

So ... how did you fill in time during our recent unusual part of history?

Ah, a full service of my MX-5 including timing belt, water pump, seals etc. The shocker boots (on NA incorporating bump stops) also needed replacing. All oils and brake fluid ...

What could possibly go wrong?

Step 1. Establish whether it is a short- or long-nose crank.

A 1990 NA is supposed to be a short-nose according to all research. *Hmmmm*. Check number of slots on pulley. Four for short, eight for long. Mine has eight. Re-check ... yep, eight slots. Guess mine must be on cusp of change.

(Ed's note: Watch for an article early next year on crankshaft "noses". In the meantime, check out this USA article on long-nose/short-nose cranks: <https://www.miata.net/garage/crankshaft.html>) ... but note the VINs won't work for Australian cars.)

Order complete kit for long nose. Fingers crossed.

Now to start. Drain all oils, remove oil filter. Replace all drain plugs and renew sealing washers. Bleed brakes and clutch. *Progress feels good.*

Remove rear shockers – straight forward. *Mmm* 17ml. Not sure 3/8 drive socket will take strain. Into 1/2" drive AF sockets. I have some odd size sockets and I found a 21/32 is a perfect fit. I have the advantage of a hoist and I've just bought a hoist chassis stand, so I can support the suspension while the shocker is out.

Read manual, re-read manual. Time to start on the engine ... once again, *what could possibly go wrong?*

Problem 1: The four small bolts holding the crank pulley on won't budge. Done up previously by King Kong. After finally getting them undone without breaking them, the bolts were clearly *stretched* (see photo, below), and I could not get newies locally (must be made of *Unobtainium*). I ordered new ones from USA. Gives me time to do everything else at a leisurely pace.



Main pulley bolt to crank: same problem as above – 21ml 3/8 drive socket. Once again into 1/2" sockets. This time the 13/16 is a perfect fit. As I remove bits and pieces, all are placed in separate containers. Much easier to marry everything up when re-assembling much later.



Front of the engine with the gubbins off

Kit arrives ... start with replacing the rear shocker boots. Caution here: the coil spring is under immense pressure. Get this wrong and pain will ensue. All good ... now do the front shocker boots. *Feeling good.*

Back to the engine. Replace water pump – part of the kit; thermostat housing then cam sprockets. New oil seals pressed in.

The replacement key for crank keyway is shorter than the original (see below) so I chose to re-use the original.



Fit new timing belt. Cable tie it to the cam sprockets so it cannot move while playing with the idler wheel and adjuster. Tighten all bolts to correct torque.



Cable ties on the cam pulleys

Re-fit spark plugs. Don't forget anti-seize on the threads; mine were dry. I didn't fancy trying to fit helicoils.

New cam cover gasket filled. All hoses and belts re-fitted.

Hooray ... nothing left over!

Radiator re-filled with plain (tap) water. Engine started and warmed up. Drained to flush any residual old coolant. Repeated above. Then filled with correct coolant.

Checked for leaks etc. *None.*

Air conditioner re-gassed and a new battery.

Now it's time to enjoy the fruits of my labour and drive my MX-5 again.

Now that mine works, *my wife said I'm allowed to do hers!*

No rest for the wicked!

PS. Thanks to various Club members who put up with my phone calls when re-assurance was needed.

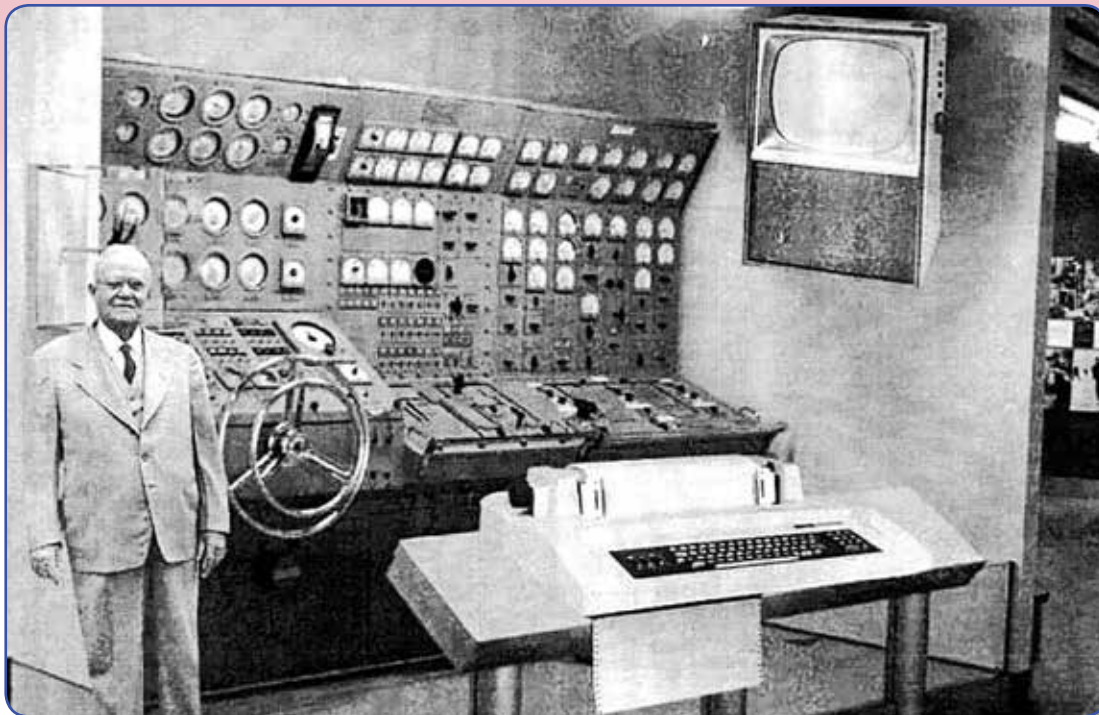
Actually it is a fairly straight forward process. Take your time, read the manual and you will find it all falls into place. ■

(Ed's note: There is a good YouTube tutorial on the net at: <https://www.youtube.com/watch?v=ooeptq0q7vc>. This shows in detail all you need to know about cam belt changing – just overlook the "Miata King" hype!)



Mine next! Kira and Woofa give the nod of approval to John's repairs.

From 1954: the home computer of the future ...



Scientists from the RAND Corporation have created this model to illustrate how a "home computer" could look in the year 2004. However, the needed technology will not be economically feasible for the average home. Also the scientists readily admit that the computer will require not-yet-invented to actually work, but 50 years from now scientific progress is expected to solve those problems. With teletype interface and the Fortran language, the computer will be easy to use. [Ed: love the ship's steering wheel (the mouse?), the keyboard, and the wall-mounted TV!]