

Subject: FW: ACCC - New car retailing industry market study - further information requests [SEC=UNCLASSIFIED]
Attachments: 1A - Snap-On Scan Tool.PNG; 1B - Scan Tool - VW POLO - Live Data - System Voltage.jpg; 1C Erwin EU - Repair Manuals.JPG; 1D - Nissan-Idle Relearn.pdf; 1E - Scan Tool - Mitsubishi Pajero - DTCs.JPG; 1H - Mitsubishi Techno.PNG; 1F - Mitsubishi Australia - Contact Us.PNG; 1G - NCR - Further data request - website and repair information - KTAS Updat....docx

From: Thomas Hatch
Sent: Tuesday, 28 March 2017 4:48 PM
To: Adam Pay <Adam.Pay@kmart.com.au>
Subject: ACCC - New car retailing industry market study - further information requests [SEC=UNCLASSIFIED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Response to information requested Wednesday, 22nd March:

- Every KTAS store is equipped with a Snap-On 'Modis Ultra' or 'Solus Ultra' diagnostic scan tool. These tools provide the user with access to the on-board diagnostic (OBD-II/EODB) and electronic operating systems on a modern vehicle (now essential for most fault finding and repair processes).
Snap-On Diagnostic web page -
http://www.snapontools.com.au/diagnostics/diagnostics_platforms/modis_ultra - Jpeg of scan tools attached (1A)
[REDACTED]
- Pic of diagnostic tool showing the alternator voltage problem in the 2012 model Volkswagen Polo attached (1B)
 - o In regards to the screenshots of the AU Erwin site versus the EU or US Erwin site about the voltage problem, I'm actually unaware of an AU Erwin site. The FCAI member service info/repair link also directs you to the euro site.
 - o I have attached a screenshot of the EU site (1C)
<https://erwin.volkswagen.de/erwin/showSearchArticle.do> . Note – I often run into difficulty at payment screen when making a purchase from Aus. Also, some manuals are only supplied on CD (via post).

- The Mitsubishi EU site <https://www.mitsubishitechinfo.eu/> (1H) showing what information is available versus the Australian site <https://www.mitsubishi-motors.com.au/about-us/contact-us> (1F)
 - o Scan tool showing faults with 2014 Mitsubishi Pajero (1E)

- Below are the Nissan repair/service sites regarding the idle recalibration procedure when the battery is removed, along with the information obtained otherwise from the internet
 - o (1D) Info obtained from the internet <http://prostream.com.au/wp-content/uploads/2015/04/Nissan-IAVL1.pdf> (unsure if Nissan would be too pleased about this doc)
 - o <http://www.nissan-techinfo.com/Home.aspx> (EU site) Note - very limited content available for online viewing (mainly supplied via CD or hard copy)
 - o <http://www.nissan.com.au/Owners/Owners> (AU site)
 - o techdata@nissan.com.au (email address supplied on the FCAI members repair info page)

- Below are the five (5) examples (as requested) of types of new cars where replacing or reconnecting a battery causes the car to no longer function properly, along with an outline what the effect of doing so would be on the car and what would need to be done to fix it
 - o The vast majority of modern vehicles require some form of re-initialisation or re-learn process following a standard battery change, with the most common known as battery registration (a process which allows a vehicles management system to monitor and manage operating systems accurately following a battery change). The impact in most cases - if a new battery is not registered the on-board computer will bring on a warning light and limit operating functions (as a safeguard), restricting drivability. Left unresolved, the battery and/or charging system could be damaged.
 - o The following makes and models all require battery registration of some type:

- Make	- Model	- Year
- Volkswagen	- Golf - 1.2 TSI Petrol FWD Hatchback	- 08/12-on
- BMW Mini	- MINI - One D Diesel FWD Hatchback	- 07/10-on
- Peugeot	- 308 - 1.6 16V Petrol FWD Wagon	- 02/08on
- Land Rover	- Discovery - 3.0 TD 4x4	- 09/09on
- Audi	- A3 – 1.4 TFSI Petrol FWD	- 04/12-on

- o Many more examples available (if required)
 - o Note that most new car warranties do not cover the battery (normally limited to 12 months).
-
- In regards to time and other costs gather the information needed, whether that information is available from the manufacturer's website or a data aggregator, or if it needs to be obtained from another source? We find most data aggregators don't list this type of information. We are however, fortunate enough to have battery and equipment suppliers who are very active in closing information gaps in this space. The direct costs for this are hard to define from our perspective, but the resources they commit to obtain and compile the info would ultimately add to what we (and our customers) pay for their products.

Regards,

Tom Hatch National Equipment, Maintenance & Quality Manager

Store Support Office / The Barwell Centre, Level 2, 7-9 Barwell Ave, Castle Hill NSW 2154
 T (02) 9680 6584 / F (02) 9680 8170 / M 0439 604 197 / W ktas.com.au

MODIS Ultra

Snap-on

07:31PM



Scanner



OBD-II/EOBD



Component Test



Scope Multimeter



Previous Vehicles and Data



Tools



OBD-II/E/OBD

12:05

118 / 4000



CALCULATED LOAD VALUE(%)

CALCULATED LOAD VALUE(%)	7.8
ABSOLUTE LOAD VALUE(%)	21.6
NR OF WARM-UPS SINCE DTCs CLEARED	255
MIL STATUS	OFF
DISTANCE WHILE MIL ACTIVE (km)	0
DISTANCE SINCE DTCs CLEARED (km)	36663
CONTROL MODULE VOLTAGE(V)	10.968



erWin

Individual vehicle information | Training items | Repair information

Model-specific repair information

Search results

Search path

Model(s) Polo (2010 - 2015) Polo A05 (8R, 8R1, 6C1)

Info medium Repair manuals

[Back to search](#) [Return to product assistant](#)

Info

Logged in as thatch
 Last searched VIN: None

This lists all of the search results in an overview.
 If the information icon is displayed, you can view the table of contents of the document by clicking the icon.
 To view a document you must have a valid fiat rate.

Settings

Surface English
 Article English

Attachment 1C

Contents	Type key*	Title	MKB/GKB*
REPAIR MANUALS			
	6R1	3-cylinder common rail engine (1.2 l, EA109)	CFNA
	6C1	3-cylinder common rail engine (1.4 l, 4V, turbocharger, EA 288)	CYZB...
	5G1 BKS...	3-cylinder direct-injection engine (1.0 l engine, 4V, EA 211, turbocharger)	CHZB...
	6C1	3-cylinder injection engine (1.0 l engine, 4 V, EA 211)	CHVA...
	6R1	3-cylinder injection engine (1.2 l engine, 2V, EA 111)	CHFA
	6R1	3-cylinder injection engine (1.2 l engine, 4V, EA 111)	CGPA...
	6C1	4-cyl. direct injection (1.2 l, 4V, EA 211, turbocharger)	CJZC...
	6R1 6C1...	4-cyl. direct injection (1.4 l, 4V, EA 211, turbocharger)	CPTA...
	6C1	4-cyl. direct injection engine (1.8 l, 4 V, EA 888 Gen III, turbocharger, chain drive)	DAJA...
	6R1	4-cyl. direct injection engine (2.0 l 4V turbocharger, toothed belt drive)	CDLJ
	9W1 9W3...	4-cyl. injection engine (toothed belt drive)	BUD...
	6R1	4-cyl. injection engine with timing chain	CL5A...
	1T 3C... 5K1	4-cylinder common rail engine (1.6 l, EA109)	CAYC...

