# Blue Print ADC47347, ADC47353



Mitsubishi Montero, Pajero and Shogun models fitted with 4M41 diesel engine





## Timing Chain Kit

### Problem

A rattling noise coming from the engine timing chain area or a broken timing chain.

### Cause

The timing chain tensioner's wear is accelerated during operation. This is caused by the high carbon deposits that build up in the oil, due to exhaust emission control measures implemented on this engine.

It is possible the tensioner will stick and no longer function properly. This in turn will result in an un-tensioned timing chain, causing a rattling noise or the chain to break.

### Solution

Remove the timing chain tensioner and inspect it for excess wear, damage and over extension of the plunger. This is checked by looking at the scratch marks between the contact surface of the cam and the plunger rack. If the plunger has extended beyond the normal operating range, there will be marks from the seventh position onwards. The cam can also sustain damage to the teeth, therefore restricting the operation of the cam.

Remove the rocker cover assembly. Using a flat blade screwdriver, raise the timing chain off the timing chain guide surface and inspect the condition of the chain running surface. A pitted wear surface is caused by a flapping untensioned timing chain.

Once the cause has been confirmed, replace the timing chain kit according the workshop manual, including changing the engine oil and filter.

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