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Part No. "SUMP 24"

Kit Check list

1 off Sump 24

4 off bolts M6 x 1.0 x 16 long

2 off 6mm spring washers.

Use the original 6mm x 16 long sump bolts for the rest of the
This sump requires some work to be done on engine block before
fitting.

There are 3 different sump positions available on the 1UZ-FE motor,
"Front Sump", "Middle Sump" or "Rear Sump".

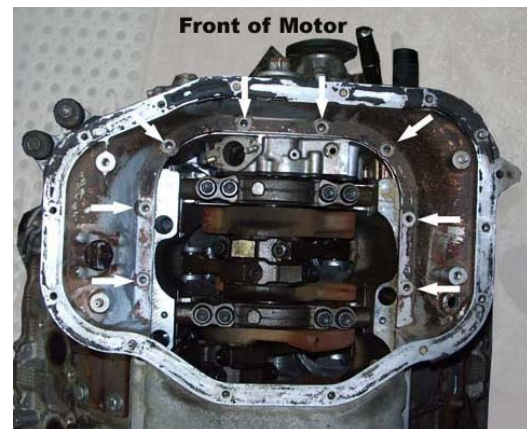
Photo shows original "Front" and "Middle Pan Sumps" removed from the motors.



STEP 1: Remove the original Aluminium Sump from
the motor.

The photo on right is from a Front Sump Motor.

Note: On all sump types you will need to remove the
steel oil pan from the sump before you remove the
aluminium portion of the sump from the motor there are
additional bolts that can only be accessed with pan
removed. **See Photo** →



STEP 2: Two holes need to be drilled and tapped into the block to allow the new sump to fit and seal properly. These holes are 120mm from the back of the sump and can be identified by sitting the new sump into position on the motor. Before drilling the new holes fit all of the sump bolt to the holes that have threads and tighten them so the are “finger tight” holes. While in the sump is in place on the motor use it as a guide to mark position of these holes. Take care to cover the opening and exposed crankshaft so that no dirt or metal shavings get inside motor **See Photos Below**



Photo 1

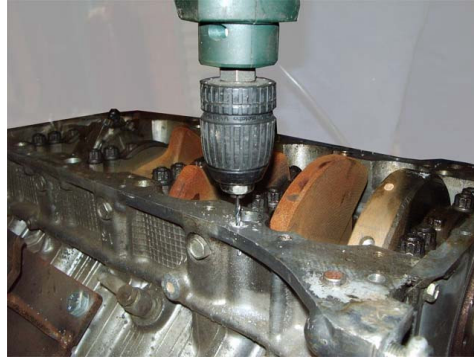


Photo 2



Photo 3

Photo 1: With sump in position on motor as described on the previous page. Carefully mark the exact centre of the new holes on to the face of the motor using the holes in the sump as a guide. Remember to do both holes, one on each side.

Photo 2: Remove the sump and carefully drill the new hole making sure that it is square to the face at all times. *See below for drill size.*

Photo 3: carefully tap the two new holes, make sure that the tap is square to the face of the motor at all times. **. Drill Size is 5mm or 13/64 ... Threads Size is 6mm x 1.0 pitch .**

STEP 3: The oil pick up can be fitted to the motor. – Requires two holes to be drilled and tapped.

The new oil pick up supplied with the sump bolts to the original position in the front of the motor.

Indicated by “C” in the photo →.

Make sure that you fit the original gasket or use a good quality oil proof sealant on final assembly.

Holes need to be drilled for the two support braces at the “strainer” end of the oil pickup.