Technical Bulletin: Idle Air Volume Relearn Procedure.

Models affected:
Nissan X-Trail T30
Nissan Tiida



Background:

With progressive carbon build up around the throttle valve and throttle bore area, the engine control unit will adapt to these long term changes by adjusting the base idle speed, base injector pulse width and ignition timing.

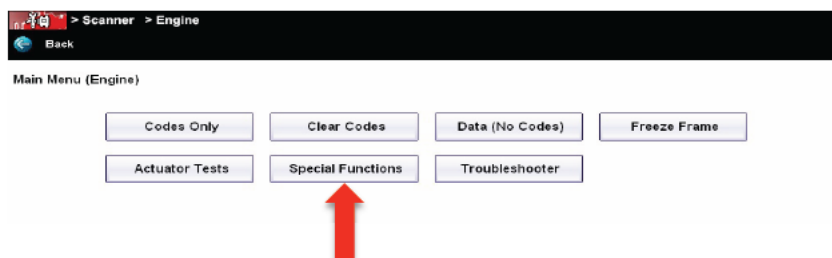
When the throttle body is cleaned, or the battery is removed these vehicles “**May**” require an idle air volume relearn.

Symptom: After a Prostream intake service has been completed, the engine “**May**” have a tendency to idle erratically from 1500 -2000 rpm.

Cause: The engine control unit is unsure of the current throttle valve position and air mass quantity after carbon removal. The control unit must be put through an “Idle Air Volume Relearn” procedure with a dedicated scan tool. **Please read this procedure in FULL prior to carrying out!**

Procedure:

1. Connect the Snap On scan tool to the 16 pin OBD 2 connector located at the lower dash trim drivers side.
2. Check and clear any current engine fault codes (codes only)
3. Select correct vehicle in vehicle selection (model, year etc.)
4. Select engine section.
5. Select “Special functions” (or Work Support mode on other scan tools).



6. Select "**Self Learning Cont.**", click on start, this will reset engine control units Adaptives to "0"



Select Test:



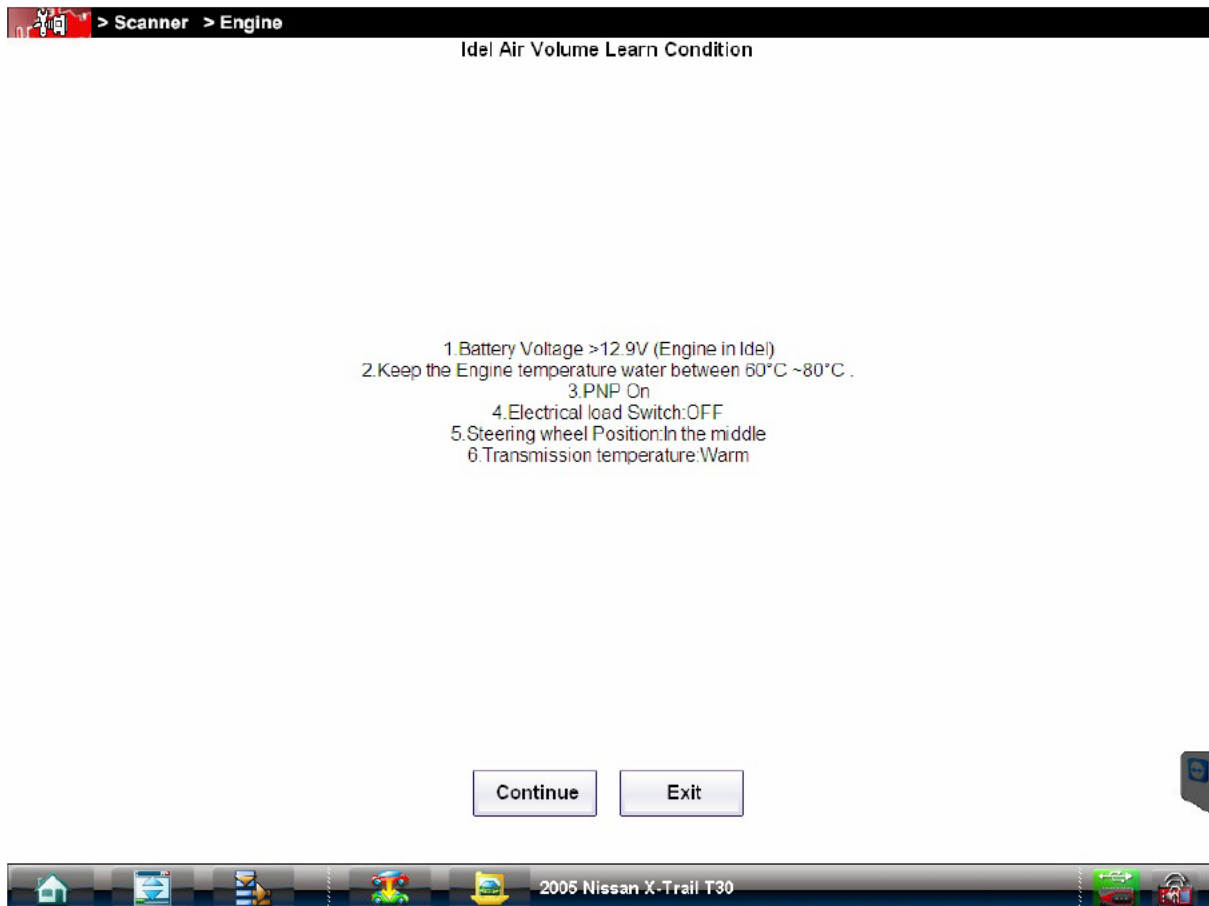
7. Select **Idle Air Volume Relearn** "make sure you follow the prerequisites listed on the screen before you begin, engine temperature between 50-80 C, transmission temperature, no loads, transmission in P/N, A/C, idle speed at 650 rpm, ignition timing etc. You can check these on the data list.



Select Test:



8. Make sure all of the **Prerequisites** are met, **Tip:** you can check this in live data first.



9. Please Note!

Before you begin the idle air volume relearn (IAVL) procedure, shut the engine **off**, loosen the clamp for the plastic induction tube at the throttle body end.

Start and run the engine, slowly remove the induction tubing to bleed in un-metered air into the engine.

This procedure will allow the engine to idle low enough to perform the (IAVL), if the engine is idling higher than 650 rpm or hunting the relearn will not work! Once the rpm has stabilized, press continue on the scan tool to perform the IAVL

While doing this try to maintain idle speed to 650 rpm or below, prevent the engine from stalling (you may need a staff member to assist).

