

79-93 HEAT INSTRUCTIONS

The logo for HELLION POWER SYSTEMS features the word "HELLION" in large, bold, metallic 3D letters with a red-to-silver gradient. Below it, "POWER SYSTEMS" is written in smaller, red, metallic 3D letters. The background includes faint, stylized orange brushstrokes, including a large circular scribble in the lower right.

HELLION

POWER SYSTEMS

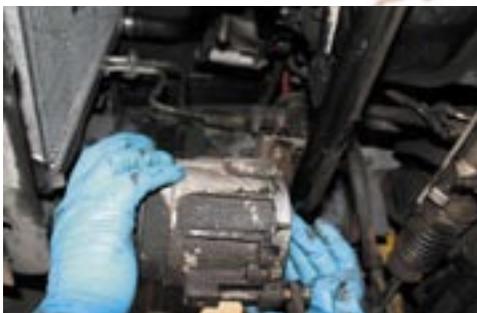
HELLION POWER SYSTEMS
79-93 HEAT
KIT INSTRUCTIONS

HELLION

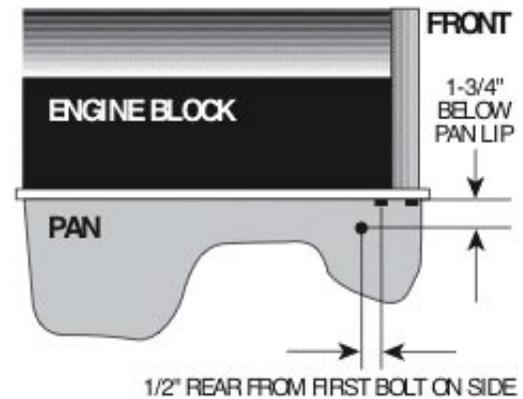
Hellion Power Systems 86-93 Turbocharger System Instalation Instructions

First steps

1. If you plan on replacing fuel pump, make sure that the car is low on fuel before starting installation.
2. Disconnect battery.
3. Raise car and support with 4 jack stands, or place vehicle on lift if one is available.
4. Loosen fan bolts and remove the accessory drive belt.
5. Remove the air inlet tube, air filter, bellows, mass air meter, and all other parts that lead to intake.
6. Remove the crankcase vent tube, (The plastic tube that connects the valve cover to the throttle body).
9. Using both a 9/16" and 1/2" wrench or socket, remove the brace that connects the smog pump to the engine cover. Disconnect hose from the back of smog pump and remove smog pump and cast bracket. from the bottom of the vehicle.



Oil drain

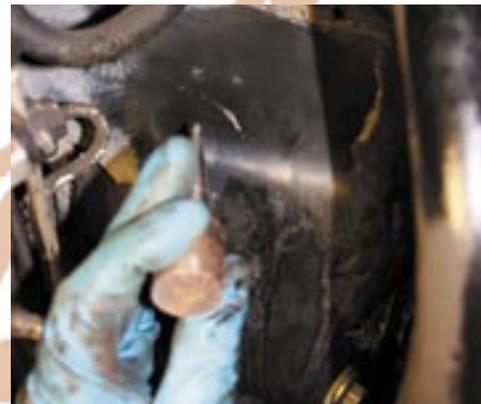


14. It is necessary to punch a hole in the oil pan to provide a drain for the turbocharger. Use supplied punch to make hole. The hole will be located 1/2 inch back from first bolt hole, and 1 3/4 inch down from pan rail on the passenger side.

(See drawing)

16. Mark spot on oil pan and punch hole using punch and hammer (It may be necessary to use a large hammer, like a 2.5 lb sledge). Drive the punch in until it is seated on the flat part of the punch. after hole has been started, look for crank shaft counterweight, if visible, rotate engine

17. Tap the hole with a 3/8" NPT tap about 1/4 inch



86-93 MUSTANG INSTRUCTIONS

deep, covering the tap with heavy grease to catch the metal shavings from the tapping process. (A tap is supplied with the kit)

18. Clean the threaded area.

19. Install supplied 3/8" pipe to #10 AN fitting into oil pan. Cover pipe threads with teflon tape before installation.



Header installation

20. Remove O2 sensors.

21. Remove factory H-pipe.

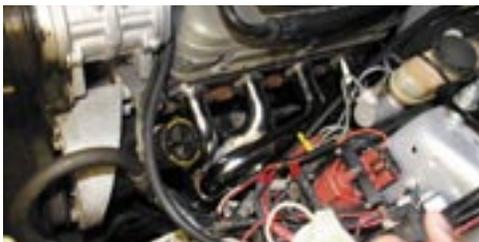
22. Remove starter to make room for header installation.