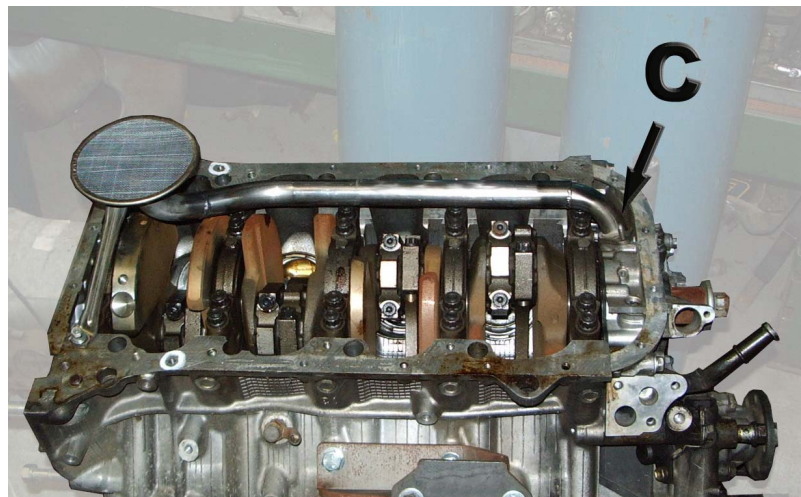


Photo 4

See next page for important information regarding the position of holes for the “strainer” end support brackets.

Two holes need to be Drilled and tapped at the crank end of the motor to allow the oil pick up to be bolted into position. It is **IMPORTANT** that the holes be positioned as described here, if they are in the wrong place they will interfere with the sump when it is fitted to the motor.

- Fit the oil pickup to the motor as shown in "Photo 4" on previous page and temporarily bolt it into position.
- You can now mark the position of the two new holes. See *Photo's 5, 6 & 7*. When you mark the position of the holes you **MUST** make sure that the distance from the inside edge of the motor the outside edge of the bracket must not be more that 16mm, this distance is between the arrow's marked "A" and "B" and is shown on all three photo's.
- When you have got the position of the hole marked accurately you can drill and tap the block to take the bolts. See *Photo's 7 & 8*. Make sure that you cover the inside of the motor so that metal shavings don't get inside. **Drill Size is 5mm or 13/64 ...Threads Size is 6mm x 1.0 pitch**
- After the Motor has been drilled and tapped you can bolt the oil pickup in place. **Make sure that you fit the original gasket or use a good quality oil proof sealant on final assembly.** Use M6 x 1.0 p x 16 long metric bolt with spring washers in the holes that you have just tapped



Photo 5

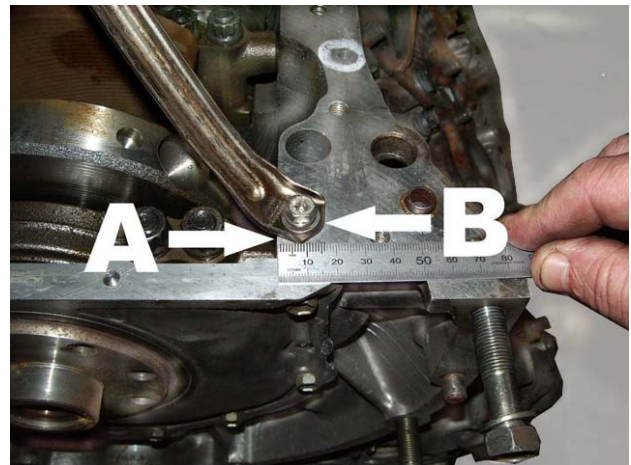


Photo 6

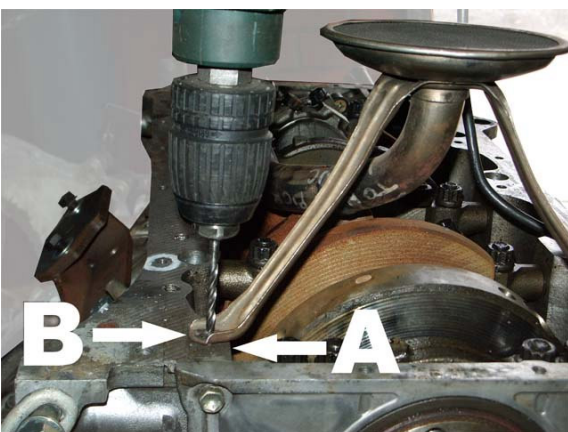


Photo 7



Photo 8

FOR MOTOR THAT ORIGINALLY HAD A FRONT SUMP:

The Dipstick has an external and the tube goes directly into the sump as shown in “Photo 8”.