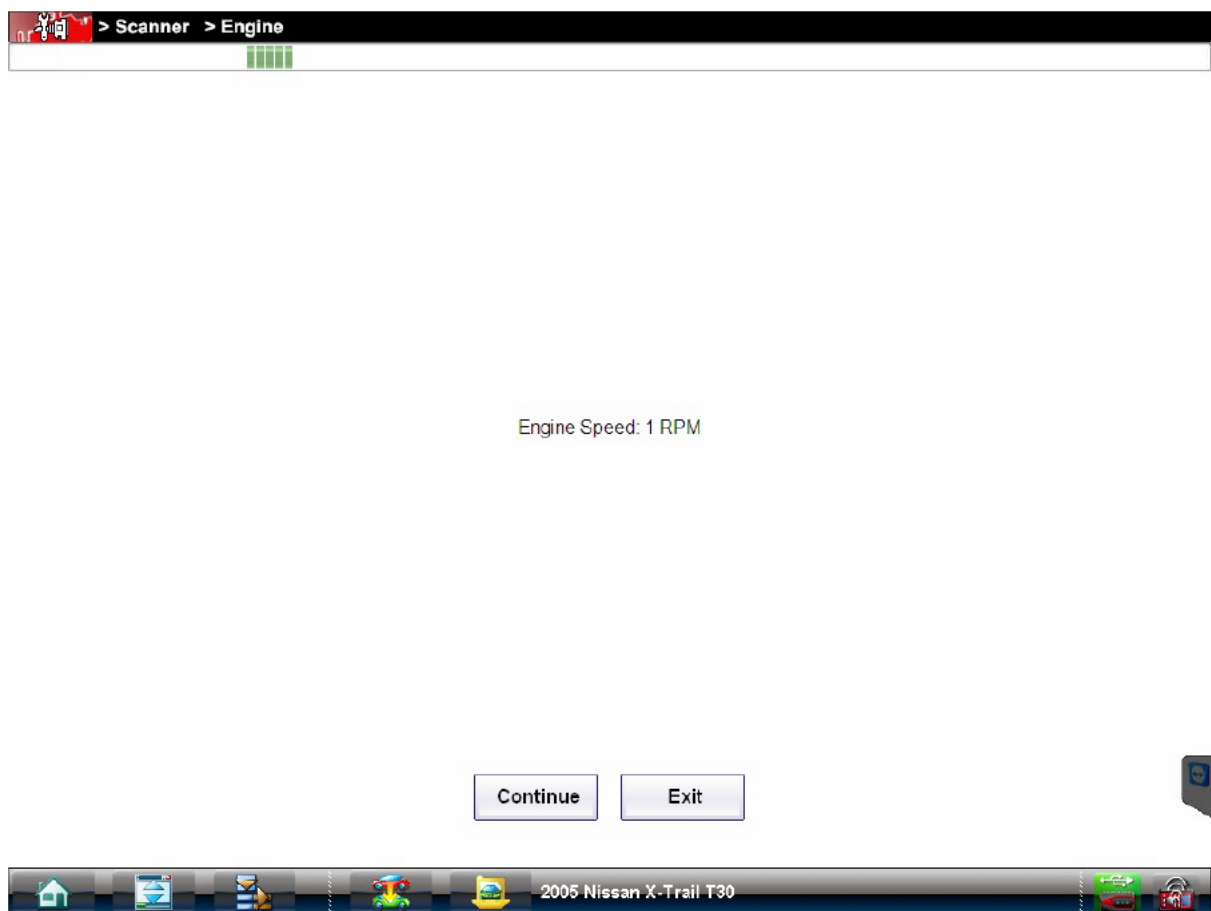
Press Continue:



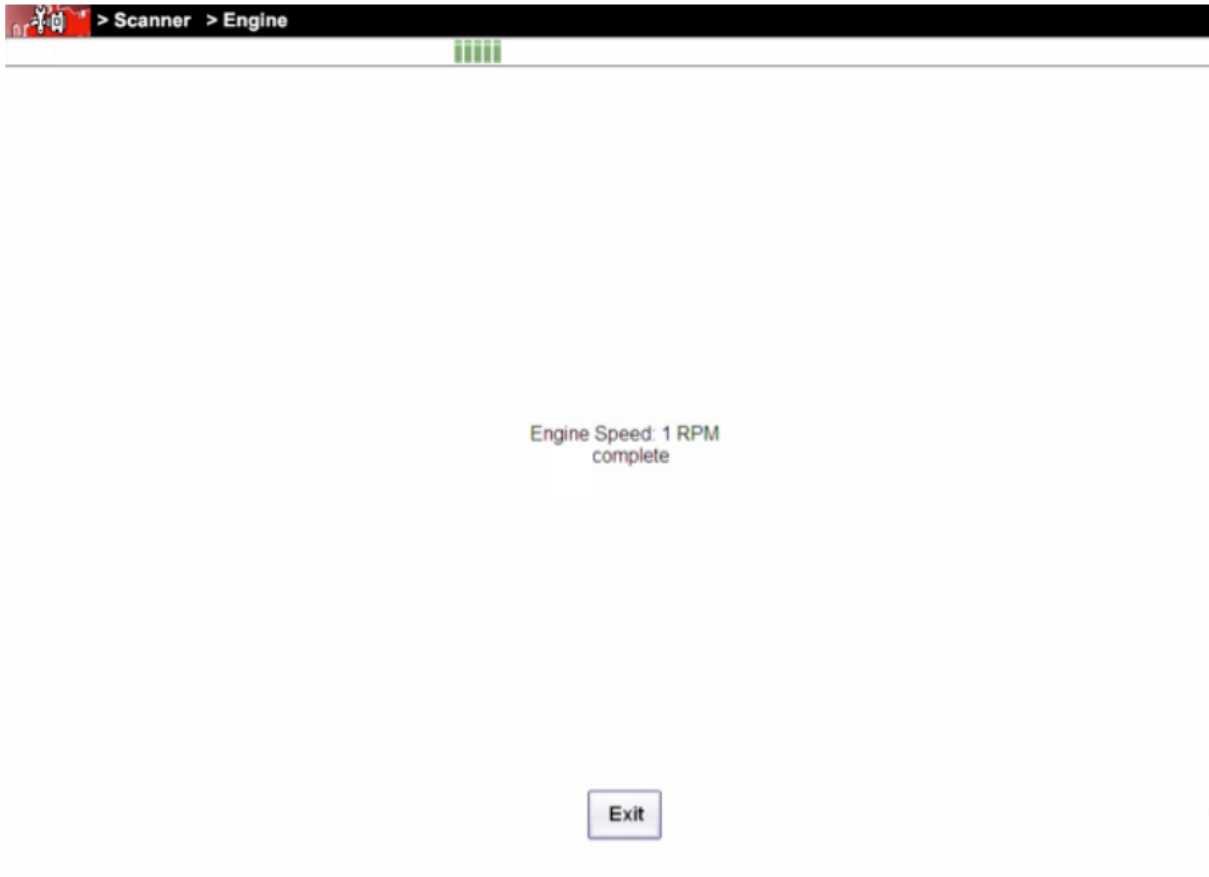
This function allows the ECM to learn the position of the IACV-AAC which maintains proper engine speed at idle. always proper this mode after replacement of IACV-AAC, throttle body, ECM or when idle speed or ignition timing is out of specification
*Two Test Procedures need to be executed before running idel air Volume learn



10. **Start** the IAVL relearn by pressing **Continue**



11. If successful the screen will display **Complete:** The engine should now idle at the specified idle speed (700 ± 50 rpm) the process is now complete. It is not uncommon to require several attempts for this procedure to work.



