



www.unichip.com.au



- Dynamotive the home of Unichip Australia and New Zealand is a family business that was established in 1974. Dynamotive has always been at the forefront of Dyno tuning in this country.
- All Unichip Plug and Plays are designed and programmed in Australia for Australian conditions.
- For more info go to Unichip.com.au

Unichip Q4

A:

Power
Timing
Fuel Control
Sensor Signals

B:

Water temp
Boost Control

C:

Throttle Control

D:

Unichip Tuning Port



Unichip Injector Driver

E:

Unichip Injector Driver



For most late model Turbo Diesel Plug and Plays that have been designed and developed in Australia for Australian conditions, the following tuning information applies.

How does the Unichip work on Late Model turbo diesel?

- **Boost Control:** Unichip has complete 3D control over boost pressure across the entire operating range of the engine. This allows the Unichip Trained technician to increase the boost pressure as required. This helps in keeping the Air Fuel Ratios within a safe limit.
- **Injector timing:** This is a unique Unichip feature to have complete 3D control of injector timing. This means we can control the exact time they open to achieve optimised fuel burn. This will result in lower exhaust gas temperatures and greater engine longevity.
- **Fuel Rail Pressure:** Unichip has full 3D control of Fuel Rail pressure, the simplest way to increase power on a turbo diesel. However, there are rules to follow when increasing fuel rail pressure, these are taken into consideration from all of our trained Unichip Authorised agents.
- **Injector Drivers:** This feature allows the Unichip to have full 3D control of the Diesel Injectors via the Unichip for greater performance and flexibility.

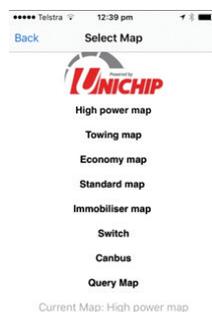
What are the other advantages to the Unichip Q4?

- **Live Real Time Tuning:** What this means is the Authorised Unichip agent can make adjustments to the Unichip tune in Real Time whilst the vehicle is running on a Dynamometer and see the effects/gains instantly with no guessing as to what YOUR vehicle requires. The other alternative which nearly all competitors use is to run the vehicle on the Dyno, turn off vehicle, make changes to the tune and then download the new data to the ECU or Module. Recheck effects of the change again on the dyno, this can take a very long time to get right with a lot of wear and tear of the vehicle on the dyno. The Unichip Live Tuning method greatly reduces time spent on the dyno to get your vehicle 100%.
- **Transfer from Vehicle to Vehicle:** The Unichip Q4 is transferable between all diesel and petrol vehicles. New car, same chip.
- **Water temperature Protection:** This is the “built in” safety feature of the new Unichip Q4, we have the ability to monitor engine temperature via the coolant temperature sensor. This allows the Authorised Unichip agent to manipulate the tune on a sliding scale as the engine temperature rises. Meaning: As the engine temperature rises the Unichip Q4 will remove the fuel, boost and timing, slowly and in a controlled fashion to ensure it maintains maximum power and torque output, without compromising the engine.
- **Throttle Booster:** This feature enables the Unichip Q4 to achieve a faster throttle response and reduce turbo lag. Some people pay upward of \$800 for a pedal booster kit. This is a standard feature in the Unichip Australia Plug & Play.

Optional Extras

- **Map Select Switch:** This option enables the 5 map capability of the Unichip. This means you can access the 5 maps which can be tailored to your requirements. EG, High Power Map, Towing Map, Economy Map, Standard Map, Immobiliser Map or Even a High Boost or Low Boost Map. Speak to your Authorised Unichip agent to tailor 5 tunes to suit your application. The 5 maps can be changed on the fly whilst driving from in cab.
- **Bluetooth Map Select:** This option allows you to change the 5 maps via your Smartphone.
- **EGT Protection:** This option enables the Unichip Q4 to monitor Exhaust Gas Temperature and modify the tune to keep Exhaust Gas Temperature at a safe level.

Smart Phone App



- Typical Plug and play loom.
- Provisions for Unichip Q4
- Up to two Injector drivers when required.
- Seamless fitting between E.C.U and E.C.U. Harness
- Factory OEM E.C.U. plugs

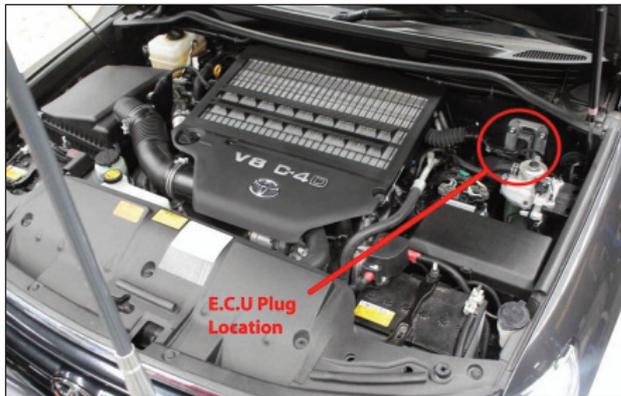


- This is to ensure a direct fit to the vehicle E.C.U.