Remove the Dipstick from the Tube (the tube is NOT used)

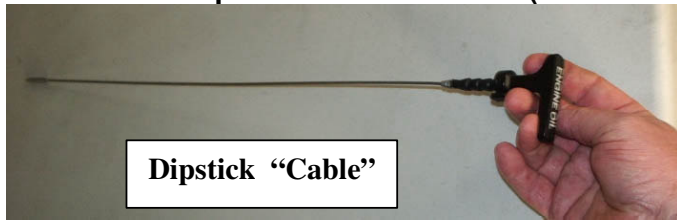


Photo 8

FOR MOTOR THAT ORIGINALLY HAD A MID SUMP WITH DIPSTICK LOCATED IN PASSENGERS SIDE OF THE HEAD:

(See Photo’s 9, 10, 11)

Carefully remove the Short Dipsticks Tube from the head.

Arrow “A” shows the Flexible Dipstick Cable.

Arrow “B” shows the Short Dipstick Location Tube.

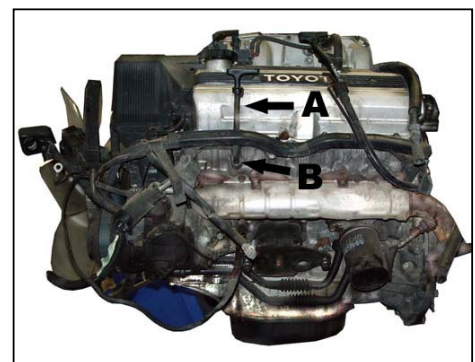


Photo 9

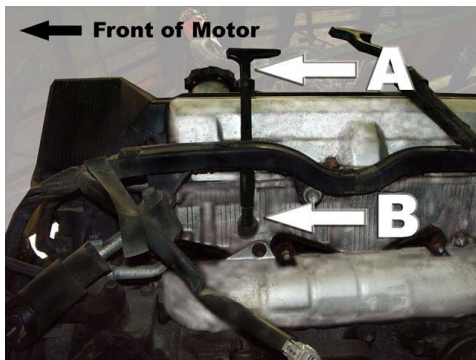


Photo 10

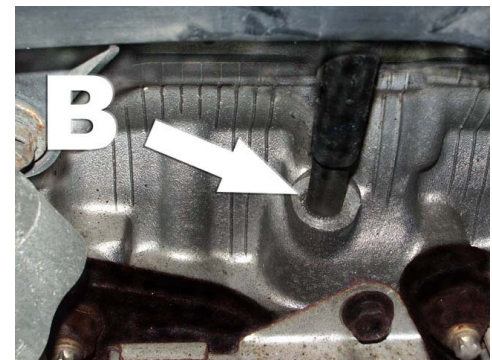


Photo 11

Refer to Photo 12 on next page

Arrow “A” on photo 12 shows the position of the blanking plug in the “Drivers Side of the Head The Magnifying Glass gives an enlarged view of the Plug.

This Plug need to be removed from the head. In the motors that we have had, the plug seems to be made out lead or a similar material, we recommend drilling a small hole in the centre of the plug and screwing a self tapping screw into it and using the head of the screw to gently prize the plug out ... using a screw driver as a lever or a slide hammer.