12. Shut the engine **off**.
13. Refit the induction tube.
14. **Start** and run the engine, the engine should now idle to specification.
15. Check for any **diagnostic trouble codes** and record, clear any code's.
16. **Road test** the vehicle, make sure A/C is turned on, run vehicle through all gears, drive through complete drive cycle, up hill, down hill, idle, around corners etc. make sure malfunction indicator lamp does not illuminate during road test.
17. Reconnect scan tool, **recheck for diagnostic trouble codes**, confirm system pass, make sure intake tubing and air box is secure, vehicle is ready for customer hand over.

MODIS Ultra

2014 Mitsubishi Pajero NW 3.2L-DT L4

09:06



Code List

P0102	Mass Air Flow Sensor Low - Active DTC
P0113	Intake Air Temperature Sensor High - Active DTC

Snap-on

MITSUBISHI ENQUIRIES

If you have a enquiry about Mitsubishi please enter your details in the form below and hit the 'submit' button. Your query will be forwarded to our customer service team who will respond to your email. We wish to help you get your query resolved so please provide all of the correct mandatory information to allow us to respond as quickly as possible.

We also have some helpful information on our website on the links below which may help assist:

- [General Frequently Asked Questions](#)
- [Accessories](#)
- [Outlander PHEV](#)
- [Vehicle Maintenance](#)
- [Diamond Advantage Warranty](#)
- [Capped Priced Servicing](#)
- [Roadside Assistance](#)



CUSTOMER ASSISTANCE

1300 13 12 1

If you have a question or comment about Mitsubishi or any of our vehicles please call us.

Type of enquiry*:	<input type="text" value="(Please Select)"/>
Vehicle*:	<input type="text" value="(Please Select)"/>
Title*:	<input type="text" value="(Please Select)"/>
First Name*:	<input type="text"/>
Last Name*:	<input type="text"/>
Telephone type:	<input checked="" type="radio"/> Mobile <input type="radio"/> Home Phone <input type="radio"/> Business
Mobile Number*:	<input type="text"/>
Email Address*:	<input type="text"/>
Postcode*:	<input type="text"/>
Dealership Name*:	<input type="text"/>
VIN*:	<input type="text"/>
Registration Number*:	<input type="text"/>
Comments (optional):	<input type="text"/>

I have read and agree to the terms in the Mitsubishi Privacy Statement outlined below.

Table 1: Links to Australia’s top 10 car manufacturers’ (2016)¹ Australian, EU and US repair and service websites and subscription cost webpages

Manufacturer	Manufacturer repair/service website and subscription page (EU)	Manufacturer repair/service website and subscription page (US)	Manufacturer repair/service website and subscription page (AU)	Notes
Toyota	https://www.toyota-tech.eu/Menu/Repair	http://techinfo.toyota.com/	https://toyotamanuals.com.au/	
Mazda	https://mapps.mazdaeur.com/mud/registerio.html#44DACAD6-8F60-47EB-89CA-686FE8DEFFEB	http://www.mazdaserviceinfo.com/	https://mazdamanuals.com.au/	
Hyundai	https://www.hyundaitechinfo.com/	http://service.hyundai-motor.com/	No Portal (email only): technical@hyundai.com.au	
Holden	https://www.gme-infotech.com/	https://www.acdelcotds.com/acdelco/action/techinfo	https://www.acdelcotds.com/acdelco/action/home	
Ford	http://www.etis.ford.com/home/charging.do	https://www.motorcraftservice.com/Home/Pricing/7	https://www.motorcraftservice.com/Home/Pricing/7	Site provides good illustration of data restrictions in AU. Switch country/region to view (select 'pricing information' for further detail).
Mitsubishi	https://www.mitsubishitechinfo.eu/Subscription.aspx	https://mitsubishitechinfo.com/epacarb/	http://i-car.com.au/technical-information/ https://www.fcai.com.au/service-repair/member-service-repair	No Portal Available (links only to FCAI & I-CAR OEM info pages to show gap)
Nissan	http://www.nissan-techinfo.com/find.aspx?dept_id=10	https://login.eu.nissan.biz/nidp/idff/sso?id=NissB2B&sid=0&option=credential&sid=0&target=https://eu.nissan.biz/#	No Portal (email only): techdata@nissan.com.au	EU must call for pricing info (& obtain e-token)
Volkswagen	https://erwin.volkswagen.de/erwin/showHome.do	https://erwin.vw.com/erwin/showOrderFlatrate.do	No AU portal	(FCAI provide link to EU portal - site will not accept payment from AU IP)
Subaru	https://techinfo.subaru.com/index.html	https://techinfo.subaru.com/index.html	AU - no content available online - Data available via CD only (see CD order form link in notes)	https://www.subaru.com.au/service/service-and-repair-manuals

¹ <http://www.drive.com.au/motor-news/toyota-hilux-is-australias-best-selling-vehicle-20170104-gtm6jz.html>

Honda	https://techinfo.honda.com/rjanisis/logon.asp	https://techinfo.honda.com/rjanisis/logon.asp	AU - no content available	EU & US shared site
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Table 2: Screenshots from car manufacturer’s Australian, EU and US repair and service websites for popular models from each of Australia’s top 5 car manufacturers’ (2013–2016) about the types of oil (specifically: crankcase, transmission, differential and power steering) required to service the car

Manufacturer/ Model (specify year 2013–16)	Manufacturer repair/service website (EU)	Manufacturer repair/service website (US)	Manufacturer repair/service website (AU)
Toyota Corolla	1A.	1B*	1C.1D
Mazda Mazda3	2A. 2B*	2C*	2D. 2E. 2F.
Hyundai i30	3A.	3B*	N/A
Holden Commodore	4A*	4B.	4C.
Ford Ranger	5A*	5B	5C.

*Registration/Account verification restricted

Toyota Corolla EU –

1A.

The screenshot shows a technical manual page for a Toyota Corolla/Auris. The page is titled 'COROLLA/AURIS' and includes a table of oil specifications for various models and years. The table is organized into columns for different engine types and years. The specifications include oil grades (e.g., 5W-30, 0W-20), viscosity grades, and other technical details. The page also includes diagrams and icons for oil change procedures and safety warnings.

