr. Kit, Dom only

Notes: 558-400 - Connects into Main Harness Input/Output Connector (8 pin metripak). Loose lead wires.

558-401 - Includes J2A ECU connector with fully terminated #2 wide band oxygen sensor cabling. Comes with loose lead wires for all other input connections (qty 23). ECU pins are pre-crimped.

558-402 - Includes J2B ECU connector. Includes all output connection wires (qty 16). ECU pins are pre-crimped.

558-403 - Includes J3 ECU connector. Includes all input and output connection wires (qty 17). ECU pins are pre-crimped.

558-404 - Includes J4 ECU connector. Includes all input and output connection wires (qty 26). ECU pins are pre-crimped.

See holleyefi.com for more info.

Step 8 (optional)

Choose your Injectors

522-191 - Single Inj 19PPH

522-198 - 8 pk Inj 19PPH 300HP Max

522-241 - Single Inj 24PPH

522-248 - 8 pk Inj 24PPH 385 HP Max

522-301 - Single Inj 30PPH

522-308 - 8 pk Inj 30PPH 480 HP Max

522-361 - Single Inj 36PPH

522-368 - 8 pk Inj 36PPH 575 HP Max

522-421 - Single Inj 42PPH

522-428 - 8 pk Inj 42PPH 670 HP Max

522-481 - Single Inj 48PPH

522-488 - 8 pk Inj 48PPH 765 HP Max

522-661 - Single Inj 66PPH

522-668 - 8 pk Inj 66PPH 1050 HP Max

522-831 - Single Inj 83PPH

522-838 - 8 pk Inj 83PPH 1325 HP Max

522-121 - Single Inj 120PPH

522-128 - 8 pk Inj 120PPH 1900 HP Max

522-161 - Single Inj 160 PPH

522-168 - 8pk inj 160 pph 2525 HP Max

Notes: Choose Injector needed

Step 9 (required)

Choose your Sensors

554-100 - NTK Wideband Sensor

554-101 - Bosch Wideband Sensor

554-102 - 100 PSI Sensor

554-103 - 200 PSI Sensor

554-104 - 1600 PSI Sensor

538-24 - 1 bar MAP sensor

538-13 - 2 bar MAP sensor

554-107 - 3 bar MAP sensor

554-108 - 5 bar MAP sensor

534-10 - Coolant Temp Sensor

9920-107 - Air Temp Sensor

Notes: Choose all that apply to your customer 554-102/103/104 - Comes with short pigtail connector for sensor.

Oxygen sensor recommendation: The NTK sensor is recommended when using leaded or methanol fuels, high exhaust and forced induction applications or for highest precision feedback.

Step 13 (optional)

Choose your Modules

554-111 - Nitrous solenoid driver

554-112 - 2 wire coil driver module

554-115 - Peak and Hold Module, Water/Meth

558-412 - CAN2 Connector/Cable Kit (for Racepak & other external CAN drives)

Notes: 554-111 - The nitrous solenoid driver is REQUIRED when progressively controlling nitrous oxide solenoids. It can be used for non-progressive nitrous to replace a standard relay. Requires a PWM - (ground) output. One per stage, 40A max each.

554-112 - Required when using 2 wire coils. One module can drive 4 coils. Dominator and HP ECUs can directly trigger "smart coils" triggered by a 5 volt input

554-115 - Required to drive a water/methanol solenoid if there is not an extra injector driver available.

Step 14 (optional)

Choose your Water Meth

557-100 - Pump

557-101 - Installation kit

557-103 - Solenoid/Nozzle 600CC up to 400HP

557-105 - Solenoid/Nozzle 900CC up to 600HP

557-106 - Solenoid/Nozzle 1000CC up to 800HP

557-107 - Water Inj Filter

Notes: For a complete kit, a pump, installation kit, filter and solenoid nozzle of the appropriate size is required. A peak and hold module may be required when using an HP ECU.

