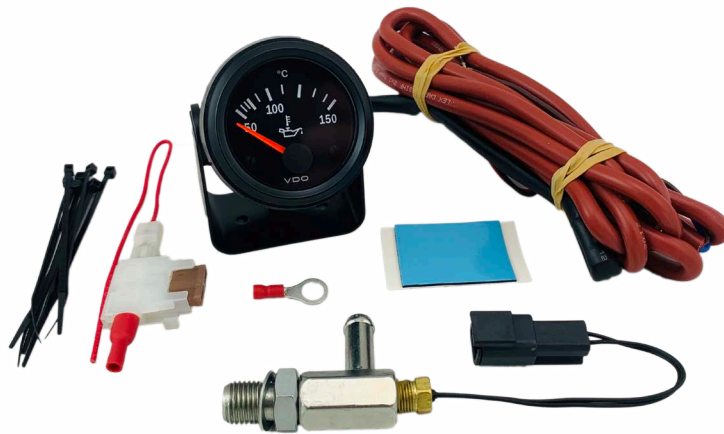




Automatic Transmission Temperature Gauge Kit



Installation Guide for the Automatic Transmission Temperature Gauge Kit

Please read through all of the instructions carefully before proceeding. If any of the information does not appear correct or the diagrams don't match your vehicle, please contact Wholesale Automatic Transmissions on +61 3 9762 8004.

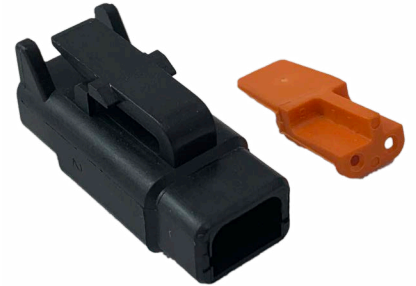
Temperature Gauge Parts List



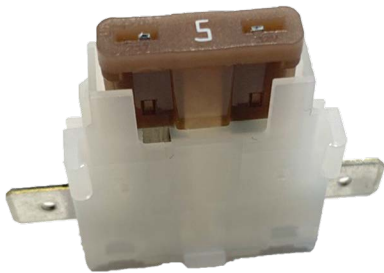
1 x Transmission temperature gauge with gauge cup and wiring



1 x Temperature sensor with Deutsch connector mounted into transmission specific union



1 x Deutsch DTM connector for temperature sensor wires



1 x Fuse holder and 5 amp fuse



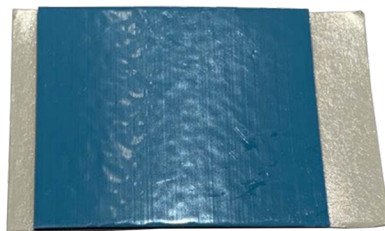
1 x Power pickup wire
1 x Red female spade terminal
1 x Red 8mm ring terminal



1 x White mounting screw



8 x Cable ties



1 x Double sided tape

Temperature Gauge Overview

The Wholesale Automatics Transmission Temperature Gauge Kit is designed to provide you with a real-time indication of the transmission's hottest temperature. We do this by providing a sensor installed into a factory cooler line union, which is mounted where the transmission oil is coming out of the torque converter at its hottest point, before it flows into the transmission cooling system. Maintaining an automatic transmission in good working order is much easier to achieve when you are able to monitor the hottest temperature it reaches.

The Transmission Temperature Gauge Kit has been supplied with all the wiring and parts required to install the gauge into your vehicle and only basic tools are needed to complete the installation. If you chose the bracket and cup version it can be mounted as a standalone gauge. If you chose the pillar version we supply the gauge and the wiring to suit mounting into a standard 52mm pillar pod.

The gauge requires a fused, ignition switched, 12v connection and a ground connection. These can be wired into an appropriate location in your vehicle. The sensor circuit needs to run through a grommet and under the vehicle to the sensor location. The sensor circuit is made from a twin core high temperature silicone wire designed to handle temperatures up to 180° C. Please do avoid proximity to your exhaust system, however, as an exhaust is likely to exceed this temperature regularly.

We have already terminated the wires that connect to the sensor however we have not inserted them into the Deutsch connector so that it is easier to run the sensor loom through a grommet and outside the vehicle. Once the wiring is in place you will need to insert the terminals into the connector and finish off by covering the wire with the supplied conduit.

Once installed the gauge will light up with the ignition and provide a real-time read out of the temperature of the transmission fluid.

If there is anything that is not clear in these instructions or the supplied union does not suit your vehicle please contact us.

Transmission Union Application Guide

6R80 Union



This union suits the following vehicles:

- Ford Ranger PX with 6 or 10 Speed
- Ford Everest UA with 6 or 10 Speed
- Mazda BT50 with 6 Speed Auto (<2020)
- Ford Ranger Next-Gen with 6 or 10 Speed
- Ford Everest UB with 6 or 10 Speed
- VW Amarok with 6 or 10 Speed

*Only available when used with an External Transmission Oil Cooler Kit

90° Barbed Union



This union suits the following vehicles:

- Toyota Land Cruiser 200 Series 1VD 6 Speed
 - Lexus LX570 with 6 Speed
 - Isuzu D-Max and MU-X 6 Speed (08/2020>)
 - Mazda BT50 6 Speed (08/2020>)
-

90° Short Union

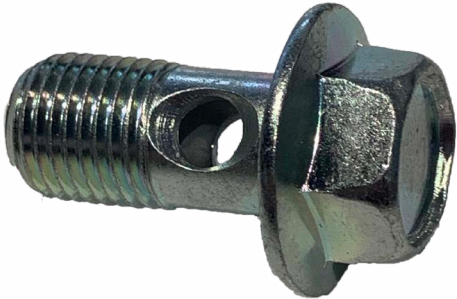


This union suits the following vehicles:

- Toyota Land Cruiser 60 Series
 - Toyota Land Cruiser UZJ100 with 5 Speed
 - Toyota Land Cruiser UZJ200 with 5 Speed
 - Toyota Land Cruiser FJA300 with 10 Speed
 - Lexus LX570 with 8 Speed
-

Transmission Union Application Guide

Nissan Banjo Bolt Union



This union suits the following vehicles:

- Nissan Patrol GQ with 4 Speed Auto
- Nissan Patrol GU with 4 Speed Auto
- Nissan Patrol GU with 5 Speed Auto
- Nissan Patrol Y62 with 7 Speed Auto
- Nissan Navara with 4 and 5 Speed Auto
- Nissan Navara with 7 Speed Auto
- Nissan Pathfinder with 4 and 5 Speed Auto

30° Short Union



This union suits the following vehicles:

- Toyota Land Cruiser GDJ79 with 6 Speed
- Toyota Land Cruiser HDJ100 with 5 Speed
- Toyota Prado 120/150 Series with 5 & 6 Speed
- Toyota Prado 120 Series 3RZ with 4 Speed
- Toyota Hilux/Fortuner with 5 & 6 Speed
- Toyota FJ Cruiser with 5 Speed
- Isuzu D-Max/MU-X with 5 & 6 Speed(<2020)
- Mitsubishi Pajero NT> & MQ Triton 5 Speed

90° Short with 2nd Conn Union



This union suits the following vehicles:

- Toyota Land Cruiser 80 Series with 4 Speed
- Toyota Land Cruiser 100 Series with 4 Speed
- Toyota Land Cruiser 105 Series with 4 Speed

Transmission Union Application Guide

30° Long with 2nd Conn Union



This union suits the following vehicles:

- Toyota Prado 120 Series 1GR with 4 Speed
- Toyota Prado 120 Series 1KZ with 4 Speed
- Toyota Prado 90 Series with 4 Speed
- Toyota Hilux Diesel with 4 Speed
- Isuzu D-Max with 4 Speed

30° Long Union



This union suits the following vehicles:

- Toyota Prado 90 Series with 4 Speed

Mitsubishi Banjo Bolt Union

16 x 1.5



This union suits the following vehicles:

- Mitsubishi Pajero NM, NP, NS with 5 Speed
- Mitsubishi Triton ML, MN with 4 & 5 Speed
- Mitsubishi Challenger with 5 Speed
- Mitsubishi MQ Triton with 5 Speed

Transmission Union Application Guide

Mitsubishi Banjo Bolt Union



14 x 1.5

This union suits the following vehicles:

- Mitsubishi MR Triton with 6 Speed
- Mitsubishi MV Triton with 6 Speed

VW Amarok End-cap & Bypass Kit



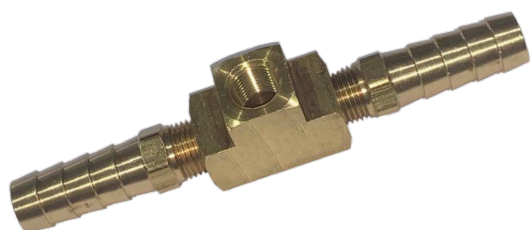
This union suits the following vehicles:

- Volkswagen Amarok with 8 Speed

Universal 3/8" Barbed Union

This union suits the following vehicles:

- Holden Colorado RG, 7 and Trailblazer
- Any vehicle with 3/8" cooler lines



Universal 5/16" Barbed Union

This union suits the following vehicles:

- Any vehicle with 5/16" cooler lines

Installation Guide

Before commencing work, please ensure that you have sufficient transmission fluid to top up the transmission at the end of the job. Please read through all of the instructions to familiarise yourself with the process first.

We recommend starting with the wiring and fitting the gauge to the vehicle first. This will allow the transmission fluid to settle for 30 minutes after driving to reduce the temperature and allow any oil in the cooler to flow back into the transmission, which will lessen the chance of injury and reduce fluid loss.

It is also highly recommended that you check the union supplied is the same as your original union. While most vehicles always use the same union, on occasion we have seen some vehicles use a different union without any reason. Please check your original union against the one supplied and if they are different, please compare your original union with the list of unions in the Union Application Guide and then contact Wholesale Automatics for assistance.

Standalone Cup Mount Installation

Find a suitable location in the vehicle to mount the gauge. We supply double sided tape to mount the gauge cup to the vehicle. We do recommend screwing the pod down to ensure it is secure, however we understand if you do not wish to permanently affix the pod to your vehicle.

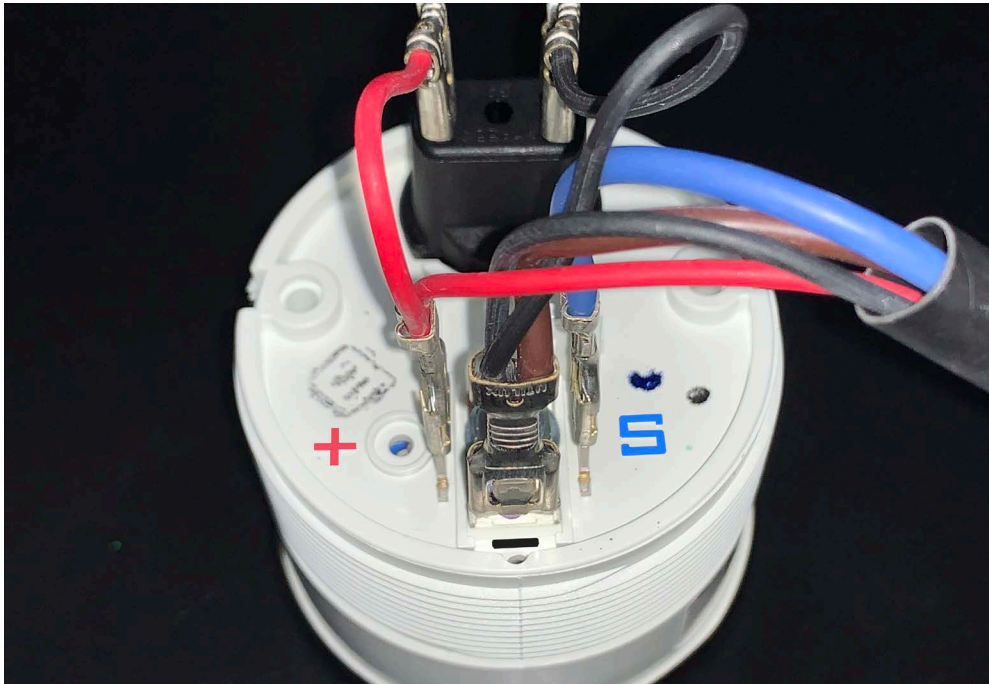
Please be aware that most plastic dashes will not provide a reliable surface for the adhesive tape only and you may find you will need to replace the double sided tape regularly.

