Supplemental Information & Instructions
for
460-372 Oil Pan, Alloy
MGB with 5 Main Bearings

About this oil pan…

This is a high quality die cast alloy oil pan with a ½ inch thick mounting flange, which adds stiffness to the bottom of the engine block. Aluminum alloys transmit heat better that steel to begin with, and we added fins to the bottom of the pan to improve heat transfer. When driven hard, an MGB with modern tires can generate a great deal of cornering force. With the stock oil pan, the oil will tend to surge to the edges, and under some conditions the oil pickup can be starved for oil. The bottom of this pan has cast-in baffling to keep most of the oil around the pickup where it belongs. The oil pan is the same depth as the stock pan, so it will not hang down below the chassis. This also means the stock dipstick will still work properly. The pan was also designed to work with an optional baffle plate or windage tray (460-373), which is available separately. The baffle plate/windage tray is described on page 4 of these instructions. Weight of the oil pan is 10 pounds.


Fig 1


Fig 2

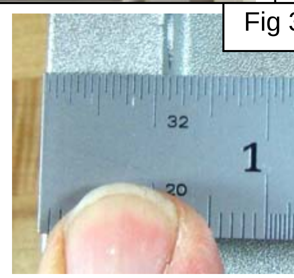


Fig 3

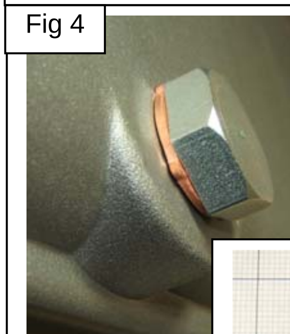


Fig 4

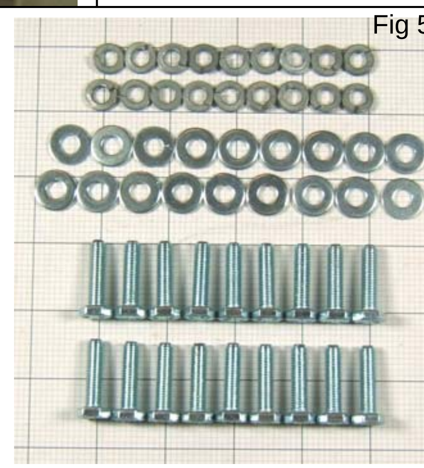


Fig 5

What comes with the pan?

Part #	Description	Qty
772-642	Oil Pan, Aluminum Alloy	1
328-280	Drain Plug, Hex Head	1
324-626	Washer, Copper, for drain plug	1
322-247	Bolt, Hex, 1/4 UNF X 1, G5, Zinc	18
324-590	Washer, Flat, 1/4", Zinc	18
051-583	Washer, Lock, 1/4", Zinc	18
980-340	Instructions (this document)	1

May be Needed, But Not Included
291-010 Oil Pan Gasket, 221-556 Hylomar Sealant

Tools Required for Pan Installation:
1/2” and 7/16”- 1/4” drive swivel sockets
6” and 12”- 1/4” drive extensions
1/4” drive ratchet
1/2” combination wrench
3/16” Allen wrench
Jack stands Floor jack
Engine cradle
Compressed air or clean lint free rags
Gasket scraper
Cleaning solvent (brake clean)
Black RTV (gasket maker)
Torque wrench

Preparation

Wash your new aluminum oil pan thoroughly with soap and hot water to remove any dirt and debris. Take special care to clean out the four threaded holes for the baffle plate. (6a)

Dry the pan using compressed air or clean lint free rags.