23. Remove spark plugs.

24. Remove both driver and passenger headers, cleaning heads after removal.

25. Remove all smog lines and accessories at this time and set them aside for later use. The lines and their attaching points at the cylinder head can be used again in order to prevent any exhaust leaks or other issues.

Figure 7- Driver Side Header



26. Install supplied driver's side header using supplied bolts and tighten.

27. **It is necessary to slide the down pipe behind passenger header before bolting passenger side header to head.** Install supplied turbo header on passenger side, again using supplied hardware. Leave bolts loose.

Figure 8- Passenger Side Header



28. Re-install starter.

29. Tighten header bolts.

30. Next, wrap a/c lines with heat wrap to protect line from heat. Secure heat wrap with supplied ties.

Turbo & Pipe installation

31. First, screw oil drain extension fitting into oil drain fitting using Teflon pipe paste.

Figure 9- Oil Drain Fitting and Extension



32. Loosen clocking bolts on turbocharger and install oil drain fitting and extension onto the turbo.

86-93 MUSTANG INSTRUCTIONS

33. Next, lower the turbo onto the turbo header until the drain extension touches the inner fender area. Mark this point, and remove the turbo.

34. Drill a 1 3/4" hole where you made the mark for the oil drain. Once you have drilled this hole, put a mark on the plastic inner fender well directly under the hole. You will also drill a 1 3/4" hole on the mark.



35. Install supplied air filter onto turbo, and then install the turbo onto the turbo header; use supplied steel shim gasket (shim gasket is in turbo box) and 3/8" x 1.5" bolts and nuts. Leave bolts loose.

36. Install 19" push-lock hose onto oil drain. Feed oil drain line down through the holes in the metal and inner fender well, and route to fitting in oil pan.



57. If the optional turbo heat shield was ordered, install it at this time. Secure heat shield with safety wire.

50. Install crossover pipe between driver header and turbo header using supplied 7/16" and 3/8" bolts. Leave bolts loose.

Figure 9- Cross over pipe



51. Install new spark plugs and gap to .030. Install with anti seize on spark plug threads. Contact Hellion Power Systems for spark plug recommendation.

52. Re install spark plug wires. It will be necessary to tie spark plug wires to the intake to keep them from contact with downpipe.

59. Install Downpipe #1, leaving all V-band connections loose

Figure 12- Short Down Pipe



Figure 13- Long Down Pipe

62. Underneath the car, install the 3" ball end downpipe extension to long down pipe using supplied 3/8" bolts, nuts, and washers. Leave bolts loose.



67. Slide either the 11" long straight pipe or catalytic converter over the downpipe extension, sliding 3" clamp first for easy installation.

Figure 18- 11in. and 13 in. Straight Pipes



68. Next slide on 13" straight pipe using supplied clamp.
69. Slide Y-pipe over 13" straight pipe, installing clamp first, and bolt to cat back system using supplied 3/8" bolts, washers, and nuts. Leave bolts slightly loose.
70. Position system components with clearance between pipes and body, and then tighten all bolts and clamps. Slide clamps towards edge of slip fit connection for optimal clamp.

71. Remove front nose cover.



72. Install supplied 2.5 inch silicone hose pieces onto inlet and outlet of intercooler, sliding supplied clamps on at the same time. Tighten clamps.

73. Hang intercooler with supplied straps to radiator support. The long strap goes on the driver's side. The radiator support has factory metric nuts installed in the radiator support that are now used for intercooler installation. Depending on the year, the driver side metric nut may have the p/s cooler bolted to it. Simply remove the current bolt and sandwich the bracket. Now the intercooler and p/s will share the same mounting location. On some applications it may be necessary to remove the passenger side lower condenser mount for intercooler installation. Bolt the straps to intercooler with supplied 5/16" bolts, nuts, and washers, and bolt straps to intercooler support with supplied M6 x 20mm bolts and washers. Leave bolts loose.

