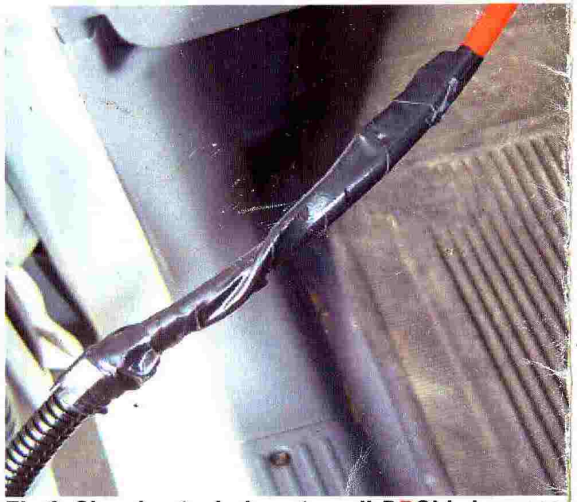


Fig.6 Showing technique to pull *DPChip* harness into engine bay

Tuning Adjustment

You can adjust the tune of the engine with the ***DPChip*** if required.

Remove the clear cover of the ***DPChip*** with a small screwdriver to access the selector (Fig.7).

There you will find an adjustable selector which allows for **10 different pre-programmed states of tune**. To increase performance you can increase the number that the arrow points to. If the quality of exhaust emissions falls off, this can be rectified by lowering the number.

Further advanced adjustments can be achieved by lap top tuning. This requires additional leads and programme for connection to laptop or PC. These are available at a cost from **AWDTech or your dealer.**

Note: This ***DPChip*** can be later transferred to any other diesel vehicle listing this ***DPChip*** as the model type. Failing to do so will result in failure of the ***DPChip***! To obtain ***DPChip*** model transfer information contact **AWDTech or your authorised *DPChip* dealer.**



Fig.7 View of unique 10 position tuning controller

Note: If for some reason you need to return the vehicle back to normal, simply unplug the ***DPChip*** from its harness plug!

Enjoy driving with the *DPChip!*

Make	Model
Nissan	Patrol GU 3.0 TD

DPCHIP
DIESEL POWER

www.dpchip.com

Installation Manual
for

DP34

Nissan Patrol GU 3.0TD



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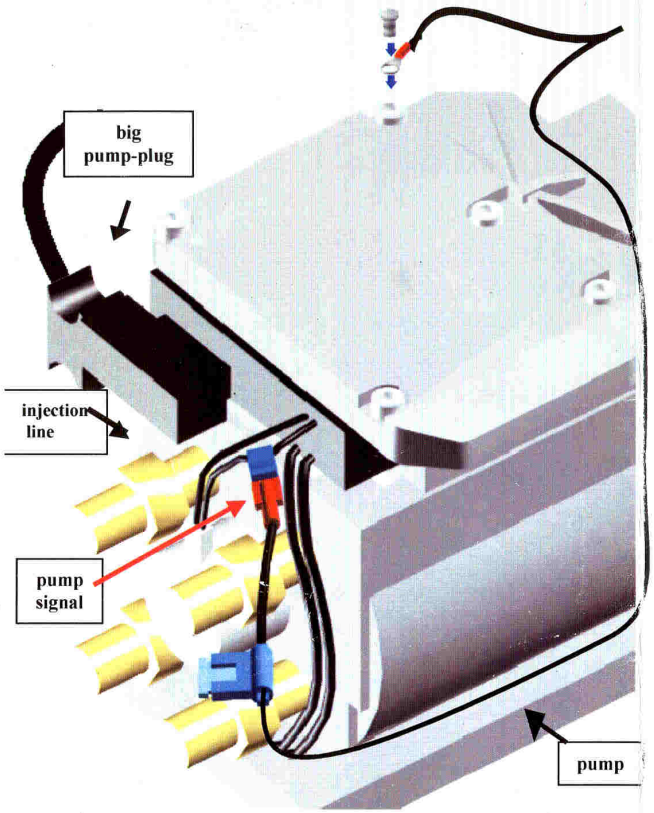


Fig.1 Showing injection signal control wire to connect *DPChip* harness to

1. Before installation

1.1 Turn off the ignition of your vehicle!

1.2 Locate the ECU (electronic control unit). It is located at the driver`s side, beneath the dash, near the foot pedals above the gearbox hump (Fig.4).

2. Installation

2.1 Unplug the ECU plug and unclip the white cover.

2.2 Connect the Grey & Red wires of the ***DPChip*** wiring harness to the harness wires. Spot solder to the harness wires a few cm`s back from the plug (Fig's.2&3).

2.3 Attach the earth (-) eyelet to the vehicle body.

2.4 Run the ***DPChip*** harness into engine bay (Fig.6)

2.5 Connect the scotch-loc clip to only 1 of the 4 black wires on the fuel-injection pump (the top pair, right one furthest from the block. (Fig's.1&5). Connect the blade terminal to the scotch-loc clip. Connect the earth (-) eyelet to a bolt on or near the injection pump (Remove battery, fuel filter & pump plug to ease access).