Model/Year	Oil Grade	Viscosity	Other Details
2010-2011 1.8L	5W-30	11000000	260 (2.6, 380)* 270 (2.7, 280)* 230 (2.3, 330)* 240 (2.4, 350)*
2010-2011 2.0L	5W-30	11000000	260 (2.6, 380)* 230 (2.3, 330)*
NRE, ZRE	Stop and Start System	Simple Intelligent Parking Assist System	Power Door Lock Control System
2013-2016 1.2L	0W-20	1.25 to 1.29	20°C (58°F)
1000 cc	5W-30	11000000	1200 (1.2, 120)
1500 cc	5W-30	11000000	1500 (1.5, 150)
2000 cc	5W-30	11000000	2000 (2.0, 200)
2500 cc	5W-30	11000000	2500 (2.5, 250)
3000 cc	5W-30	11000000	3000 (3.0, 300)
3500 cc	5W-30	11000000	3500 (3.5, 350)
4000 cc	5W-30	11000000	4000 (4.0, 400)
4500 cc	5W-30	11000000	4500 (4.5, 450)
5000 cc	5W-30	11000000	5000 (5.0, 500)
5500 cc	5W-30	11000000	5500 (5.5, 550)
6000 cc	5W-30	11000000	6000 (6.0, 600)
6500 cc	5W-30	11000000	6500 (6.5, 650)
7000 cc	5W-30	11000000	7000 (7.0, 700)
7500 cc	5W-30	11000000	7500 (7.5, 750)
8000 cc	5W-30	11000000	8000 (8.0, 800)
8500 cc	5W-30	11000000	8500 (8.5, 850)
9000 cc	5W-30	11000000	9000 (9.0, 900)
9500 cc	5W-30	11000000	9500 (9.5, 950)
10000 cc	5W-30	11000000	10000 (10.0, 1000)

1B.

Subscriber Login

Email ID: Remember Me
 Password:

Need An Account?

 Access to TIS is available on a subscription basis. Click the Subscribe button above for more details.

Already Have An Account?

 Click the button above to manage your current TIS account.

TIS Featured Information
[Click here for a tutorial on our Technical Information System.](#)
 Access to vehicle security information is provided for security professionals registered with the NASTF Vehicle Security Professional Registry. For more information [click here](#).

What is TIS?

The Technical Information System or TIS is your service support source for all Toyota produced vehicles marketed in North America. TIS includes all of the vital information you'll need to effectively service most 1990 and later Toyota products.

Emergency Response and Disarmar Information is available HERE free of charge. Select the Manuals tab above to view available Emergency Response Guides, Disarmar Guides and Owner's Manuals.

TIS is available in three different levels. The table below summarizes the features of each subscription level.

Subscription Level Features	Standard	Professional Diagnostic	Security Professional
TIS Library			
Service Bulletins	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Repair Manuals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wiring Diagrams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Technical Training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Technical Information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diagnostics / Reprogramming			
Techstream ScanTool Software	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ECU Calibrations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Identifi Direct-Hit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Security (U.S. and Mexico V316 only)			
Key Codes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Immobilizer / Smart Reset	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[-> Learn More](#)

Beyond service information, several additional resources are available to assist in the swift and accurate service of Toyota, Scion, and Lexus vehicles. Follow the links below for more details.

- [-> Special Service Tools](#)
- [-> Technical Training & Printed Materials](#)
- [-> Emergency Response Presentation](#)
- [-> Emergency Response Presentation PDF Printout](#)

Professional Resources

Techstream Life Kit
 Techstream Software + Mongoose MPC V316 + Your PC = techstream LIFE KIT

Factory Service Information and Diagnostics for your shop!
 Need an innovative solution for diagnosing & repairing Toyota, Scion, and Lexus vehicles? The NEW Techstream Life Kit allows you to use your own PC with Techstream Software.

[-> Learn More About Techstream Life](#)
[-> ScanTools & Vehicle Reprogramming](#)

Find a Dealership near you for a full selection of Genuine Parts and Accessories.

[-> Wholesale Parts](#)
[-> Star Dealers](#)

Learn all about factory authorized parts and repair at Toyota's new Wholesale Parts website. Or use the locator form to find a STAR (Support To Automotive Repair) Dealer.

Toyota Motor Sales, Inc. | Home | Contact Us | FAQ | System Requirements | Toyota & Industry Links | Payments and Refunds | Privacy Policy | Terms of Use

Toyota Corolla US – cannot provide information (account locked)

Toyota Corolla AU –

1C.

Service Information - Toyota Service Information - Google Chrome

Secure | <https://toyotamanuals.com.au/docs/corolla-service-repair-manual-dec-13-current/N0076/pgm/service.html>

TOYOTA COROLLA, COROLLA ALTIS > ZRE17F, ZZE17F > 2013.10

Search YOKOGUSHI

Repair Manual

RESULTS

INTRODUCTION

PREPARATION

SPECIFICATIONS

SERVICE DATA SHEET

SERVICE DATA SHEET

MAINTENANCE

Engine / Hybrid System

Drivetrain

Suspension

Brake

Steering

Audio / Visual / Telemat

Power Source / Network

Vehicle Interior

Vehicle Exterior

SERVICE DATA SHEET SERVICE DATA SHEET SERVICE DATA SHEET

NOTE: Click PDF button. The following illustration is an example.

TOYOTA TOYOTA RAV4 Diesel ALA30 2008/12 - 2009/03

ALA

1932 cc 16E1 1932 cc 20E2
 18.32 hp 7.57 18.38 hp 8.57

IMAGE

ALA

1842 cc 1943 (7.25 hp 7.64) 1816 cc 174.4 (8.68 hp 7.37)

1.6 4 (10.09 hp 8.28)

PDF

16 of 24 - Clipboard
 Remove Collection. Delete Item to increase available space.

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1D.

The screenshot shows a web browser window with the URL <https://toyotamanuals.com.au/docs/corolla-service-repair-manual-dec-13-current/N00076/pgm/service.html>. The page title is "Service Information - Toyota Service Information - Google Chrome". The navigation bar shows "TOYOTA COROLLA, COROLLA ALTIS > ZRE17#, ZZE17# > 2013.10". The left sidebar lists categories like "General", "INTRODUCTION", "PREPARATION", "SPECIFICATIONS", "SERVICE DATA SHEET", "MAINTENANCE", "Engine / Hybrid System", "Drivetrain", "Suspension", "Brake", and "Steering". The main content area shows a "SERVICE DATA SHEET" for a "TOYOTA TOYOTA RAV4 Diesel" with model code "ALA30" and years "2008/12 - 2009/03". A table displays fuel consumption data: "175.7 to 185.7 (6.92 to 7.31)" and "210.2 to 220.2 (8.28 to 8.67)". A large "IMAGE" placeholder is visible. A red circle highlights the navigation bar and the vehicle information header.

Note - glitch with AU site. 2013 Corolla selected, however Rav 4 information is provided ?

Mazda 3 EU -

2A.

The screenshot shows the "Mazda Technical Information" website. The page title is "Mazda Technical Information" and the URL is <https://mapps.mazdaeur.com/mvul/register.htm#1C0BF66-6036-4E42-8234-B78763780091>. The page content includes "General Information for Independent Operators and Mazda Registration", "Repair and Maintenance Information", and "Digital Service Record". The "Repair and Maintenance Information" section is divided into "Free Access" and "Payable Access". The "Payable Access" section includes a "Price Information" table.

Price Information *	
1 hour	€5.00
2 hours	€19.00
3 hours	€15.00
1 Day	€29.00
2 Days	€59.00
1 Week	€139.00
1 Month	€276.00
1 Year	€1660.00

The "Digital Service Record" section states: "The service history of all new Mazda models since 2008 is held on a central system called DSR Digital Service Record, accessible through the internet. As an ID, you can access the DSR system as well to update each vehicle's history following the completion of every scheduled service, extended service item and body inspection. The essential maintenance events that need to be tracked for each vehicle are: Scheduled Servicing, Extended Service Items, Annual Body Inspections".

