INSTALLATION INSTRUCTIONS
For TTI BB Low Deck Headers
2" O.D. primary tubes / steps up to 2-1/8" secondary tubes merged into 3.5" collectors

Part no's: **TTI400IB-218C1**
TTI400IB-218C4
TTI400IB-218C5

PLEASE READ INSTALLATION INSTRUCTIONS BEFORE INSTALLING

- **Applications:** 1967-1976 A-bodies, 1962-1974 B-bodies & 1970-1974 E-bodies.
- **Engine Size:** 383/400 B-engines with Brodix B1BS, Edelbrock Victor, Indy 440-1 or Indy 440SR Heads.
- **Engine Mounts:** Fits with Schumacher engine mounts or equivalent.
- **Standard Trans / Floor Shift only:** Clears. Will also clear Keisler 5-speed Trans.
- **Automatic Trans / Floor Shift only:** Application requires the adjustable swivel and lower rod attached to the torque shaft lever to be re-positioned to clear the header collector. Instruction sheet #SHT3703 available for Do-It-Yourself modification. Applications with a 3-section Throttle Rod will require modification to the bellcrank and the pivot shaft. Instructions sheet #SHT101 available for Do-It-Yourself modification.
- **Column Shift:** Will not clear.
- **Manual or Power Steering:** Clears B & E-body applications. A-body applications clear Manual Steering only.
- **Starters:** Must use Lightweight Mini Starters - Chrysler part no's: R53005984, 56027702AC / Mopar Performance part no's: P5249644AB, P5007860, P4286522. Applications using the Edelbrock Victor cylinder head, can also use the Powermaster Starter #9513.
- **Flywheel / Bellhousing:** 10.5" or 11". Modification required to the passenger-side bellhousing when running a Lakewood scatter shield / Large stick shift bellhousing. A half moon shape notch will need to be ground down, approximately ¼" deep to clear the header tube.
- **Spark Plugs / Wires:** NGK Spark Plugs / Accel 9000 wires. For adequate spark plug clearance when using Brodix B1-BS cylinder heads, NGK spark plugs with 5/8" hex and 3/4" reach are required. These spark plugs are 2" long from the base of the threads to the tip of the plug and will clear the header tubes. The header was also designed using Accel Extreme 9000 with the 90° plug ends. NGK recommends BKR5E thru BKR7E for street use and R5671A-7 thru R5671A-10 for racing.
- **Oil Pan / Oil Filter:** OEM or Milodon Oil Pan part no's: 31010, 30930 & 30931.
- **Steering Linkage**: OEM only. Will not clear the quick-ratio extended length pitman arm and idler arm.
- **Clutch Linkage:** OEM only. Some Z-bars may require modification to clear the header.
- **Valve Covers:** Cast Aluminum only. Applications using the Edelbrock Victor cylinder heads, will not clear Mopar Performance cast aluminum valve covers and will require a thinner stamped steel cover.

ATTENTION: Make sure your engine is located to the following specs

Factory Engine Location Specifications: K-members are not all identical and the dimensions must be checked to ensure proper fit. Check your engine location prior to installation of your TTI Headers. TTI Headers were designed to fit with the engines located to the factory specifications. If the engine is not located correctly in the chassis, the headers will not fit properly. If necessary, place shims between the insulator assembly and the K-frame mounting pad to achieve the proper dimensions. Shim kits and engine mounts can be purchased from Schumacher Creative Services of Seattle, WA (206)364-7151.

• 67-76 A-body applications: Position of the engine is extremely critical. TTI recommends moving the engine back 3/16" for additional clearance from the stock manual steering box, pitman arm and the idler arm. The (3) mounting holes in the steering box can also be elongated to allow the steering box to be moved outboard for additional (1/8") clearance of the header tubes. Elephant ears or a motor plate are recommended for A-body applications.

• 66-74 B-body / 70-74 E-body applications: From the center of the crankshaft to the top of the K-frame, the correct distance is 5-1/4". The engine is also offset towards the passenger-side. Measure from the center of the crankshaft to each frame rail. The difference should be 2-1/2".

• 62-65 B-body applications: From the center of the crankshaft to the top of the K-frame, the correct distance is 5-1/4". The engine is also offset towards the passenger-side. Measure from the center of the crankshaft to each frame rail. The difference should be 3".