2.6 **Secure all wiring properly with supplied cable ties!**

3. Securing

3.1 Now the harness is installed, plug the ***DPChip*** into its harness plug. Secure the ***DPChip*** just behind the carpet.

3.2 Re-install all removed items.

4. Testing

4.1 Start the engine and the vehicle is now ready for road testing.

4.2 In **DP34**: Check for Green LED flashing when engine is running and that a Red LED, when engine is revved up, comes on. Take for a test drive to make sure engine is operating throughout the rev range.

The ***DPChip*** system is not capable of creating any conflict within the vehicles ECU system. The harness is connected 'Hard Wired Downstream' to prevent damage to the ECU and to prevent conflict or memory kept by the original ECU data logging system which is what is kept if an 'in-series' plug-in system is used. The ***DPChip*** can be un-plugged from its harness to immediately return things back to standard.

DPChip colour of the wire	Pin no. & colour of the wire of the ECU	function
Grey	**PIN 23 (white but can also be other colours) Connect close to the 118 pin plug on the thin wire section!**	Variable Reference signal voltage 0,4 - 4,5 volt (throttle)
Red	**PIN 61 (red but can also be other colours)**	Power supply 12 volt + positive

Fig.2 Connection table

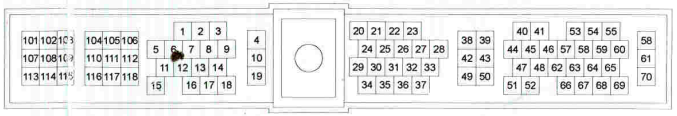


Fig.3 ECU plug

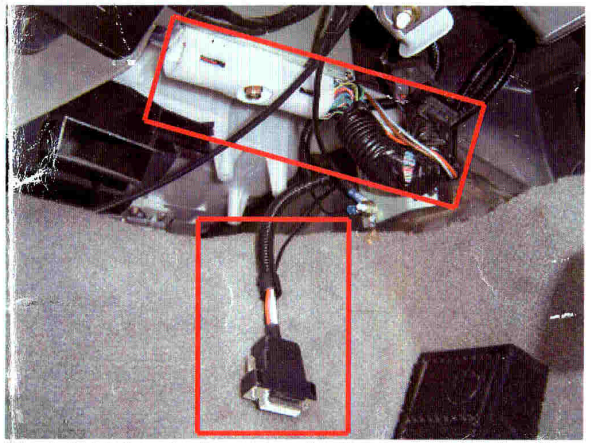


Fig.4 ECU located under middle console (driver`s side) showing *DPChip* harness attached and loom connection area

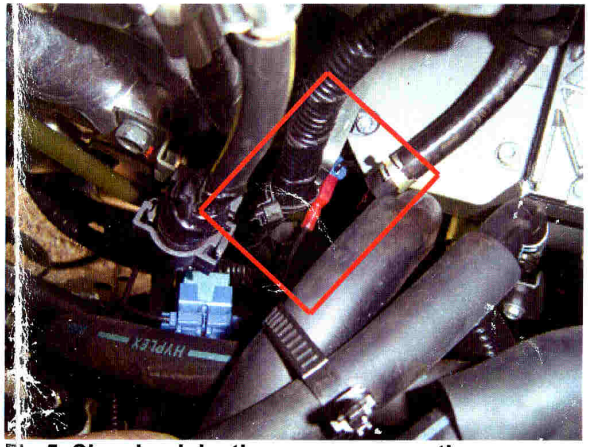


Fig.5 Showing injection pump connection

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DPCHIP
DIESEL POWER

Tuning Adjustment DP34 USB

You can adjust the tune of the engine with the ***DPChip*** if required. This is generally recommended to assist additional modifications such as a larger exhaust or intercooler.
Remove the clear cover of the ***DPChip*** with a small screwdriver to access the selector (Fig.1).
There you will find an adjustable controller which allows for **10 different pre-programmed states of tune**. To increase performance you can increase the number that the arrow points to. **No.9 is the highest setting** on the selector. If the quality of the exhaust emissions falls off, this can be rectified by lowering the number.



Fig.1 View of unique 10 position digital tuning controller.

Further advanced adjustments can be achieved by computer tuning via the USB port. This requires an additional ***DPChip*** programme and USB lead for connection to your laptop or PC. These are available at a cost from **AWDTech.**
To obtain ***DPChip*** model transfer information contact **AWDTech or your *DPChip* authorised dealer.**

DPCHIP
DIESEL POWER

Diagnostics for DP34 USB series

Q1: No additional Power?
A1: -Turn on the ignition and you should notice a Green LED on. If there is no LED on, then check the Power (+) and Earth (-) connections.

-Start the engine. You should notice the Green LED Flashing. If it is not flashing then check the connection at the injection pump.

-Rev up the engine and you should notice a Red LED appear temporarily. Under load driving, the Red LED will stay on. If not, check the throttle connection.

Q2: Visible emissions under heavy load?
A2: Due to the number of common outside variables we suggest to do the following first!

