GLIDDEN VICTOR SC-1 CYLINDER HEADS
For Ford Windsor Engines
PART #770769
INSTALLATION INSTRUCTIONS

PLEASE study these instructions carefully before beginning this installation. If you do not feel comfortable performing this installation, it is recommended to have the installation completed by a qualified engine builder. If you have any questions, please call our **Technical Hotline at: 1-800-416-8628**, 7:00 am - 5:00 pm, Pacific Standard Time, Monday through Friday or e-mail us at **Edelbrock@Edelbrock.com**.

IMPORTANT NOTE: Proper installation is the responsibility of the installer. Improper installation will void your warranty and may result in poor performance and engine or vehicle damage.

DESCRIPTION: The Glidden Victor SC-1 cylinder head is designed for all out racing applications on Ford Windsor V8 blocks. It has a raised intake port with an extended intake flange and a raised exhaust port designed to work with Yates-style headers. Water outlets are provided on the front and rear of the head for external plumbing of a water crossover. For maximum head gasket retention, these heads include two auxiliary head bolt holes per cylinder. *(**Note:** Provisions for these extra bolts are found only on aftermarket race blocks. Four of these bolt holes are partially drilled and will need to be finished to be used.)* These heads have small ports and chambers that will require professional porting prior to installation. Valve guides and seats are included but not installed, and the seat bores are undersized and shallow. Heli-coil thread inserts for valvetrain retention are also included but not installed. We recommend Edelbrock intakes #2860, #2865 or #2868 for these heads.

NOTE: *Prior to standard machining and heat treating procedures, this cylinder head was subjected to a process know as Hot Isostatic Pressing (HIP). During this process the casting is exposed to heat in excess of 900° F and inert gas pressures of nearly 30,000 psi. This combination of heat and pressure eliminates any gas pores remaining from when the head was orignially cast. By elevating the material density of the cylinder head to nearly the level of billet aluminum, significantly increased durability and longevity under extreme conditions is achieved.*

BEFORE BEGINNING INSTALLATION

IMPORTANT NOTES: READ BEFORE BEGINNING INSTALLATION!
For a successful installation, Glidden Victor SC-1 Cylinder Heads require several specialized components. To complete your installation, you will need the following items:

- ❑ Head Gaskets (using ten head bolts per head only); Fel-Pro #1134 (4.180" bore), or #1135 (4.210" bore)
- ❑ Intake Manifold Gaskets; these are currently in development by Edelbrock, custom gaskets or other sealing solution will need to be used until application specific gaskets are available
- ❑ Exhaust gaskets; Fel-Pro #1433 or equivalent.
- ❑ Head Bolts/Studs; when using the standard 10 bolt per head pattern, you will need five (5) bolts or studs 5" long, and five (5) that are 4.5" long.
- ❑ Camshaft Valley Cover Plate; 9.2" deck engines use Edelbrock #2832, 9.5" deck engines use Edelbrock #2833
- ❑ Valve Covers; Edelbrock #4267 will clear Jesel and T&D rockers
- ❑ Valve Cover Gaskets; Edelbrock #7569
- ❑ Valves; the valve guides supplied are sized for 5/16" stems on the intake, and 11/32" on the exhaust.
- ❑ Spark Plugs; 14mm x 3/4" reach x 5/8" hex, gasketed seal (heat range to be determined by specific application)
- ❑ Shaft Mounted Rocker Assembly; Jesel and T&D have produced application specific rockers for this head
- ❑ Pistons; custom pistons are preferred for use with this head due to its unique chamber and valve angle configuration. Pistons designed for a Yates head should also work with minimal modifcations

CHECKING ENGINE CLEARANCES: As with any competition engine build, it is highly recommended that valve-to-piston clearances are checked prior to installation and corrected to minimum specs, if necessary. Minimum intake valve clearance should be .080". Minimum exhaust valve clearance should be .110". The point of minimum intake valve to piston clearance will usually occur somewhere between 5° and 20° After Top Dead Center during valve overlap. The point of minimum exhaust valve to piston clearance will usually occur 20° to 5° Before Top Dead Center during valve overlap. Some pistons may require notching depending upon the valves selected for your application. Also make sure that there is adequate clearance between the valves and the cylinder wall, as well as the rocker arms to the valve cover and the rocker arm to the valve cover rail (intake only).

REQUIRED MACHINE WORK: The intake and exhaust ports as supplied are deliberately undersized to allow sizing and shaping to the preference of the head porter. The valve seat provisions are also undersized (2.180" intake and 1.600" exhaust from the factory) and can be machined out to a maximum of 2.300" on the intake and 1.75" on the exhaust. The valve seats can be sunk into the head by up to .250" in order to increase chamber volume. The valve guide bores have already been finished to .500" and the supplied guides simply need to be installed.