Figure 20- Intercooler Support Straps



74. Slide supplied 2.5-inch silicone hose over turbocharger compressor outlet.
75. Slide supplied 2.5 inch T-bolt clamps over hose.
76. Install intercooler pipe 1 onto end of silicone hose, slightly tightening clamps to hold pipe in place. (See next page)

Figure 21- Intercooler Pipe 1



- 77. Slide clamps and hose onto other end of pipe.
- 78. Install second intercooler pipe on pipe 1 and then push into lower intercooler inlet.

Figure 22- Intercooler U Pipe



- 79. At this time, tighten the clocking bolts on turbocharger now that turbocharger position is now determined.
- 80. Install intercooler outlet pipe into silicone hose, again with supplied 2.5" clamps. This is the pipe with the fitting for the bypass valve.

Figure 23- Intercooler Outlet Pipe



- 81. Slide the supplied 3" silicone hose with supplied 3" clamp over the intercooler outlet pipe.
- 82. Install the mass air meter with clamp into the silicone hose, noting the airflow direction. Make sure the electronics are facing up.
- 83. Slide supplied 3.5" to 3" adapter over mass air meter and secure with clamps.
- 84. Next, insert the 4th intercooler pipe through the hole in the fender and push into the preceding 3.5" to 3" adapter.

Figure 24- 4th Intercooler Pipe





- 85. Slide 2.5" clamp and hose over pipe and snug clamp.
- 86. Finally install the inlet tube into 2.5" connector and then connect to throttle body with supplied 3" hose and clamps.

Figure 25- Inlet Tube



- 87. Position all intercooler hoses and tighten all clamps. Position mass air meter with electronics facing up.
- 88. Tighten intercooler support bolts.
- 89. Install supplied bypass valve onto intercooler pipe with included silicone hose and clamps. Tighten clamps.

Figure 26- Bypass Valve



- 90. Plug in mass air sensor. Sensor wires may need to be pulled from loom on the harness to extend into the fender. Cut and extend wires if needed.
- 91. Locate vacuum source from intake manifold and install supplied tee fitting.



- 92. Connect supplied rubber hose from tee to bypass valve. Route line along fender and secure with supplied zip ties.
- 93. Re install front nose cover. It will be necessary on LX models to slightly trim the lower fascia for lower intercooler pipe fitment.



Oil feed

- 96. Remove oil-sending unit from driver side of engine block. Screw in supplied 1/4" pipe tee into oil pressure extension using teflon tape. Next screw in 1/4" pipe to #4 45 degree fitting into tee. Now screw oil pressure sensor back into the other port of the tee. Re connect sensor.
- 97. Connect supplied #4 AN oil line to 45 degree fitting, and route to turbocharger.



86-93 MUSTANG INSTRUCTIONS

98. Install 90-degree 1/8th pipe to #4 AN fitting onto top of turbo with teflon tape.
99. Connect oil line to turbocharger.

NOTE: Oil Filter used in installation was a Fram PH16



Final steps

100. Install rubber caps over valve cover breather tube and throttle body tube. Clamp caps with hose clamps. Vent on valve cover may also be routed to a catch can.



101. Install brass vacuum line fitting onto turbocharger compressor cover and tighten.

102. Install brass vacuum line fitting onto underside of the wastegate. Connect rubber vacuum line from turbo to wastegate. It is very important that this line be connected to the UNDER SIDE of the wastegate; failure to do so can over-boost the engine and cause damage. Secure line with supplied zip ties. Keep line away from heat sources. (If a boost controller is to be used, different wastegate vacuum line routing may be necessary)



103. The rear cylinder head EGR ports will need to be plugged if smog crossover tube was removed (Non-emissions heads will not have to be plugged). To do this, cut the EGR tub about 1.5" from the point where it bolts to the head. Crimp this section and weld the end shut to prevent any pressure from escaping. Then attach to head at normal mounting point. (See image)

Figure 25 - Welded Smog Line



- **RE-CONNECT BATTERY.**
- **TURN IGNITION ON AND OFF A FEW TIMES TO PRIME FUEL SYSTEM AND CHECK FOR FUEL LEAKS.**



- **START ENGINE, CHECK FOR LEAKS. TAKE YOUR CAR TO A DYNO FACILITY AND HAVE CAR TUNED BY PROFESSIONAL TUNER TO ENSURE PROPER FUEL AND TIMING SETTINGS. DRIVING OR MAKING DYNO PULLS WITH THE VEHICLE WITHOUT THE PROPER TUNE CAN RESULT IN MAJOR ENGINE DAMAGE.**

HELLION

**POWER
SYSTEMS**

HELLION