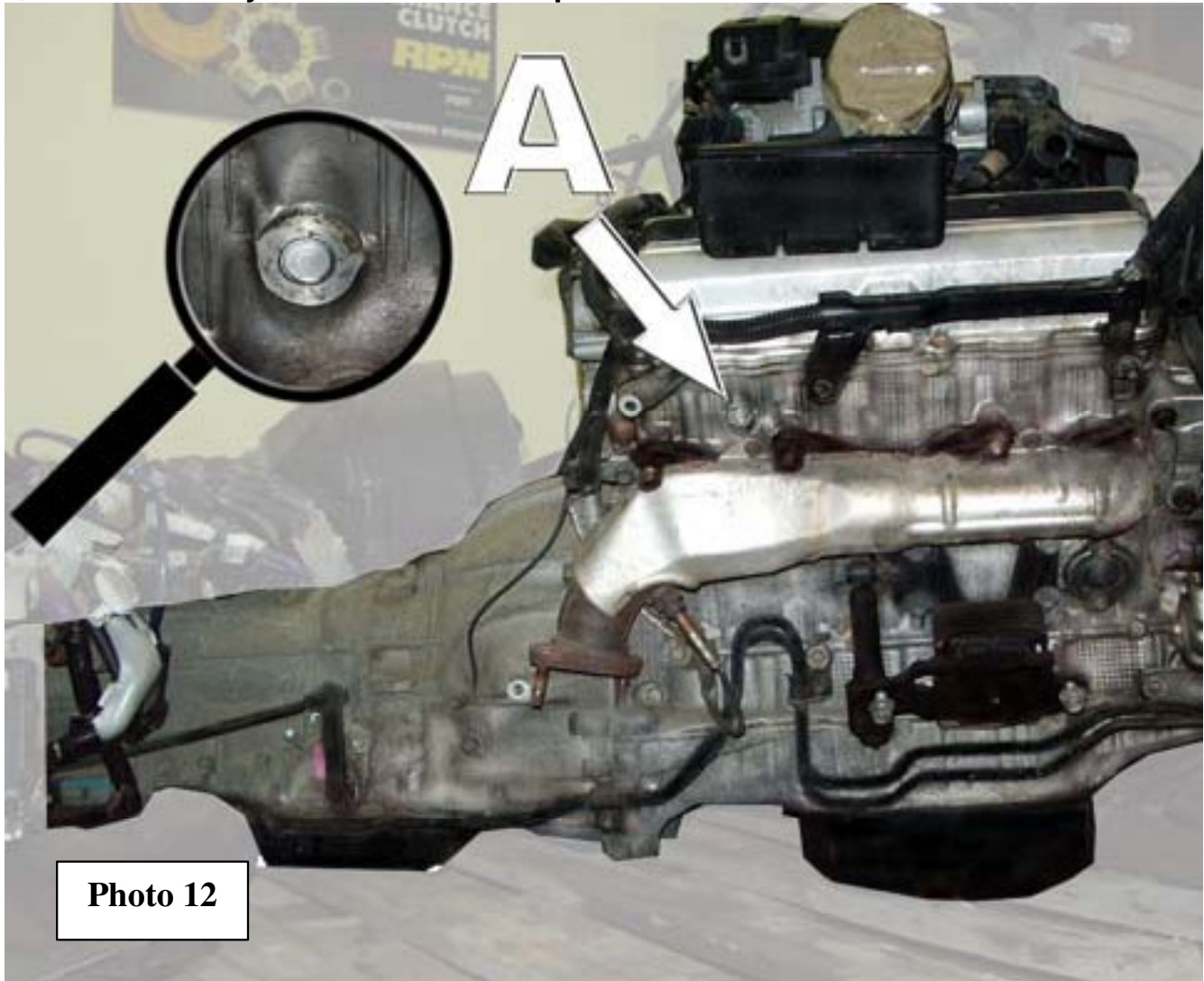


Photo 12

The hole can then be used to locate the Flexible Dipstick Cable. If you have the motor that had the short tube as shown in “photo 10”, you can reposition it in the new hole. Remember to plug the old hole that it came out off.

If your motor had the full length dipstick tube that is shown in “Photo 8” you will need to shorten the tube and fit it to the new hole as shown in “Photo 10”

VERY IMPORTANT DIPSTICK ADJUSTMENT:

You need to add the recommended amount of oil then adjust the dipstick position to read full.

Apply sealer to sump and fit it to the motor.

IMPORTANT NOTE: IT APPEARS THAT THERE MAY BE A RARE VERSION OF THIS MOTOR THAT DOES NOT HAVE THE ADDITIONAL “PLUGGED HOLES” IN THE HEAD. If that is the case you will need to weld a full-length dipstick tube to your sump taking care to use the method described above to set the oil level for the new dipstick position.

Engine mounts, flywheels, gearbox mounts, Speedo cables, cross members and accessories are available to suit this conversion in some cars.