If you need to mount the gauge in a highly visible area and you can't hide the wiring directly near the gauge there is black tubing covering the first 300mm to make the wiring less obtrusive.

Once mounted refer to the **Wiring the Gauge into the Vehicle** section for further wiring instructions

Pillar Pod Installation

If you plan to mount the gauge in a pillar pod then you will need to use the large white mounting screw (supplied). You will need to feed the wires through it during fitting. For connecting the loom to the gauge once installed, please refer to the follow image for their correct location when re-fitting.



The + , - , and S symbols on the back of the gauge are actually white, but we have highlighted them in colour in the above photo to make them easier to see.

+ is for 12v Positive Ignition Switch Power (also connected to backlight power)
- is for Vehicle Ground and Sensor Ground (also connected to backlight ground)
S is the Sensor Signal

The polarity for the backlight terminals does not matter, however we find it easiest to follow the configuration shown above.

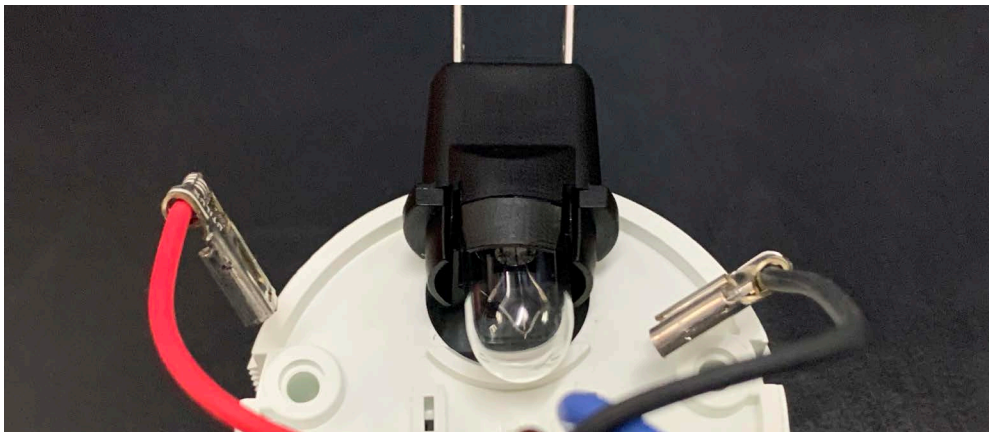
Locate the white mounting screw supplied. Feed the wires through the screw mount, then through the pod and then connect to the gauge. Insert the gauge into the pillar pod and slide the mounting screw up the back of the gauge and screw on to the gauge until it locks the gauge onto the pillar pod. Check orientation of the gauge before refitting pillar pod. Refer to the **Wiring the Gauge into the Vehicle** section for further wiring instructions.

Replacing the backlight bulb

If your gauge is installed in one of our supplied gauge pods the gauge itself will first need to be removed from the pod. These are a very tight fit and will require a lot of force, but by holding the back of the gauge pod and pulling on the rubber surround at the front it will slowly come out. Push the wiring loom through the hole at the back of the gauge pod while removing the gauge to ensure the wires aren't damaged.

If your gauge is mounted in a pillar pod you will have to release the pod from the pillar and maneuver it to a location that gives you access to the back of the gauge.

Remove the red and black wires from the rear backlight terminals. Gently push the black backlight holder towards the terminals on the gauge to 'pop' it out of the gauge.



Once removed, gently remove the burnt out bulb and replace with a new bulb. This is a low power version of the T10 wedge. Please ensure your fingers are clean when replacing this bulb- dirty or greasy fingers, or using the wrong tools, can result in premature bulb failure.

Push the backlight holder back into place and re-install the wire connectors onto the backlight terminals. Reinstall the gauge back into its mounting location.

Wiring the Gauge into the Vehicle

Locate the 2 (two) in-vehicle wires on the loom. They will exit the loom just after the black tubing.

- Red Wire Tail
- Black Wire Tail

Red Wire

Connect the red wire to a +12V ignition switched source using the supplied fuse and power pickup wire. You should be able to locate one under the dash. Please take care with late model vehicles as quite often they have wires that appear to be 12V switched but are in fact digital signal wires. If you are unsure of which wire to connect to we recommend using a qualified mechanic to install the gauge.

Black Wire

Connect the black wire to a factory earthing point on the vehicle or solder into a factory earth wire.

Temperature Signal Wires

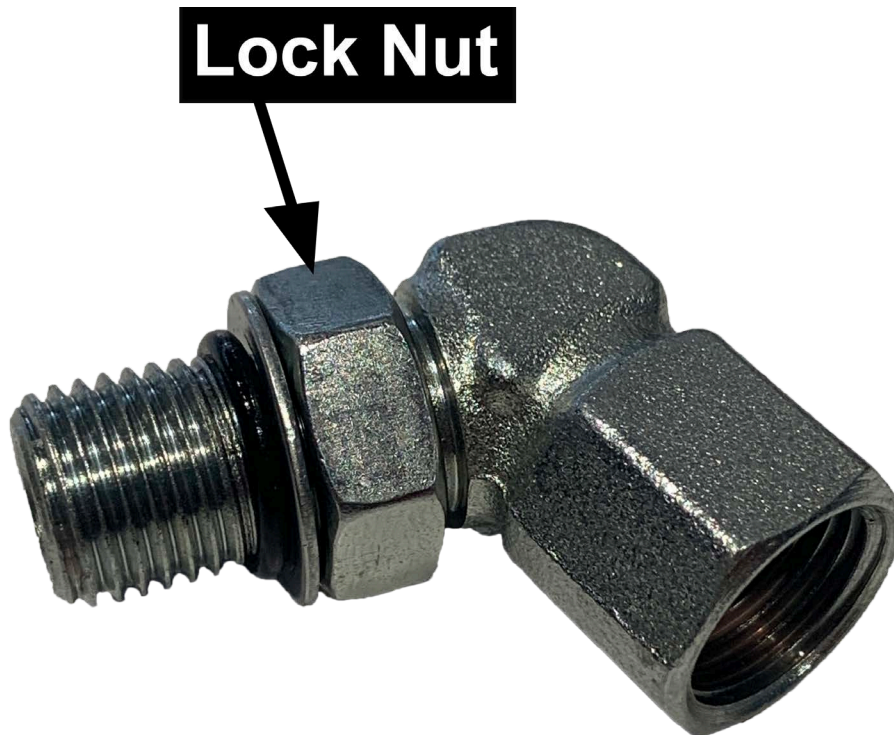
We use twin core silicone wire for the temperature signal wires because that wire is designed to handle temperatures up to 180° C. However, please avoid proximity to your exhaust system as an exhaust is likely to regularly exceed this temperature.