INSTALLATION:

1. Disconnect the negative cable from the battery terminal.
2. Disconnect the plug wires and remove all of the spark plugs. Remove the cast iron manifolds and the stock exhaust pipes. If you are installing the complete TTI Exhaust System, then remove and discard your entire stock exhaust system including hangers.
3. Raise the front of the vehicle with an appropriate lifting device and place on jack stands.
   - A-body vehicles will require the following: Unload and remove the torsion bars. Count the number of turns on the adjustment screw when unloading the torsion bars so you can return the pre-load to the same position. Also, be sure to mark the torsion bars for indexing before removal so you are able to re-install them in exactly the same position as they were.
   - Drain the engine coolant into a suitable container before removing the exhaust studs from the cylinder heads. It is necessary to use the supplied header bolts to fasten the header to the cylinder heads on A-body's.
4. Disconnect the electrical cables to the starter and remove the starter motor.

   B & E-body vehicles: The headers can be secured with the stock studs or with header bolts. If using studs the 2nd stud from the front must be shortened for the tube clearance on both sides.

   Standard Shift Only: Disconnect and remove the Z-bar. The Z-bar will be reinstalled after the header is in place. Remove the oil stick tube.
5. Automatic Transmission / Kick-down linkage:

   No modification is required on models with the single section transmission throttle rod.

   Three section Throttle Rod's require modification of the swivel assembly (Bell crank & Rod) to clear the header tubes. See Throttle Rod modification instructions. (Sheet #SHT101)

   B & E Models with automatic transmission and floor shift , re-position the adjustable swivel and the lower rod attached to the shift lever. Move to the upper side of the shift lever to clear the header collector. See modified Torque Shaft Lever illustration. (Sheet #SHT3703)
6. Now is a good time to check the condition of your engine mounts. If they are worn or deteriorated, replace them now.

   When the engine is mounted correctly the headers will fit correctly. It is common on A-body installations to shim the mounts to achieve the proper engine location.
7. Passenger-side Header: Check the sealing surface of the exhaust ports to insure they are clean. Place the supplied header gasket into position on the studs. Turn the steering wheel to the full left position. Insert the header into position from under the car. Use the original studs and nuts or the provided header bolts to secure the header to the cylinder head. Tighten the center bolts first then the end ports. Torque the bolts to 35 lbs. evenly to insure a proper seal.

   It may be necessary to raise the engine if you are using the original studs to secure the header to the cylinder head.
8. Drivers-side Header: Remove the drivers-side engine mount bolt and raise the engine up approximately 1-1/2". Use a block of wood between the oil pan and the floor jack. Turn the steering wheel to the full right position.

   Check the sealing surface of the exhaust ports to insure that they are clean. Place the supplied header gasket into position on the studs. Insert the header into position from under the car. Before fastening the header to the cylinder head place the starter motor into position and tighten the fasteners. Now, lower the engine back down on to the K-frame and re-install the engine mount bolt. Secure the header to the cylinder head. Use the original studs and nuts or the provided header bolts. Tighten the center bolts first then the end ports. Torque the bolts to 35 lbs. evenly to insure a proper seal. Connect the wiring to the starter. Adjust the wiring to insure that there is absolutely no contact with the header. A minimum of 3/8" clearance is required between the header and the wiring.

   Due to variations in the routing of brake lines, it may be necessary to re-position a brake line to achieve adequate clearance from a header tube. A minimum clearance of 1/2" from a header tube is required. Insert the oil stick tube

into position. Some designs fit between the header flange and the #1 cylinder tube, some fit outside of the #1 header tube. Slight bending may be required for proper fit.
Re-install the clutch Z-bar at this time.

9. Re-install the spark plugs, wires and engine coolant. Re-connect the negative battery cable.

10. Now that your headers are installed, wipe down the tubes with hot soapy water or an environmentally safe Orange Cleaner Degreaser and a soft cloth to remove any grease or skin oils (finger prints) from the header tube surface. Never use abrasive cleaners.
It is normal for Chrome plated headers to discolor almost immediately after firing-up engine.
To insure years of service from your ceramic-coated headers, it is suggested to follow our Header Care and Preventive Maintenance procedures.

11. Start the engine and check for leaks.

Re-torque all of the header bolts after approximately 50 miles of driving

To complete the rest of your exhaust system installation, we highly recommend the use of our TTI Performance Exhaust Systems. The 2-1/2" or 3" O.D. kits will bolt directly to the TTI Headers. Our exhaust systems come complete with all hardware and all new hanger assemblies. They are manufactured with aluminized tubing and are mandrel bent by the latest technology CNC tube benders insuring precision fit on every installation.

Headers supplied with:
(12) 3/8" 16x1" Header Bolts
(2) Header Gaskets (taped to inside of box)
(2) Reducers

Reducer kit Includes:
(2) 3" - 3-bolt 1/16" Reducer Gaskets
(6) 3/8" - 16 x 1-1/4" Reducer Bolts
(6) 3/8" - 16 Nuts
(6) 3/8" Split lock washers

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