



Cylinder Heads • Engine Blocks • Intake Manifolds

The following information should be helpful in the installation of these heads.

Recommended Gaskets:

Head: Mark IV block 4.54" bore - Fel-Pro 1017-1
 Mark IV block 4.37" bore - Fel-Pro 1027
 Gen V, VI 4.54" bore - Fel-Pro 1047
 Gen V, VI 4.37" bore - Fel-Pro 1037

Note: Always consult the manufacturer's catalog for proper gasket application.

Intake: All Pro1 - Mr. Gasket 121
 - Fel-Pro 1275

Exhaust: All Pro1 - Fel-Pro 1412
 - Dart 65224000

Recommended Spark Plug:

.750" reach, gasket seat w/ 5/8" hex
 NGK# FR4 w/ 8:1 - 9:1 compression
 NGK# FR5 w/ 10:1 - 10.5:1 compression
 NGK# R5671A-8 w/ 13:1 compression

Note: Always consult the manufacturer's catalog for correct heat range.

Torque Specifications: w/ CMD#3 High Pressure Lube

Head Bolts & Studs	70 ft lb
Rocker Arm Studs	45 ft lb
Manifold bolts	35 ft lb

Valve Lengths:

Intake	5.475" (+.250")
Exhaust	5.435" (STD)

Valve Springs on our assemblies:

Cam Type / OD / type / pres / install ht / max lift

Hydraulic	- 1.550" single, 145lb @ 1.900"	.660"
Hyd Roller	- 1.550" dual, 140lb @ 1.900"	.630"
Roller	- 1.550" dual, 215lb @ 1.900"	.650"
Roller	- 1.625" dual, 275lb @ 2.000"	.850"



310cc/325cc/335cc/345cc/355cc Aluminum Big Block Chevy Cylinder Heads

DART Pro1 Aluminum cylinder heads are designed to produce optimum performance "Out of the Box". Several important features have been incorporated in the Pro1 heads. The finish and wall integrity are a result of the latest improved casting techniques. Bronze guides are a standard feature on all Pro1 heads. The latest technology in port design produces an "as cast" port that performs as if it were fully ported.

INTAKE MANIFOLDS



DART MANIFOLDS are found on race engines around the world. They are designed to develop maximum power for the intended purpose. The following single plane manifolds are designed specifically for the Pro1 heads:

Part#	41114000	4150 carb	9.800" deck ht
	41115000	4150 carb	10.200" deck ht
	41124000	4500 carb	9.800" deck ht
	41125000	4500 carb	10.200" deck ht

Head Bolts:

The (4) short head bolts or studs along the exhaust (bottom) side of the head need to be one (1) inch longer than stock. These should be available at most performance parts suppliers.

VALVE COVERS

Dart cast aluminum Pro valve covers are available for your Pro1 aluminum heads. The cast Dart logo is the same one that's found on Pro Stock and Pro Mod cars in winner circles everywhere.

Part# 68000040 (cast Alum) & 68000060 (stamped steel)

PORTING INFORMATION

The intake and exhaust ports are very efficient on these heads "as cast". We recommend that if any porting is done it should only be done by a qualified head porter. As with any cylinder head, once it is modified from its' original condition, the manufacturer, Dart, takes no responsibility for the cylinder head.

This is done entirely at your own risk

ROCKER ARM STUDS

All Dart big block heads use an exhaust rocker arm stud with an increased thread length where it is installed in the cylinder head. It has a 1.300" thread length for the raised rocker arm boss. *** **Do Not Use a Shorter Length** ***

Dart PN# 27002204 exhaust stud

Dart PN# 27002223 intake stud

ARP 235-7202 Kit

STUD GIRDLE



All Dart big block heads have the valve angles rolled 2° degrees for better flow characteristics. If you decide to utilize a stud girdle it is mandatory to use one specifically designed for a Dart cylinder head. We stock a heavy duty girdle that fits the head correctly.

Part# 64110001 (includes girdle nuts)

PUSH ROD INFORMATION

Pushrod length on all Dart big block cylinder heads will be longer than stock. Due to numerous variables in deck height, cam diameter, lifter length, rocker arm, etc., you will need to measure the pushrod length with an adjustable pushrod checker. The most common length is +.200" (Stock lengths are 8.275"-Int / 9.250"-Exh) You must use 3/8" hardened push rods.

GUIDE PLATES

A Dart adjustable guide plate is recommended for use with these heads.

Part# Dart 27001230-4

NOTE: With a multitude of different rocker arm, lifter, cam, spring and push rod combinations it is important to check clearance of all moving parts, especially pushrod to head and rocker arm to spring clearance before final assembly.

WARRANTY: Dart Machinery Ltd. (from hereon referred to as Dart) warrants to the original purchaser that the products will be free from defects in material and workmanship under normal use. Dart's obligation under this warranty shall be limited to the repair or replacement, at its' option, of any parts or products which may prove defective under normal use within six (6) months from the date of sale, and which the examination of Dart reveals to its' satisfaction that the products in question are in fact defective.

This warranty is expressly in lieu of all other warranties expressed or implied including the warranties of merchantability and fitness for use and of all other obligations or liabilities on the part of Dart. The purchaser acknowledges that he is not relying on Dart's skill or judgment to select or furnish goods suitable for any particular purpose and that there are no warranties, which extend beyond the description on the face hereof. The warranty contained herein shall not apply to any part or product, which has been subject to accident, negligence, alteration, abuse or misuse. Dart makes no warranty whatsoever in respect to accessories or parts not supplied by Dart Machinery Ltd. This warranty shall apply only within the boundaries of the continental United States. Any affirmation of fact or promise made by Dart shall not be deemed to create an express warranty that the product shall conform to the affirmation or promise; any description of the product is for the sole purpose of identifying it and shall not be deemed to create an express warranty that the product shall conform to such description; any sample or model is for illustrative purposes only and shall not be deemed to create an express warranty that the product shall conform to the sample or model; and no affirmation or promise, or description, or sample or model shall be deemed part of the basis of the bargain.

Limitation of Liability: The sole liability of Dart under the warranties contained herein shall be the repair or replacement of parts or products sold. Dart shall not be held liable for any delays caused by circumstances beyond its' control including, without limitation, fire, labor problems, shortage of supplies or materials, and any other conditions which are beyond Dart's control. Dart products may not be considered "street legal", may adversely affect the original manufacturer's warranty and may violate State and Federal laws for vehicles equipped with pollution control devices. Purchaser bears full risk of any such violation.

If the purchaser brings any action by law or equity against Dart, no cause of action by purchaser shall include a claim, nor may recovery be had against Dart, for any punitive, incidental or consequential damages, including but not limited to damages to persons, property, for loss of use, loss of time, loss of profits or income. Under no circumstances shall the liability of Dart, to purchaser exceed twice the cost of the product purchased and, in that event, only when the remedy of repair or replacement is inadequate.