

Instruction Sheet DCF-297
For MP W2 “Pro Race” Cylinder Head P5007708AB and P5007445AB
Revised 6/03/03

This package consists of one “Pro Race” cast iron W2 cylinder head and this instruction sheet. This W2 head is fully machined and is special because it is designed to fit the 48-degree tappet “R” blocks like P4876381AB, P4876671AB, P4876672AB, P4876673AB and P4876674AB. This cylinder head is not recommended for use on 59-degree tappet bore blocks (production blocks, “X” blocks & “R” blocks) since the pushrods will hit the block and will not have the proper valve train geometry (the pushrods will try to go through the intake face on the manifold).

Part number P5007708AB includes a small 47 cc closed chamber. Part number P5007445AB includes a larger 65cc open chamber. Obviously, these chamber sizes will change the compression ratio of the engine, if no other changes are made. These heads have revised intake ports that will flow slightly more air.

The valve angle on the W2 48 degree cylinder head is approximately 15 degrees. All of the 48 degree wedge small block cylinder heads have a 15 degree valve angle. The 59 degree wedge small block cylinder heads have an 18 degree valve angle (including production small block heads). Be sure to cut the valve relief on your pistons to accommodate this valve angle. The 15 degree valve angle was made by a combination of angle milling the W2 head AND standing up the valve. Because of these machining changes, this head CANNOT use the W2 porting templates available from Mopar Performance Parts. The templates could be used as indicators and guidelines, but be very conservative on metal removal.

Special Notice: The rocker stands on this head are machined to work with T&D rocker arms only. Other rocker arms will not fit and cannot be used with this cylinder head. The T&D rocker arms are oiled through the pushrods, and not through passages in the head. These changes were made to update these versions of the W2 for racing, and allow the use of modern “Pro Race” rocker arms without extensive modifications to the heads. If you do not want to use the T&D “Pro Race” rocker arms, you should choose another version of the “W2 Classic” cylinder head (i.e. P4529994, P4529995, P5007089, P5007445, P5249770).

Standard “A” engine intake manifolds will not fit the W2 cylinder heads (the W2 has a different bolt pattern and port shape). See below for the suggested W2 intake manifolds. Standard “A” engine valve covers and valve cover gaskets can be used on W2 cylinder heads.

Suggested Component Parts and Accessories:

Rocker Arms: Contact T&D Machine Products at telephone (775) 884-2292

Tappets: Aftermarket w/ oil passages for rocker arm oiling

Pushrods: Aftermarket w/ oil passages for rocker arm oiling

Head Bolt Kit: ARP part number 144-3601

Head Stud / Nut Kit: ARP part number 144-4202

(Note: 12 point reduced size ARP nuts / bolts must be used to match the smaller counter bore that has been machined in this cylinder head)

Wide Valve Covers: P4876124 – for increased valve spring / rocker arm clearance

Suggested Intake Manifolds:

Mopar Part Number:	Material:	Deck Height:	Description:
P5249572	Aluminum	9.560-9.600"	4 bbl Dual Plane Intake
P5249572AB	Aluminum	9.200"	4 bbl Dual Plane Intake
P4529408	Aluminum	9.560-9.600"	4 bbl Single Plane Intake
P4876829	Aluminum	9.000-9.200"	4 bbl Single Plane Intake (small port)
P4876829AB	Aluminum	9.000-9.200"	4 bbl Single Plane Intake (standard port)

Suggested Gaskets Sets:

Mopar Part Number:	Description:
P4529454	Cylinder Head Gasket Set – up to 4.100" bore
P4349557	Cylinder Head Gasket Set – up to 4.060" bore
P4120094	Cylinder Head Gasket Set – up to 4.060" bore (thin .026" design)
P4876103	Exhaust Header Gasket Set – dual bolt pattern
P4120210	Intake Manifold Gasket Set - .030" thick
P4120211	Intake Manifold Gasket Set - .045" thick
P4007571	Intake Manifold Gasket Set - .060" thick (recommended for best port alignment)
P4876446	Intake Manifold Gasket Set - .090" thick
P4007570	Intake Manifold Gasket Set - .120" thick

Special Cometic racing head gaskets are also available from Evernham Performance Parts at phone (704) 786-1909.

Most racing T&D rocker arms are oiled through the pushrods. The oil passages in the cylinder block **MUST** be plugged when the rocker arms are oiled through the tappets / pushrods. The oil passages through the heads are not drilled in these two versions of the W2 heads, and the rocker arms must be oiled through the tappets and pushrods. These special T&D rocker arms **MUST** be used w/ tappets and pushrods that have the oil passages to supply the oil to the rocker arms. You may want to consider using tappets for the AMC 360 V-8 engine since they have the same diameter as the small block Mopar engine and have the passages for oiling the rocker arms / valve gear. Hollow tube pushrods must also be used when the rocker arms are oiled through the tappet / pushrods. Hollow pushrods can be special ordered from several suppliers (i.e. Crane Cams, Competition Cams, etc). Be sure to measure the length of the pushrods prior to ordering since these can change due to different deck height, and different tappet height.

Special Note: The Valve Cover Screws or studs should be sealed with RTV (sometimes the valve cover screws go into the water jacket). This issue is easily fixed by adding a little RTV to each screw or stud when you install them.

For additional information on W2 cylinder heads please see the *Small Block "A" Engine* Book from Mopar P4876826, and the Mopar Late Model engine book P5007450.