Close up of E.C.U plugs, this is both male and female side made from the same heat treated plastic as O.E.M. and to O.E.M specifications to ensure a direct 100% faultless and sealed fit.

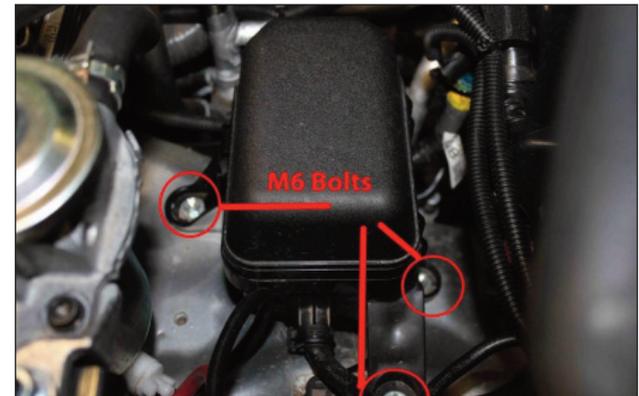


Typical Plug and Play setup:



1. Locate ECU against LH Corner of firewall

200 Series Landcruiser used for example.



2. Remove 3 x M6 Bolts for junction box in front of ECU and move box forward. (This will allow access to lower ECU plug)

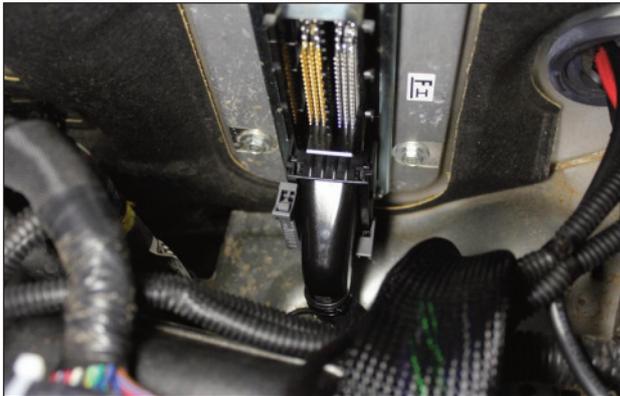
Typical Plug and Play setup: (cont).



3. Remove upper ECU plug followed by lower ECU plug. (cont.)



3 cont. Remove upper ECU plug followed by lower ECU plug.



4. Plug smaller lower PNP plug into factory ECU followed by larger top plug. (cont.)



4 cont. Plug smaller lower PNP plug into factory ECU followed by larger top plug.



5. Fit Unichip and bracket to rear most stud on diesel fuel filter housing. Plug in Unichip.

Diesel Results*

2015 Toyota Landcruiser 200 series
1VD-FTV.

Power Results:

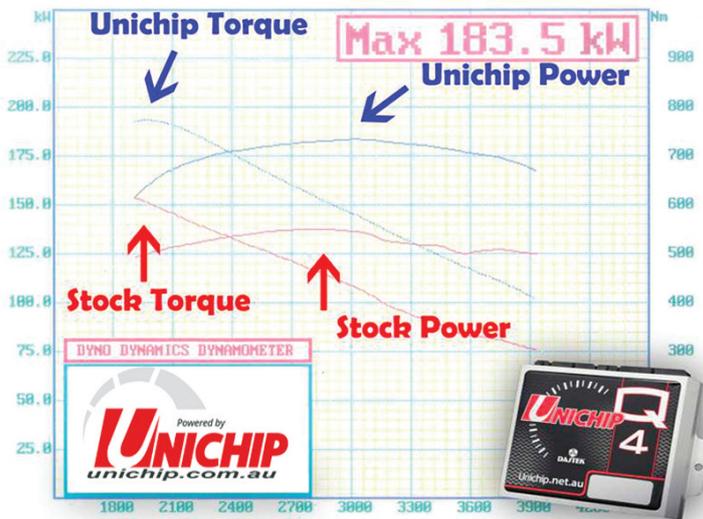
Standard 134.7all wheel kw at 3000rpm
Unichip 183.5 all wheel kw at 3000rpm

An increase of 48.8 all wheel kw in mid-range power exactly what is required to get to towing speed.

Torque Results:

Standard: 610nm at 1900rpm
Unichip: 780nm at 1900rpm

This increase of 28% more torque was carried though the entire rev range, drastically changing the drivability of this vehicle.



Petrol Results

Power Results:

Standard: 214.00 all wheel kw
Unichip: 243.8 all wheel kw

Torque Results:

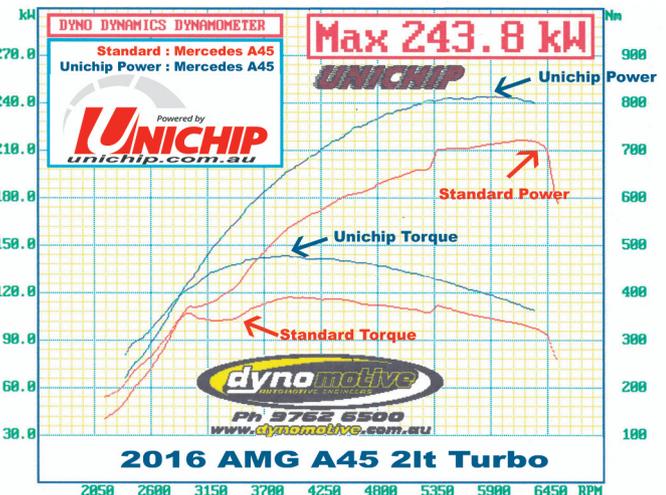
Standard: 390nm
Unichip: 480nm

Stock A45 makes 214kw @all 4 wheels and 390NM @all 4 wheels, with the Unichip Q4 these numbers soon change to 243KW @ all wheels and 480NM@all wheels, but these numbers don't tell the real picture.