Run the twin core silicone wire through a convenient grommet and down to the union location on your transmission with enough slack to allow for the wire to be cable tied out of the way in a safe manner.

Replacing any Unions that have lock nuts

Please see the vehicle data list on pages 30 and 31 to know which of the two unions on your transmission that you need to replace.

Using an appropriate spanner or tool, loosen the lock nut on the transmission side of the union first.



Using an appropriate spanner or tool undo and remove the cooler line from the union and move out of the way as best as possible without bending the metal lines.

Using an appropriate spanner or tool undo and remove the original union from the transmission. Again, visually compare your original union with the supplied union to verify they are the same.

Check that the new union has the rubber o-ring installed in the same location as your original union. Add a small dab of transmission fluid to the o-ring for lubrication.

Undo the lock nut as far as possible on the supplied replacement union until it bottoms out using your fingers only. Install the new replacement union sensor into the transmission. Screw in until the rubber o-ring touches the transmission case. Unwind one turn and line up with the cooler lines.

Screw in the cooler lines and hand tighten. Using an appropriate spanner or tool, tighten the Lock Nut against the transmission to secure the union. Tighten the cooler line nut on the union.

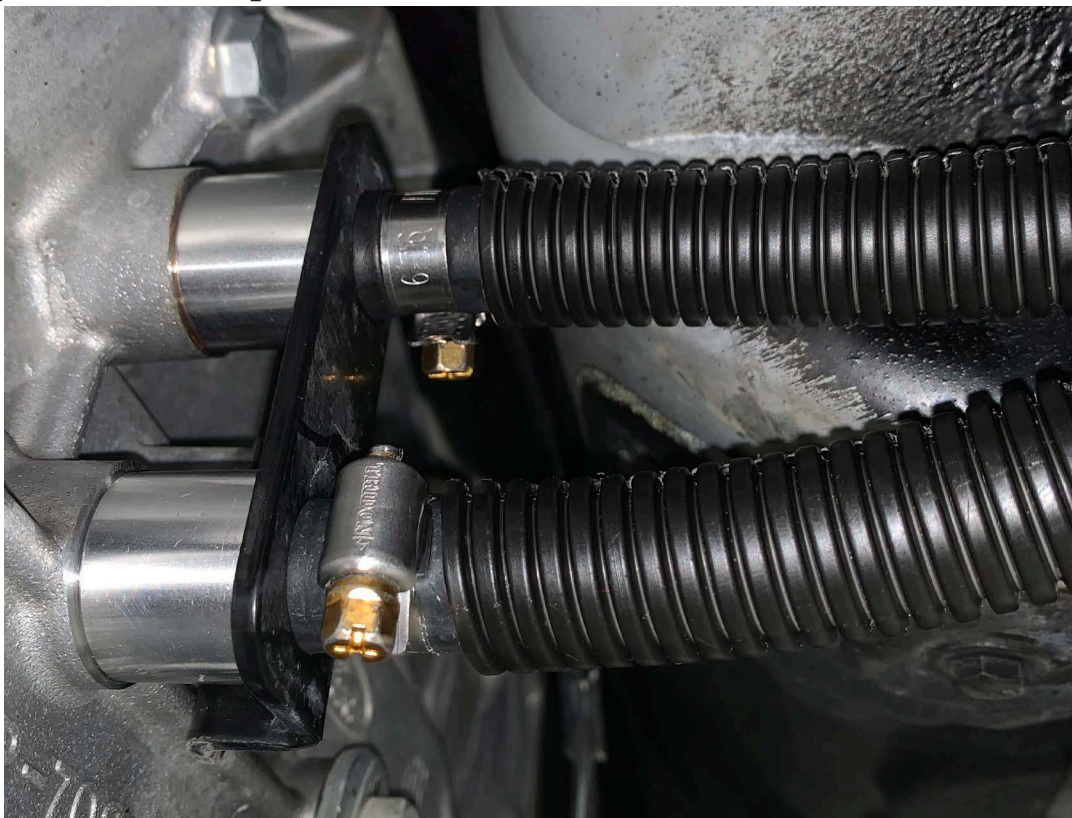
Take care when installing the union that you don't impact or break the temperature sensor or the pipe sealant used to seal the sensor thread.

Replacing 6R80/10R80 Union

Please see the vehicle data list on pages 30 and 31 to know which of the two unions on your transmission that you need to replace.

If you are fitting this temperature gauge to a Ford Ranger PX or Mazda BT50 with a 6 speed auto or a 10 speed auto you must already have our transmission cooler kit fitted. The temperature gauge kit will not work without the transmission cooler installed.