Mazda 3 US –

2C.

The screenshot shows the Mazda Service Info website. At the top, there is a navigation bar with the Mazda logo and links for ELECTRONIC SERVICE INFORMATION, PCM (ECU) REFLASHING, VCM II, IDS SOFTWARE, and PATS & IMMOBILIZER CODES. Below this is a header with the text "Welcome to Mazda Service Info" and a "log in" button. The main content area is divided into several sections: "RELATED CONTENT" with links to Mazda Motor Corp., Mazda USA, Special Tools & Information, and As Built Data; "REGISTERED SECURITY PROFESSIONAL TOOLS" with a link for Key Code, PATS and Immobilizer Requests; "IMPORTANT INFORMATION" with links to Capacitor Disposal Manual, Mazda3, and Mazda6; and "HIGH PERFORMANCE BATTERIES" with an image of a battery. A large image of a silver Mazda3 is shown in motion. Below the car image, there is text stating: "Mazda Service Info provides US and Canadian independent automotive repair facilities with subscription based access to Mazda's service information and diagnostics. The information available on this site is intended for vehicles distributed within the North American market only. For As Built Data information, please use CONTACT US to submit a request". At the bottom, there are links for "REGISTERED LOCKSMITHS KEYCODE REQUESTS" and "SUBSCRIPTIONS AS LOW AS \$19.95" which includes links for Service Manuals, Immobilizer Codes, Technical Service Bulletins, and PATS Codes. A Geofrust logo is also present.

[SITE USAGE AGREEMENT](#) | [CONTACT US](#) | [PRIVACY](#)

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Mazda 3 AU –

2D.

The screenshot shows the Mazda MESI website interface. The top navigation bar includes the Mazda logo, "MESI Mazda Electronic Service Information", and a search bar. Below the search bar, there is a "Workshop Manual" section with a list of vehicle systems: GENERAL INFORMATION, ENGINE, SUSPENSION, STEERING/SHOCKS, BRAKES, TRANSMISSION/TRANSAXLE, STEERING, HEATING, VENTILATION & AIR CONDITIONING (HVAC), RESTRAINTS, BODY & ACCESSORIES, MULTIMEDIA COMMUNICATION SYSTEM, and PERSONALIZATION FEATURES. A large icon of a car with a wrench is labeled "WORKSHOP MANUAL".

MESI

Mazda Factory Service Information

Mazda3 (BM)

VIN

SRT (Suggested Repair Times)

PRINT

FORWARDED

DPOE-1A-10H

Maintenance Diagram

- GENERAL INFORMATION
- ENGINE
- SUSPENSION
- DRIVELINE/AXLE
- BRAKES
- TRANSMISSION/TRANSAXLE
- STEERING
- HEATER, VENTILATION & AIR CONDITIONING (HVAC)
- RESTRAINTS
- BODY & ACCESSORIES
- MULTIPLEX COMMUNICATION SYSTEM
- T-stop
- PERSONALIZATION FEATURES
- E-LOOP

SCHEDULED MAINTENANCE

id000000801200

Scheduled Maintenance Table for Europe

Maintenance Interval	Number of months or kilometers (miles), whichever comes first.									
	Months	12	24	36	48	60	72	84	96	108
	x1000 km	20	40	60	80	100	120	140	160	180
x1000 miles	12.5	25	37.5	50	62.5	75	87.5	100	112.5	125

GASOLINE ENGINE

Engine valve clearance (Only MZR-G) Audibly inspect every 120,000 km, if noisy, adjust.

Spark plug^{*1} Replace every 120,000 km (75,000 miles).

MZR-G R R R R R R R R R R

Air cleaner element^{*2} R R R R R R R R R R

Exhaust system (if installed) I I I I I I I I I I

DIESEL ENGINE

Fuel filter R R R R R R R R R R

Fuel injection system^{*3} I I I I I I I I I I

Air cleaner element^{*2} C C R C C R C C R C R

GASOLINE AND DIESEL ENGINE

Drive belts^{*4} I I I I I I I I I I

Engine oil & filter Replace when indicator is ON. (Max interval: 12 months/20,000 km (12,500 miles))

Fluore^{*5} R R R R R R R R R R

Other than fluore^{*5*} I I I I I I I I I I

Cooling system I I I I I I I I I I

Engine coolant^{*6} Replace at first 200,000 km (125,000 miles) or 10 years; after that, every 100,000 km (62,500 miles) or 5 years.

Fuel lines and hoses I I I I I I I I I I

Brake^{*7} I I I I I I I I I I

Brake lines, hoses and connections I I I I I I I I I I

Brake fluid^{*8} R R R R R R R R R R

Parking brake I I I I I I I I I I

Disc brakes I I I I I I I I I I

Steering arm and linkages I I I I I I I I I I

Manual steering oil Replace every 180,000 km (112,500 miles).

Front and rear suspension, ball joints and wheel bearing wear play I I I I I I I I I I

Drive shaft dust boots I I I I I I I I I I

Exhaust system and heat shields Inspect every 80,000 km (50,000 miles) or 5 years.

Balls and nuts on chassis and body I I I I I I I I I I

Body condition (for rust, corrosion and perforation) Inspect annually.

Cabin air filter (if installed) R R R R R R R R R R

Tires (including spare tire) (with inflation pressure adjustment)^{*9,10} I I I I I I I I I I

Flt for repair kit (if installed)¹¹ Inspect annually.

Chart symbols

I: Inspect and clean, repair, adjust, fill up, or replace if necessary.

R: Replace

C: Clean

T: Tighten

Remarks (Emission control and related systems)

- The ignition and fuel systems are highly important to the emission control system and to efficient engine operation. All inspections and adjustments must be made by an expert repairer, we recommend an Authorized Mazda Repairer.
- After the prescribed period, continue to follow the described maintenance at the recommended intervals.
- As the result of visual examination or functional measurement of a system's operation (performance), corrects, clean, or replace as required. (Inspect, and if necessary replace the air cleaner element)
- Refer below for a description of items marked* in the maintenance chart.

^{*1:} In the countries below, inspect the spark plugs at every 10,000 km (6,250 miles) or 12 months before replacing them at the said interval.
Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Latvia, Macedonia, Moldova, Montenegro, Romania, Serbia, Ukraine

^{*2:} If the vehicle is operated in very dusty or sandy areas, clean and if necessary, replace the air cleaner element more often than the recommended intervals.

^{*3:} Implement the fuel injection amount correction.

^{*4:} Also inspect the air conditioner drive belts, if installed.

If the vehicle is operated primarily under any of the following conditions, inspect the drive belts at every 20,000 km (12,500 miles) or 12 months.