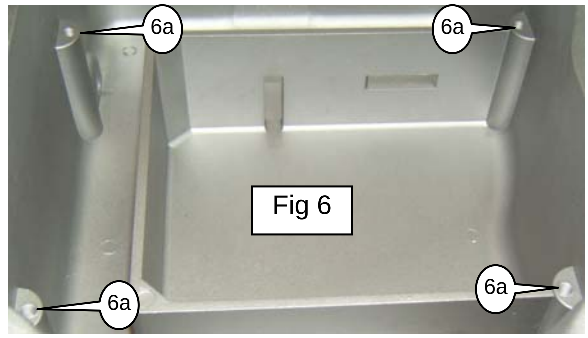


Fig 6

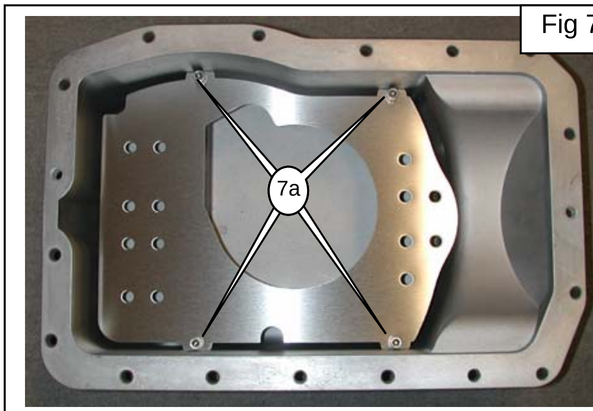


Fig 7

Installation of the 460-373 Baffle Plate

If you purchased this plate to go with your new oil pan, now is the time to install it.

Check the four tapped holes (6a) and make sure the threads are clear.

Remove the protective plastic film from the stainless steel plate.

Position the plate as shown in Fig 7 and start the 4 special Allen head socket cap screws (7a). Note that the screws supplied are a special self-locking type. The yellow spot on the threads is the locking compound.

Torque the cap screws to 7 ft-lb using a 3/16" Allen wrench.

Installation of the Oil Pan

Drain your oil.

Removing the Original Oil Pan

In order to remove the stock oil pan from a chrome bumper car you must lift the engine away from the front cross member. You may be able to access the front oil pan bolts on a rubber bumper car without lifting the engine. If the 460-372 die cast aluminum oil pan is already installed on your car, it can be removed without lifting the engine.

Remove the engine mount bolts using a 1/2" combination wrench.

If you have an engine cradle use it to lift the engine off of the engine mounts.

If you do not have a cradle use a floor jack and jack stand under the front of the transmission (bell housing) to lift the engine.

Remove the oil pan bolts from the vehicle using the 1/2" swivel socket, extensions and ratchet.

Remove the oil pan, and the oil pan gasket.

Clean the oil pan gasket seating surface on the bottom of the block thoroughly using a gasket scraper, and cleaning solvent (brake clean). Apply the solvent to a rag and use the rag to clean the surface of the block. ***Do not spray any solvent up into the crankcase.***

Gasket or No Gasket?

Because the flange of the alloy pan is so thick, you can install the pan without any gasket if you use RTV. Be aware that removal of the pan at a later date may be quite a challenge. A more conservative approach would be to use a standard oil pan gasket 291-010 and Hylomar sealant 221-556.

Using RTV

Apply a thin bead of RTV to the flange of the oil pan. ***Excess RTV can be squeezed into the sump as the bolts are tightened. Use it sparingly.***

Using a Gasket & Hylomar

Apply a thin bead of Hylomar (221-556) to the flange on the oil pan.
Lay the gasket (291-010) on top of the Hylomar on the oil pan flange.
Apply a thin bead of Hylomar to the top surface of the gasket.

Fitting the Oil Pan

Place a lock washer and a flat washer on each of the 18 bolts included in the kit.
Offer the pan up to the bottom of the block.
Hold it in place and start a couple of the bolts to hold it in place.
Start all the oil pan bolts before tightening any one of them.
Torque the oil pan bolts to 7 ft-lbs.

Fig 8

If you removed the engine mount bolts, reinstall them and torque them to 18 ft-lb.

If you removed the hex headed drain plug, reinstall it with the copper washer it came with.