1. Remove the hose from the correct union by first removing the hose clamp. Be aware that there may be some transmission fluid leaking from the fitting after removing the hose, and we recommend having a bucket or drain pan handy to catch the drips.
 - 6 Speed 6R80 - Replace the lower union



- 10 Speed 10R80 - Replace the rear union

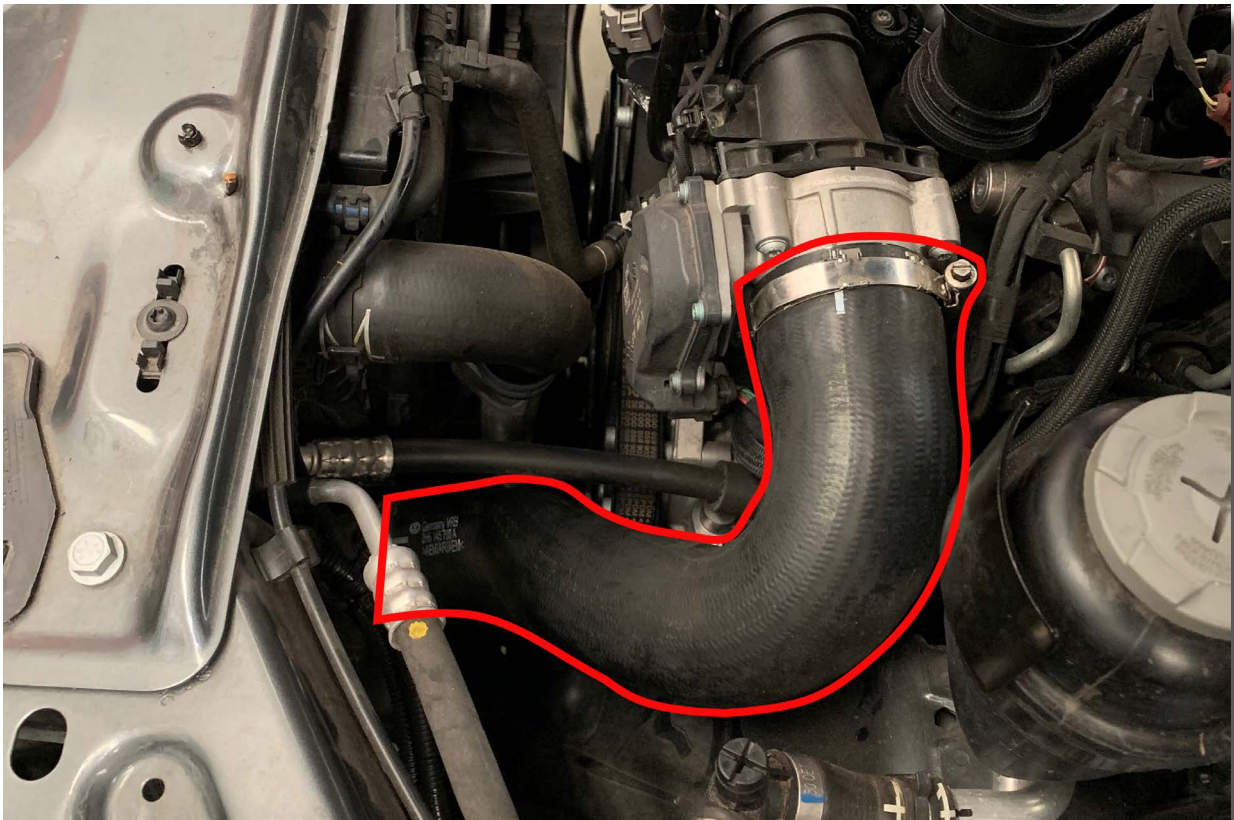


2. Remove the bolt holding the support bracket around the unions and then twist support bracket out of the way.
3. Remove the union and replace it with the supplied new union with the temperature sensor already fitted. Take care not to damage the temperature sensor during fitting.
4. Rotate the union to ensure the temperature sensor and wiring will be not get caught under the union or support bracket.
5. Refit the support bracket and re-install the bolt holding the bracket. Take care to avoid jamming the wiring under the bracket.
6. Push the cooler hose onto new union until the hose bottoms out and tighten the hose clamp.

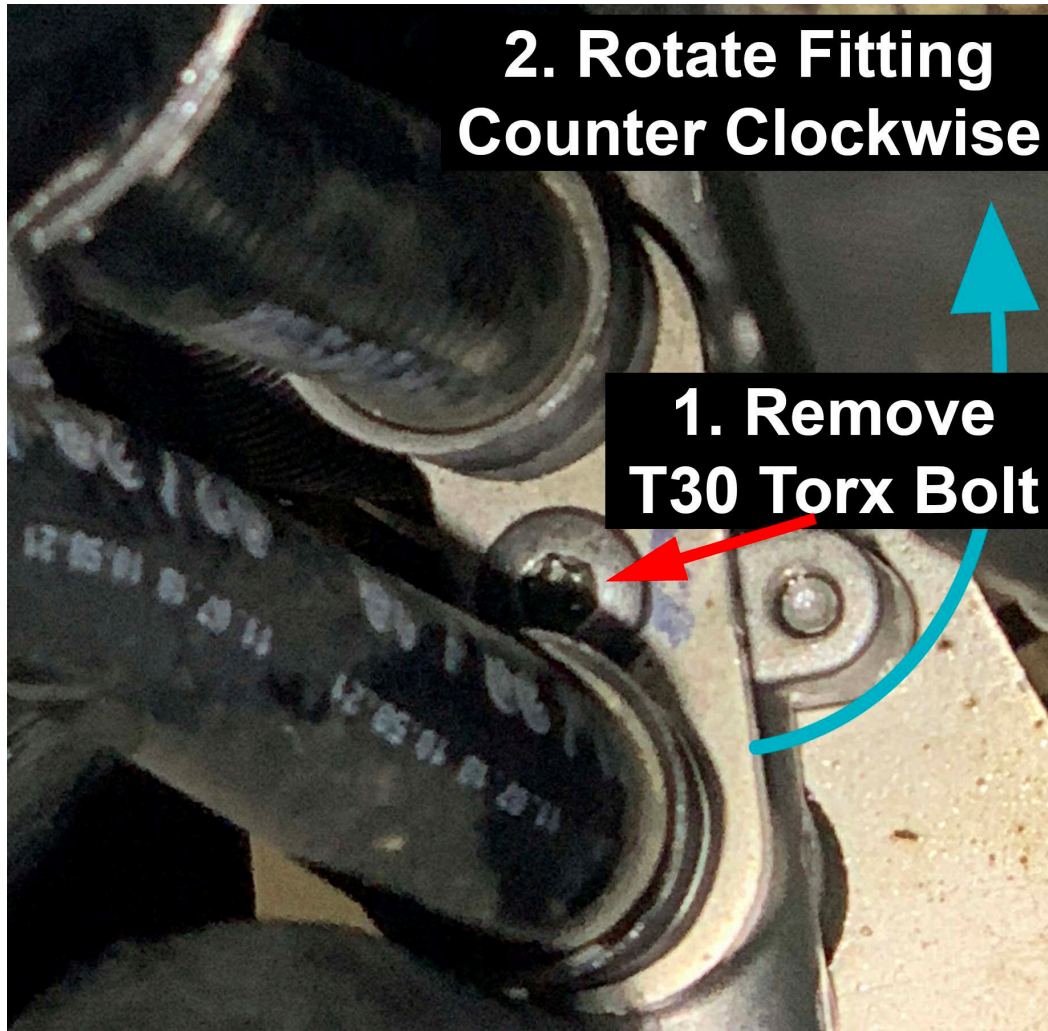
Installing the VW Amarok End-cap Replacement