- a. Driving in dusty conditions
- b. Extended periods of idling or low speed operation
- c. Driving for long period in cold temperatures or driving regularly at short distance only
- d. Driving in extremely hot conditions
- e. Driving in mountainous conditions continually

^{*5:} SKYACTIV-G and SKYACTIV-D vehicles can select flexible setting only some countries in Europe. Consult an Authorized Mazda Repairer for details. Flexible setting can be set if the vehicle is operated mainly where none of the following conditions apply.

OIL FILTER REPLACEMENT [SKYACTIV-G 1.5, SKYACTIV-G 2.0, SKYACTIV-G 2.5]

id0111h8800700

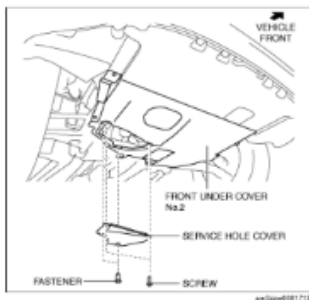
Warning

- Hot engines and engine oil can cause severe burns. Turn off the engine and wait until it and the engine oil have cooled.
- A vehicle that is lifted but not securely supported on safety stands is dangerous. It can slip or fall, causing death or serious injury. Never work around or under a lifted vehicle if it is not securely supported on safety stands.
- Continuous exposure to USED engine oil has caused skin cancer in laboratory mice. Protect your skin by washing with soap and water immediately after working with engine oil.

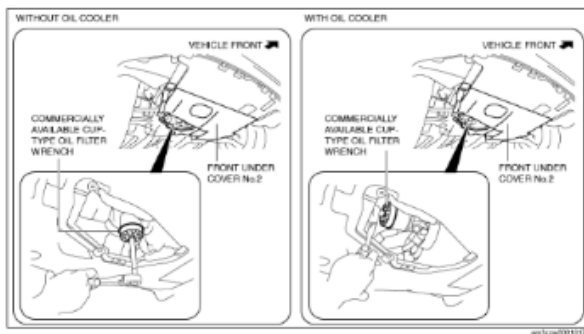
Caution

- If engine oil is spilled on the exhaust system, wipe it off completely. If you fail to wipe the spilled engine oil, it will produce fumes because of the heat.

1. Remove the service hole cover (installed to front under cover No.2) used to remove the oil filter.



2. Remove the oil filter using the commercially available, cup-type oil filter wrench (67 mm (2.6 in) diameter, 14 sided).



3. Use a clean rag to wipe off the mounting surface.
4. Apply clean engine oil to the O-ring of a new oil filter.
5. Tighten the oil filter according to the instructions on the package or side of the oil filter.

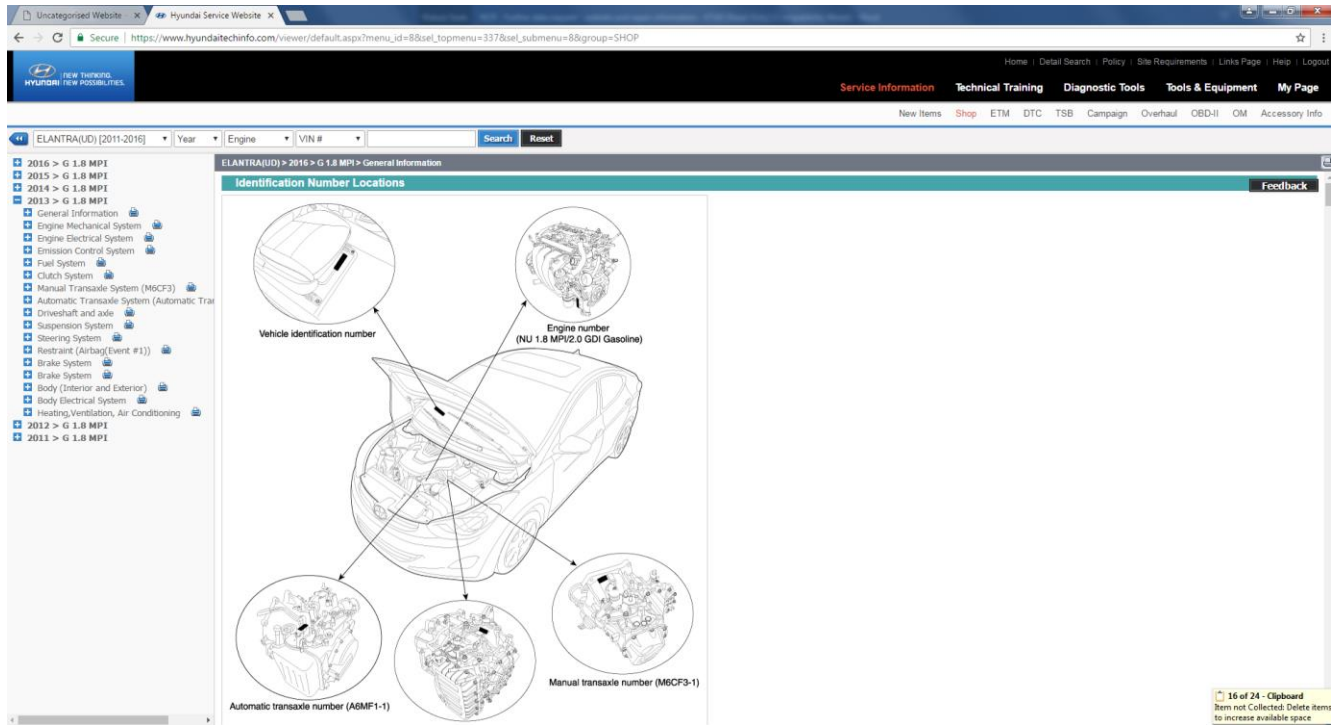
Tightening torque (reference value)

12—16 N·m (123—163 kgf·cm, 107—141 in·lbf)

6. Start the engine and confirm that there is no oil leakage.
 - If there is oil leakage, repair or replace the applicable part.
7. Inspect the oil level. (See [ENGINE OIL LEVEL INSPECTION \[SKYACTIV-G 1.5, SKYACTIV-G 2.0, SKYACTIV-G 2.5\]](#).)
8. Install the service hole cover.

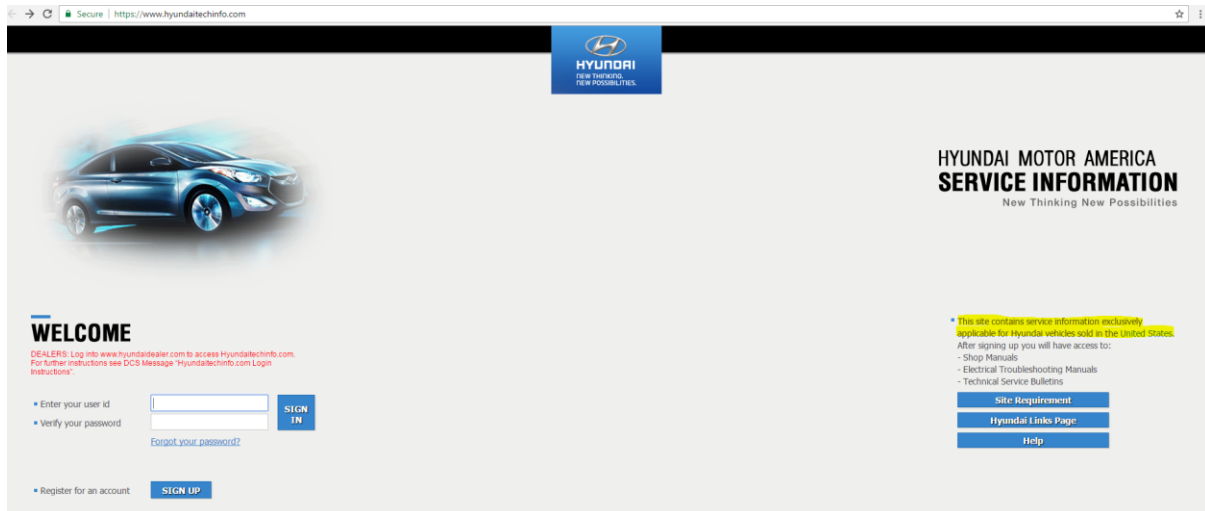
Hyundai i30 EU –

3A.