-Inspect the engines air filter and air inlet for restrictions.

-Inspect fuel quality.

-Inspect the vehicles turbo boost levels for sufficient boost.

-Carbon build-up burning out of areas inside the engine and exhaust can also be visible at first after a ***DPChip*** installation; we suggest driving the engine at higher revs and lower gears to assist this clearing up.

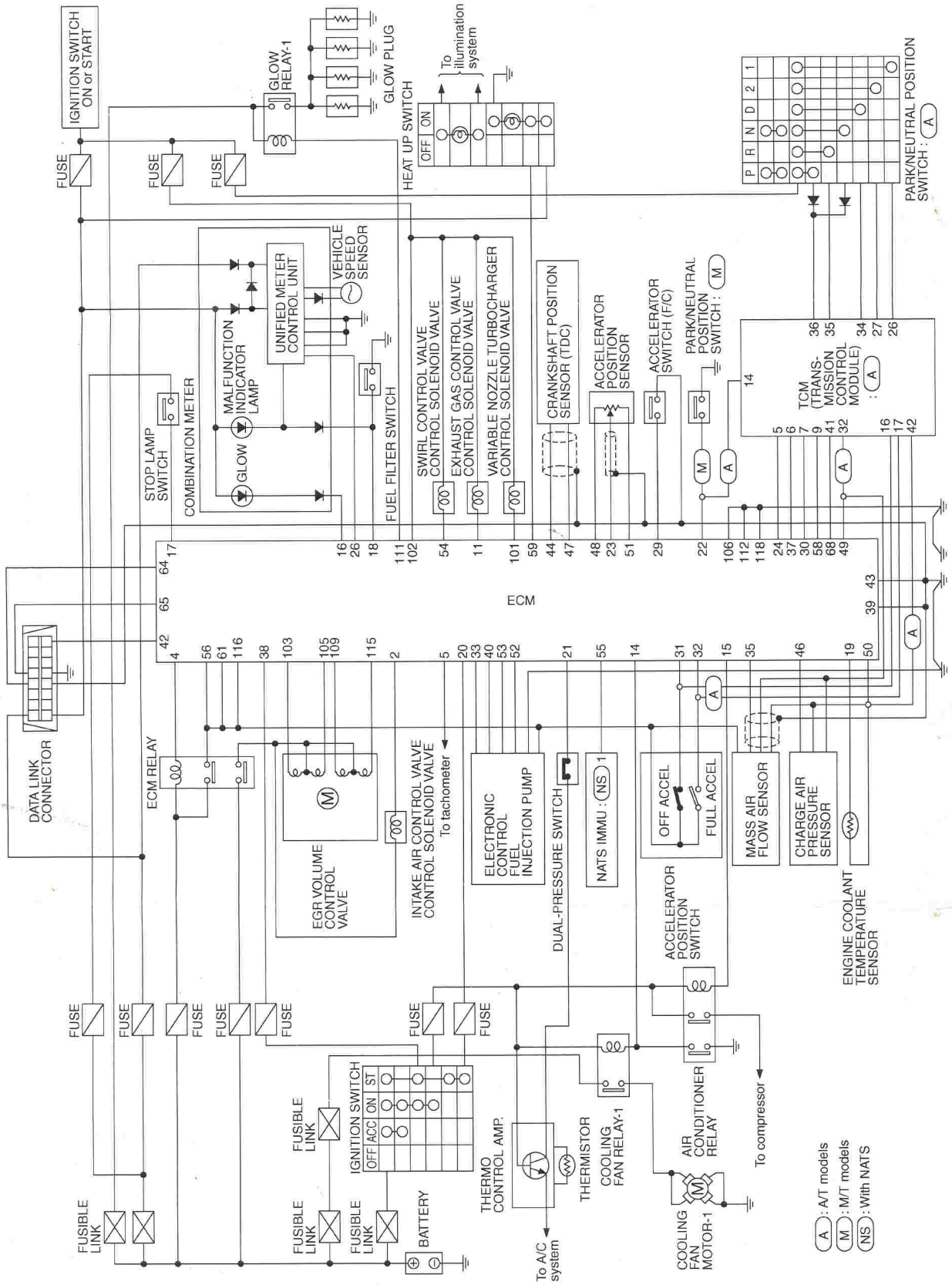
Finally- Lower the settings on the ***DPChip*** **selector**. If this just decreases power with no reduction in visible emissions, then other areas such as EGR valve faults within the engines emission system may need attention.

Q3: Vehicle appears to have lost power over time.
A3: Unplug the ***DPChip*** from its harness **(only for DP34 series)**. Drive for a few days as you would normally then re-install the ***DPChip***. You can get used to the additional power gain at times and so returning the vehicle back to standard is a good test to be sure it is not another problem.

Q4: There is an Engine fault light on or the vehicle is not running normal.
A4: Simply unplug the ***DPChip*** from its harness to return the vehicle back to standard. Now check if the problem is still there.

Circuit Diagram (Cont'd)

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TEC277M