The VW Amarok does not have unions like other vehicles do so we have manufactured a replacement end-cap for the thermostat housing. This allows us to install the temperature sensor into the end-cap in the correct location, with the additional benefit of removing the thermostatic bypass valve to aid in cooling the transmission.

1. Remove engine cover (if fitted) and then locate and remove the air intake pipe between inter-cooler and throttle body. Cover any intake openings to prevent foreign objects from falling in.

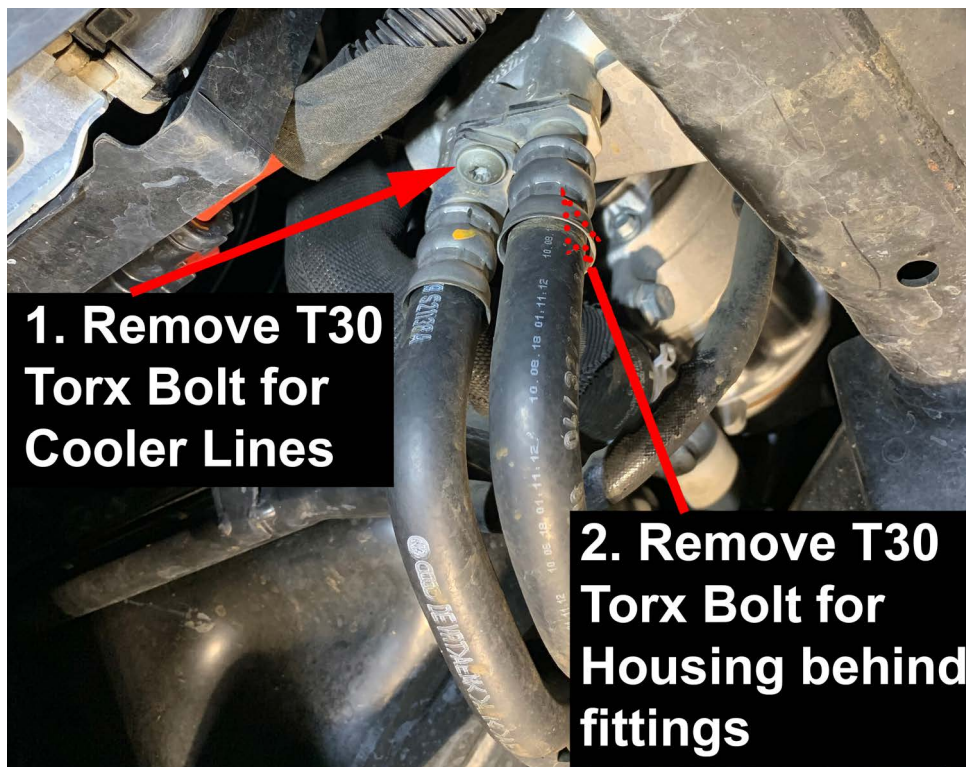


2. Remove the T30 Torx bolt in between the two upper cooler lines, then remove upper cooler lines. The line closest to the engine needs to be removed first by twisting counter-clockwise while removing.



3. Remove any bash plates under the vehicle that prevent access to the thermostat housing. The thermostat housing is mounted to the inside of the chassis rail, near the radiator and A/C compressor.
4. Remove the T30 Torx bolt that secures the two lower cooler lines, then remove lower cooler lines. The line closest to the engine is removed first.

5. Locate the second T30 Torx bolt under the thermostat housing and remove. This is the bolt that secures the thermostat housing to the chassis.



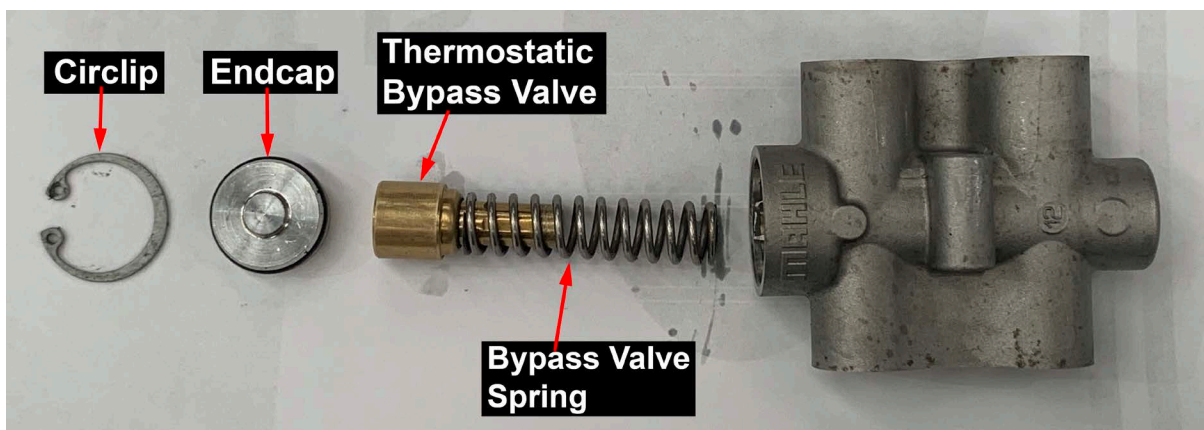
6. With the thermostat housing on the bench use a pair of circlip pliers to remove the circlip. You will need to push down on the end cap with your finger at the same time to reduce the spring pressure on the cap and allow you to remove the circlip.