With the Unichip Q4 the torque increase at 3100rpm (this is an RPM range where the average driver spends a lot of time) is nearly 100NM, most A45 owners love their car but wish it had more low down power, we've got that covered.

As you can see the power is increased throughout the entire rev range with the stock output of 214kw passed now at the 4300 rpm mark, so in other words the Unichip equipped A45 makes more power at 4300rpm than the stock car makes at 6400RPM.

More power more torque, better throttle response and far better fuel consumption



WHAT IS THE DIFFERENCE

TUNING SPECIFICATIONS

Full 3D mapping against load, RPM and modifiers

LIVE Real Time Tuning whilst vehicle is running

3D Fuel Rail Pressure Control

3D Boost Control

3D Injector Volume Control

3D Injector Timing Control

3D Throttle Control/Booster Standard feature

Closed Loop Water temperature protection

Closed loop EGT Protection (Exhaust Gas Temperature)

Closed loop Air temperature protection

Up to 5 Custom tuned maps to suit YOUR vehicle

Switch maps on the fly via Map select switch

Switch maps on the fly via Smartphone App (Bluetooth)

Switch maps on the fly via Can Bus (controller area network)

Suits all Computer controlled diesel engines

Suits all Computer controlled Petrol engines

Road speed limiter removal on most vehicles

Speedo calibration for most vehicles (increased tyre diameter)

EGR delete feature for most vehicles

DPF delete feature for most vehicles

Up to 5 configurable outputs (eg: Boost control, Fan control, water injection, nitrous etc.)

Firmware upgradeable for future vehicle models

Transfer from vehicle to vehicle, Petrol to Diesel

OEM Quality Looms

Plug and Play - Straight to E.C.U Harness (No Electronic Footprint)

First and original piggyback computer in the world

Modify or Open factory ECU (Engine Control Unit)

Market leader for more than 20 years

100% Australian developed tunes

3 year product warranty

Australia wide aftermarket vehicle warranty

Australia wide dealer network

30 Day money back guarantee

	UNICHIP Q4	STS MODULE	FLASH	RAIL PRESSURE
Full 3D mapping against load, RPM and modifiers	✓	×	×	×
LIVE Real Time Tuning whilst vehicle is running	✓	×	×	×
3D Fuel Rail Pressure Control	✓	✓	✓	✓
3D Boost Control	✓	✓	✓	LIMITED
3D Injector Volume Control	✓	LIMITED	×	×
3D Injector Timing Control	✓	×	×	×
3D Throttle Control/Booster Standard feature	✓	×	×	×
Closed Loop Water temperature protection	✓	×	×	×
Closed loop EGT Protection (Exhaust Gas Temperature)	✓	✓	×	×
Closed loop Air temperature protection	✓	×	×	×
Up to 5 Custom tuned maps to suit YOUR vehicle	✓	×	×	×
Switch maps on the fly via Map select switch	✓	×	×	×
Switch maps on the fly via Smartphone App (Bluetooth)	✓	×	×	×
Switch maps on the fly via Can Bus (controller area network)	✓	×	×	×
Suits all Computer controlled diesel engines	✓	LIMITED	LIMITED	✓
Suits all Computer controlled Petrol engines	✓	×	×	×
Road speed limiter removal on most vehicles	✓	×	×	×
Speedo calibration for most vehicles (increased tyre diameter)	✓	×	×	×
EGR delete feature for most vehicles	✓	×	✓	✓
DPF delete feature for most vehicles	✓	×	×	×
Up to 5 configurable outputs (eg: Boost control, Fan control, water injection, nitrous etc.)	✓	×	×	×
Firmware upgradeable for future vehicle models	✓	×	×	×
Transfer from vehicle to vehicle, Petrol to Diesel	✓	×	×	×
OEM Quality Looms	✓	CLAIMED	N/A	×
Plug and Play - Straight to E.C.U Harness (No Electronic Footprint)	✓	×	N/A	×
First and original piggyback computer in the world	✓	×	N/A	×
Modify or Open factory ECU (Engine Control Unit)	N/A	×	✓	×
Market leader for more than 20 years	✓	×	×	×
100% Australian developed tunes	✓	✓	CLAIMED	×
3 year product warranty	✓	✓	×	✓
Australia wide aftermarket vehicle warranty	✓	×	×	✓
Australia wide dealer network	✓	✓	✓	✓
30 Day money back guarantee	✓	×	×	×



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