Step 15 (optional)

Choose your Boost Control

557-200 - 3 port valve

Step 10 (optional)

Choose your Fuel System

- 12-927** - In-Line pump (TBI Units)
- 12-700** - HP™ Billet In-Line pump
- 12-890** - HP™ Billet In-Line pump
- 12-1400** - Dominator™ Billet In-Line pump
- 12-1800** - Dominator™ Billet In-Line pump
- 12-846** - HP™ Billet Fuel Pressure regulator, EFI bypass - 40-70 psi
- 12-848** - Dominator™ Billet Fuel Pressure regulator, EFI bypass -40-70 psi
- 162-550** - 100 GPH HP™ Billet Fuel Filter -3/8" NPT – 10 micron
- 162-551** - 100 GPH HP™ Billet Fuel Filter -3/8" NPT – 100 micron
- 162-552** - 175 GPH HP™ Billet Fuel Filter -3/8" NPT – 10 micron
- 162-553** - 175 GPH HP™ Billet Fuel Filter -3/8" NPT – 100 micron
- 162-554** - 175 GPH HP™ Billet Fuel Filter -8AN – 10 micron
- 162-564** - 175 GPH HP™ Billet Fuel Filter -8AN 100 micron
- 162-570** - 260 GPH Dominator™ Billet Fuel Filter - 12AN 10 micron
- 162-572** - 260 GPH Dominator™ Billet Fuel Filter 12AN – 100 micron

Step 16 (optional)

Choose your Gauges / Display

- 553-100** - Gauge "Black"
 - 553-101** - Gauge "Chrome"
 - 553-103** - 5.7" LCD Touch Screen
 - 553-104** - Avenger Hand-held Controller
- Notes: Gauges can be individually configured to display any sensor that is parameter available in the ECU (RPM voltage, oil pressure, Air/Fuel, ect).
- 553-104 - Can be used with the HP and Dominator & allows basic tuning and monitoring functions. Can also be used as a replacement on the Avenger.

Step 11 (optional)

Choose your Crank Trigger System

- 556-110** - SBC Crank Trigger Kit
- 556-111** - BBC Crank Trigger Kit

Notes: 556-110/111- Include everything needed to install a 60-2 crank trigger wheel system on a Small or Big Block Chevy engine for use with an HP or Dominator ECU. Includes wheel, sensor, billet aluminum mounting components, and fully terminated wiring harness with crank and cam sensor connectors. Intended to provide a very accurate RPM signal to the ECU.

Step 17 (optional)

Choose your Accessories

- 558-407** - Multi Map Selector
- 558-409** - Sealed USB Cable

Notes: 558-407 – Four position key switch that allows the user to select from 4 stored calibrations without the need of a laptop computer. Dominator ECU only.

Step 12 (optional)

Choose your Ignition

- 556-100** - 4 Cyl DIS System
- 556-105** - 6 Cyl DIS System
- 556-101** - 8 Cyl DIS System
- 556-102** - SB Crank Sensor mounting kit
- 556-103** - BB Crank Sensor mounting kit
- 556-104** - DIS Coil
- 556-112** - HP Smart coil
- 556-106** - 5" Crank trigger wheel
- 556-107** - 6" Crank trigger wheel
- 556-108** - 7 3/4" Crank trigger wheel
- 556-109** - 8 1/2" Crank trigger wheel (SBC/BBC)
- 554-118** - Hall effect Crank sensor is designed as a drop-in sensor replacement for flying magnet crank trigger

Notes: Choose all that apply to your customer

NOTE: The installation of Holley DIS on Small and Big Block Chevy engines requires the purchase of PN 556-101 and either the 556-102 or 556-103. 566-100/101/105 - comes with Coils, Crank/Cam sensor wiring, coil wiring, and crank sensor. Must purchase trigger addition 556-102/103- Complete trigger wheel and sensor mounting kit for SB/BB Chevy engines. Comes with 8-1/2 trigger wheel and billet aluminum bracketry to mount crank sensor. Can be mounted on either side of block and is fully adjustable. Requires accessories to be moved 1/8" out. Includes 1/8" water pump pulley spacer

NOTE: The installation of Holley DIS on non-Small/Big Block Chevy engines requires the purchase of PN 556-100/101/105 and a properly sized trigger wheel (PN 556-106/107/108/109). The user will have to machine the trigger wheel mounting pattern as well as fabricate a rigid mount for the crank sensor itself. Individual Trigger Wheels PN 556-109 – bolt hole pattern machined for SB/BB Chevy Engines. PN 556-106/107/108- machined only with 1" diameter center hole. Must be machined to mount to specific application. 554-118 Hall effect Crank sensor is designed as a drop-in sensor replacement for flying magnet crank trigger setups using a 3/4-16" threaded magnetic sensor. This sensor is a Hall Effect sensor, meaning it outputs a square wave signal, which is ideal for use with most Electronic Fuel Injection Systems. This sensor is to only be used with a trigger wheel with "flying magnets". It does not detect a ferrous steel target.