7. Slowly release the pressure on the end-cap and allow it to come out. You may need to manipulate the end-cap to get it to release. Keep your hand covering the end-cap to prevent it from flying off as the internal spring is quite strong.

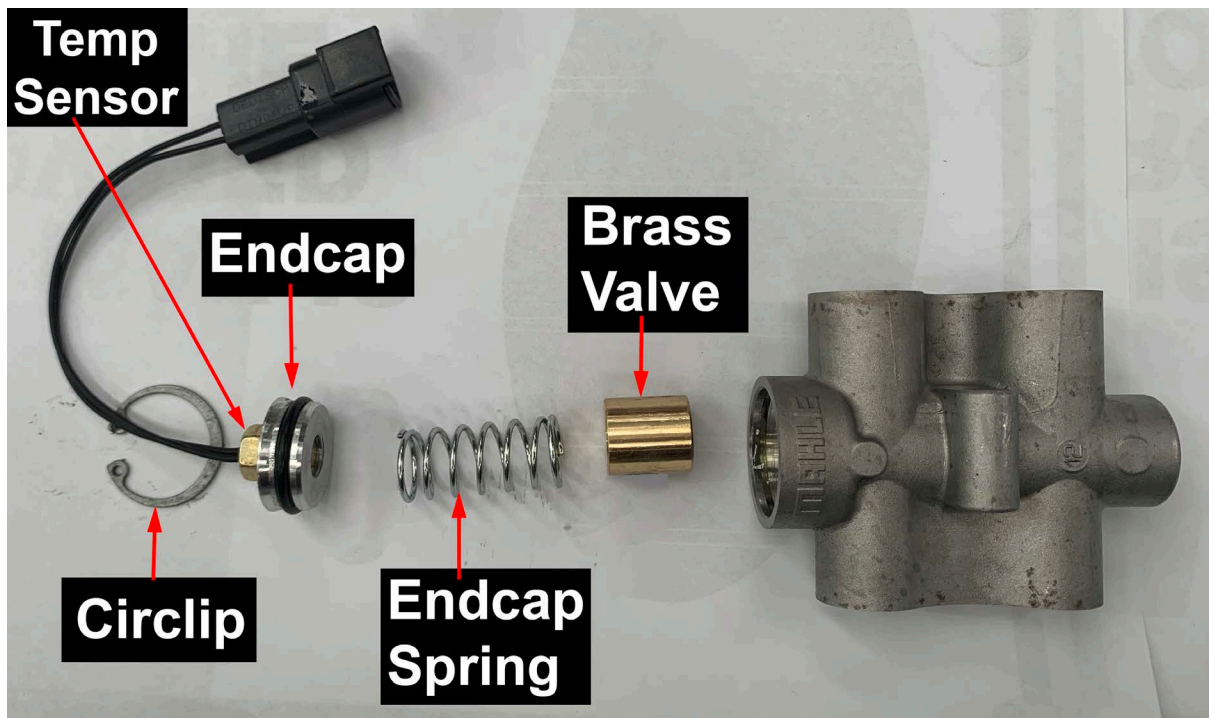


8. Remove the thermostatic bypass valve and spring. These are no longer required but may be saved if you ever wish to return to the standard configuration.



9. Replace the end cap o-ring with the supplied new o-ring

10. Insert the supplied brass valve followed by the supplied end cap spring into the now empty thermostat housing.



11. Using circlip pliers and your fingers push the end-cap down on the spring and install the circlip. Once the circlip is holding, push down on multiple locations around the circlip to ensure it is fully locked into place.
12. Reinstall the thermostat housing into the vehicle by installing the T30 Torx bolt that holds the housing to the chassis. Take care not to damage the temperature sensor, wiring or connector during installation.
13. Re-install both lower cooler lines into the lower ports on the housing. The cooler line closest to the chassis is installed first. Secure both line using the original T30 Torx bolt.
14. Re-install both upper cooler line into the upper ports of the housing. The cooler line closest to the chassis is installed first, then install the cooler line closest to the engine and rotate clockwise to lock both cooler lines. Secure with the original T30 Torx bolt.

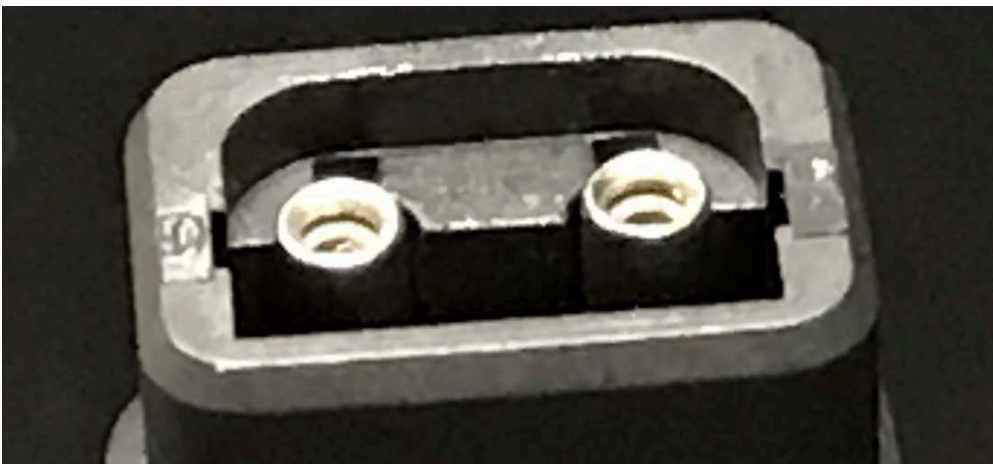
Installing Deutsch connector and connecting sensor to loom

On the end of the signal wires at the transmission end there will be two Deutsch terminals that are required to be inserted into the supplied connector. Inspect the terminals to ensure they have not been damaged during installation.