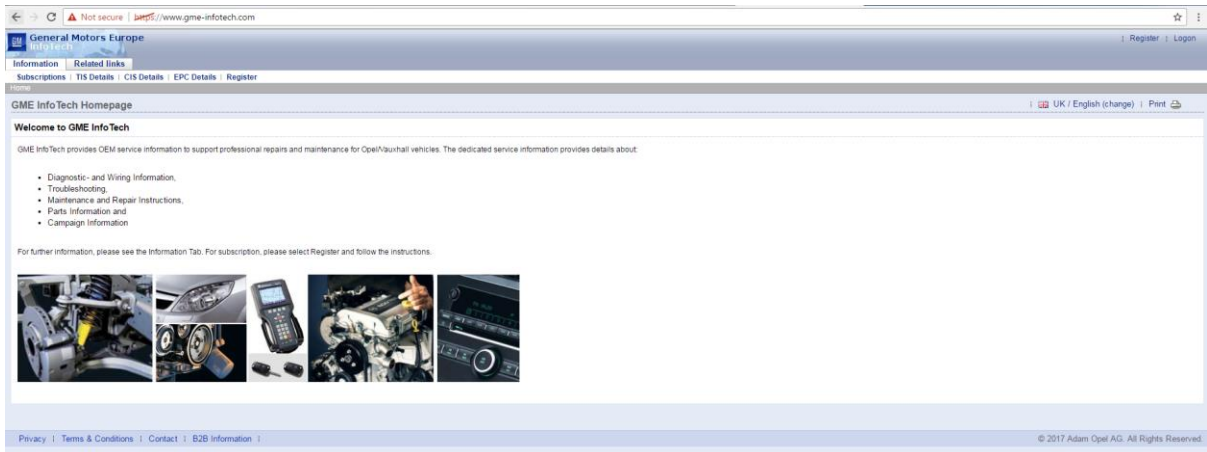
Note - i30 Marketed as Elantra in EU

3B.



GM (Holden) EU

4A.



GM (Holden) US - (not sold in US. Cadillac CTS used for purpose of exercise) –

4B.



Note - Cadillac CTS used for demonstration purposes

Holden Commodore AU –

4C.

The screenshot shows a web browser window with the URL <https://gsi.ext.gm.com/gsi/showPubSection.do?vehSysKey=100304225&pubName=VF%2FWN+-+Sedan%2C+Ute%2C+Sportwagon%2C+Caprice%2C+HSV+Service+Manual+%288764814%2>. The page title is "2016 Holden VF Sedan | VF/WN - Sedan, Ute, Sportwagon, Caprice, HSV Service Manual 8764814". Below the title, there is a search bar with the text "Search [titles] matching [all] of these keywords :". To the right of the search bar are "Search" and "Reset" buttons. Below the search bar, there are several links: "Fastener Specifications", "RPO Code List", "Maintenance Items", "Diagnostic Starting Point", "Diagnostic Trouble Code List", and "Symptom List". The main content area is titled "Select a Service Category Type:" and contains a list of service categories with expandable icons (plus signs) next to each item:

- Bulletins By Category
- View All Bulletins
- Campaigns
- Preliminary Information
- Preface
- General Information
- Body Hardware and Trim
- Body Repair
- Body Systems
- Brakes
- Diagnostic Overview, Starting Point, and Programming
- Driveline/Axle
- Driver Information and Entertainment
- Engine/Propulsion
- HVAC
- Power and Signal Distribution
- Roof
- Safety and Security
- Seats
- Steering
- Suspension
- Transmission

Ford Ranger EU –

5A.

The screenshot shows a web browser window with the FordEtis website. The browser's address bar shows the URL <https://www.ford.com.au/service>. The page features the Ford logo and the text "FordEtis". Below the logo, there is a navigation menu with the following items: "Home", "Vehicle", "Information", "Services", "FordService", and "Help". The "FordService" item is highlighted. Below the navigation menu, there is a sub-menu with the following items: "FordService Home", "Service Schedules", "Vehicle Conversions", and "Rescue Cards". The "Service Schedules" item is highlighted. Below the sub-menu, there is a heading "Service Schedule Vehicle Selection". Below the heading, there is a message: "LAST SELECTED VEHICLE - Ranger 2012 (04/2011-)".

FordService is not available for your selected Market (Australia).

Ford Ranger US –


5B.

← → C Secure | https://www.motorcraftservice.com/Home/Index

Ford SERVICE INFO.COM Log In | Contact Us | Cart (0)

Home | Service Info | Training | Key Code | Reprogramming | Diagnostic Tool Support | Free Resources

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Ford Ranger AU –


5C.

← → C Secure | https://www.motorcraftservice.com/Home/Index

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Home | Service Info | Free Resources

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MITSUBISHI MOTORS EUROPE B.V.

Welcome to the Vehicle Repair and Maintenance Information website of Mitsubishi Motors Europe. On this website you can retrieve the following information as of MY11 Mitsubishi vehicles:

vehicle identification, service handbooks, technical manuals, component and diagnosis information, wiring diagrams, diagnostic trouble codes, the software calibration identification number applicable to a vehicle type, information provided concerning, and delivered by means of, proprietary tools and equipment, data record information, two-directional monitoring, test data as well as Workshop Manual information and Training Material.

The services provided on this website will only be provided to professional users and not to consumers.

Before using the information Mitsubishi Motors strongly advises, and recommends you to carefully read the **Warning & Cautions** mentioned in the information.

You must check which Mitsubishi model(s) are available through this site before registering on and/or subscribing to this site. For models you cannot retrieve the information you require, please contact your local **Mitsubishi Motors Authorized Service Point**.

Before you will use the information from this website ensure yourself that you are technically competent to use the information correctly.



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- > [Training Material](#)
- > [Owner's Manual](#)
- > [Service Bulletins](#)
- > [Newsletters](#)
- > [ECU Reprogramming](#)
- > [On-Board Diagnostics](#)
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- > [Parts Catalogue](#)
- > [Special Tools](#)

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Mitsubishi Motors Europe



Mitsubishi Motors North A...



Last Updated Document

25-12-16 Newsletter- ENL10-018

Help Desk



[All Data](#)

Attachment 1H