We highly recommend that premium quality hardware be used with your new heads.

COOLING REQUIREMENTS: Numerous water holes are cast and/or drilled in this head. Three (3) 8-32 x 1/4" long set screws should be installed with red Locktite in each tapped hole between the water core and head bolt. Two (2) 5/16"-18 x 1/2" long set screws will plug the appropriate holes on either end of the head. Use red Locktite on those screws as well. A 3/4" and 1" NPT threaded hole is provided on each end of the head to allow a variety of cooling solutions. Any hole that is not plumbed, must be plugged.

- **HEAD BOLTS OR STUDS:** High quality 1/2" head studs or head bolts with hardened washers must be used to prevent galling of the aluminum bolt bosses. ***See Figure 1*** for the cylinder head bolt tightening sequence. The even number provisions in the torque sequence near the exhaust ports will use the 5" long bolts, while the odd provisions below the valve cover use the shorter 4.5" bolts. Bolt threads, underside of bolt heads, and washers should be lubricated with an oil/moly mix prior to installation and torquing. Apply liquid Teflon PST or suitable thread sealant on any bolt threads that go into coolant passages.

  NOTE: *This head has provisions for eight (8) auxiliary fasteners per head. These provisions are located adjacent to each exhaust port and directly below each intake port. A hole will need to be drilled through both the roof and the floor of the intake ports, and a plug installed to prevent oil seepage. Head bolt length for these provisions will vary by application and should be determined by the engine builder.*

- **GASKETS:** Fel-Pro head gaskets can be used with any application utilizing the standard ten (10) bolt per head pattern. #1134 will work with engines having a bore diameter up to 4.180", and #1135 will work with bore diameters up to 4.210". Applications using the eight auxiliary head bolt provisions should use the head gasket recommend by the manufacturer of the engine block.
- **ROCKER ASSEMBLIES:** Shaft mounted rocker arms are required. Edelbrock recommends the use of Jesel or T&D rocker shaft assemblies. Eight (8) 7/16"-14 heli-coils have been supplied to ensure the stability of the rocker system. These will need to be installed by the engine builder. Significant thread depth has been added to these holes to improve bolt retention and the longevity of valvetrain components under the extreme conditions generated in a racing enviroment.
- **PISTONS:** The unique chamber and valve placement of the SC-1 cylinder head are ideally complimented by custom pistons, however several manufacturers have compatible shelf pistons. Valve angles are 7.3° by 0.3° cant intake and 6.9° by 0.6° cant exhaust. Pistons designed for a Ford Yates type head or for the Ford SC-1 are generally compatible, or can be made to work with minimal machine work. Check with your preferred piston manufacturer to see if they carry an application specific part number.
- **INTAKE MANIFOLD:** Edelbrock has developed several Super Victor manifolds for use with the Glidden Victor SC-1 cylinder heads. Refer to the table at right to determine the best match for your application:

Manifold Part #	Intended Deck Height	Carburetor Pad Flange
2860	9.5	4150
2865	9.2, 9.5*	4500
2868	9.5	4500

*End seal spacers #2864 will be required to use #2865 on a 9.5" deck.

- **EXHAUST HEADERS:** Any header designed for Yates heads will fit the Edelbrock Glidden Victor SC-1 cylinder head. Fel-Pro exhaust gaskets #1433 or equivalent are recommended. Check in-car fitment, as these ports are raised significantly from the stock location.
- **VALVE COVERS:** The valve cover flange is designed to work with Cleveland style valve covers, though the shaft rocker assembly will often require greater clearance than stock. Edelbrock Cast Aluminum covers #4267 have been designed specifically for use on SC-1 heads.
- **SPARK PLUGS:** Use 14mm x 3/4" reach gasketed spark plugs with a 5/8" hex. Heat range for competition engines will vary by application. Use anti-seize compound on the plug threads to prevent galling in the cylinder head, and torque to the spark plug manufacturers specification for aluminum heads; usually 10 ft./lbs. **DO NOT OVERTIGHTEN!**
- **VALVES AND VALVESPRINGS:** Edelbrock Glidden Victor SC-1 cylinder heads will accept an intake valve with a diameter up to 2.25" and an exhaust valve diameter up to 1.70". The supplied valve guides are deigned to work with an intake valve stem diameter of 5/16" and exhaust valve stem diameter of 11/32". Length will need to be determined by the engine builder once the valve seats have been installed in their desired location. These cylinder heads are equipped with a 1.760" valve spring pocket diameter. Edelbrock strongly recommends the use of a hardened steel cup or shim below the valve spring to prevent damage to the head. Refer to cam manufacturer for recommended spring pressures.