Torque the drain plug to 12-15 ft-lbs.

Fill with 4 quarts of your normal oil and top off as necessary.

Enjoy your new die cast aluminum oil pan!

*Although every effort has been made to ensure the accuracy and clarity of this information, errors and/or omissions on our part are almost inevitable. Any suggestions that you may have that will improve the information (especially detailed installation notes with photographs) are welcome. Please use the simple email form on the **"Contact Us"** page on the Moss website:*
http://www.mossmotors.com/AboutMoss/ContactUs.aspx

If you prefer, you may call our Technical Services Department at 805-681-3411. So many people call us for help that we are often not able to answer the calls as fast as we'd like, and you may be asked to leave a message. We apologize in advance for the inconvenience. We will get back to you within 2 business days.

Supplemental Information & Instructions for
460-373 Baffle Plate, Stainless Steel
460-372 Oil Pan

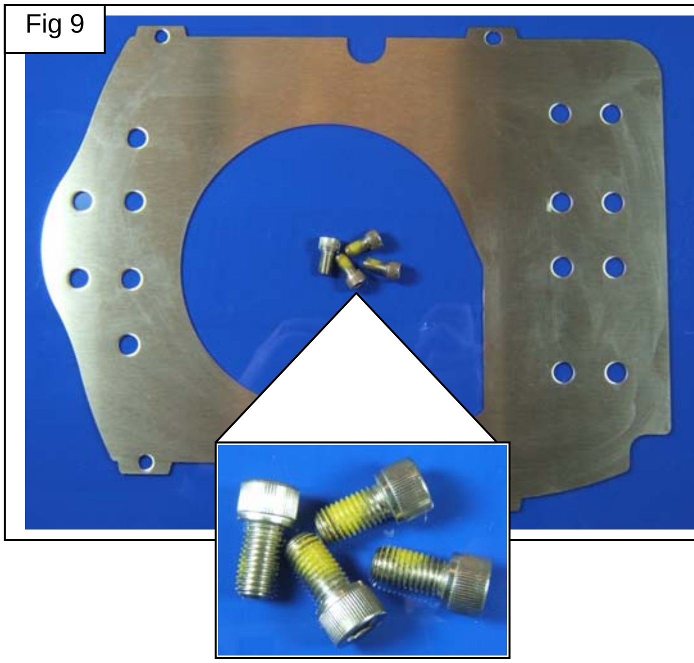
What Exactly is it and What Does It Do?

Engines with a “wet sump” oil system (as opposed to a dry-sump) have a constant rain of oil draining back into the sump from the cylinder head, can, tappets, and the crankshaft. At low RPM, the oil splashes around and eventually settles in the sump where it is picked up by the oil pump again. At high RPM, this oil is whipped into a cloud of oil droplets by the spinning crankshaft. Think of it as a horizontal tornado. Depending on the size of the sump, there can be anywhere from 1 to 3 quarts of oil caught up in the cloud of oil droplets around the crankshaft. This can cause two problems. First, the oil in this cloud is not available to the oil pump, which can lead to oil starvation or cavitation. Second, it actually takes some energy to spin the crank through this oil cloud compared to spinning it in air. The actual power loss is hard to pin down, but when you are trying to wring every bit you can out of the engine, it matters. That is where the windage tray or baffle plate comes in. This is a carefully shaped piece of sheet metal (usually stamped) that is secured beneath the crankshaft inside the oil pan. It actually breaks up the spinning cloud of oil, and the oil drains back into the sump where it belongs. For a high performance MGB engine that sees sustained high RPM, it can make a difference. The 460-373 baffle plate or windage tray was designed to work with the 460-372 oil pan.

What Comes With the Baffle Plate?

Part #	Description	Qty
772-735	Baffle Plate	1
772-772	Cap Screw, Allen Head, SS	4
980-340	Instructions (this document)	1

Fig 9



Installation

Please refer to lines 54 through 70 on page 2.

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