INSTALLATION PROCEDURE

Be sure that the surface of the block and the surface of the head are thoroughly cleaned to remove any oily film before installation. Use alcohol or lacquer thinner on a lint-free rag to clean. Apply oil or suitable thread lubricant to head bolt threads and the underside of bolt heads and washers to prevent galling and improper torque readings. Apply liquid Teflon PST or other suitable thread sealant on any bolt threads that go into coolant passages. Torque 1/2" bolts or stud nuts to 100-110 ft./lbs. in three step increments, following the tightening sequence shown in **Figure 1**. A re-torque is recommended after the initial star-up and cool-down (allow 2-3 hours for adequate cooling).

Other Assembly Tips: When installing the sparkplugs and exhaust manifolds, be sure to use a high temperature anti-seize compound on the threads to reduce the possibility of thread damage in the future. Do not exceed a torque of 25 ft./lbs. on the intake manifold bolts and lubricate the bolt threads prior to assembly.

NOTE: Torque sparkplugs to 10 ft./lbs. Do not over tighten sparkplugs! If short reach plug is used, poor performance and possible engine damage may occur.

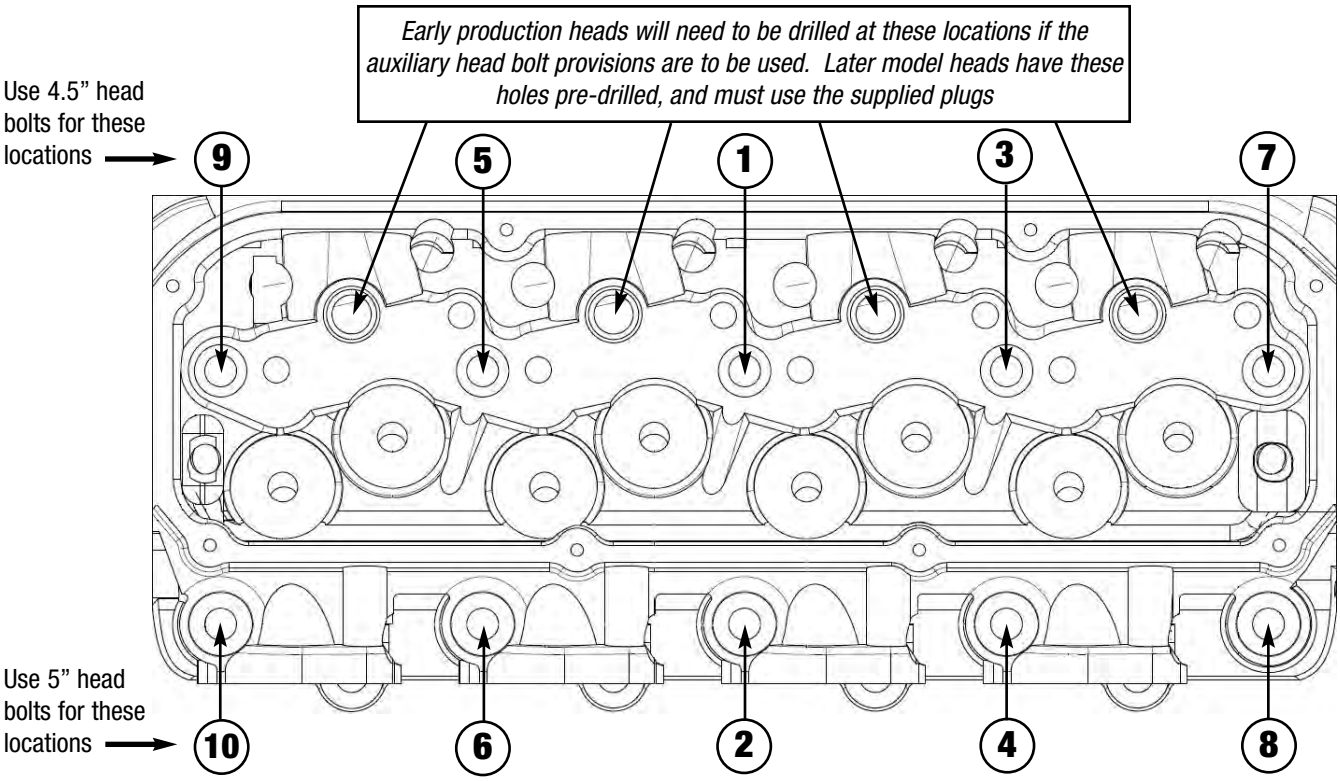

FIGURE 1 - CONVENTIONAL TEN (10) BOLT TORQUE SEQUENCE
Bolts should be tightened to 100-110 ft/lbs in three intermediate steps.
Applications using the eight (8) auxiliary bolt provisions should consult their engine block manufacturers instructions for the correct torque sequence.

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