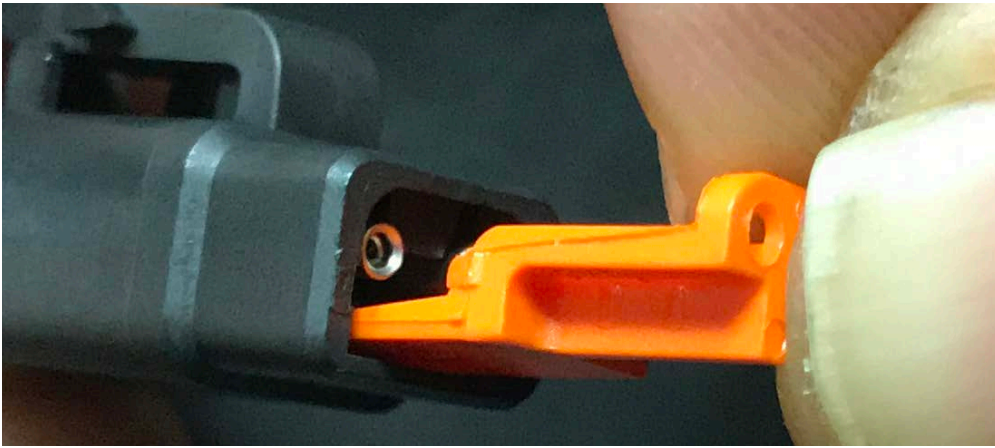
The two signal wires in the twin core silicone wire need to be inserted into the rear of the Deutsch connector until they click into place. It does not matter which pin location in the connector each wire goes into as the temperature sensor is not polarity sensitive.



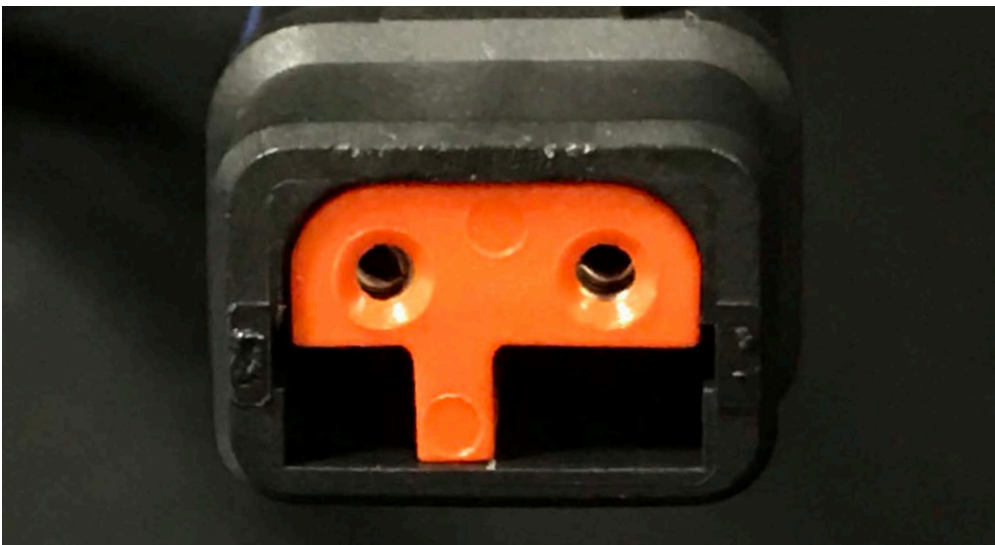
You will know the terminal is fully inserted as the tip of the terminal will be just below the end of the connector.



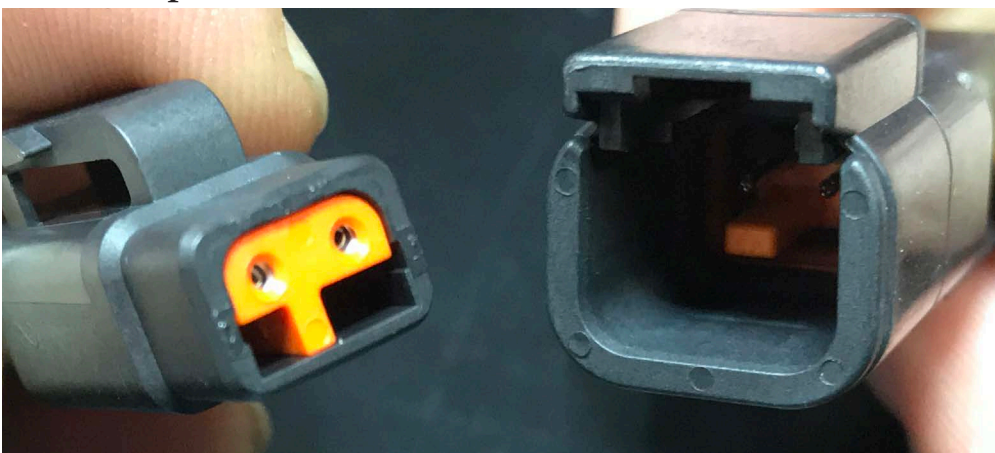
Once both terminals are fully inserted install the terminal wedge that locks both terminals into place.



When the wedge lock is fully inserted it should be flush with the end of the connector.



Connect both Deutsch connectors together by inserting the male connector (loom side) into the female connector (sensor side) until the latch on the male connector clicks into place.



If you need to disconnect them, push down on the latch and gently pull apart.



Take the opportunity now to check that the gauge lights up and you should see the needle move slightly on startup. Most likely the gauge needle won't move past 50°C (120°F) as the transmission temperature will be below this temperature and therefore will not register on the gauge.

If the needle shoots to the top of the gauge please check the trouble shooting area on pages 32 to 35 for assistance.

If the gauge appears to be working, take the time to cover any wire that is outside the vehicle cabin with conduit and then tie up all the wires both under the vehicle and inside the vehicle so they are safe from moving parts and high heat sources such as exhaust systems.

If you find any issue with the temperature gauge please refer to the troubleshooting guide for initial checks. If the troubleshooting guide is unable to help you resolve the issue please contact Wholesale Automatic Transmissions for assistance.

Transmission Fluid Level Checks

During the process of fitting the replacement union or temperature sensor it is quite likely that you have lost some transmission fluid or maybe your transmission is low on fluid before you started fitting the temperature gauge. It is extremely important that you now check the level of the transmission fluid prior to test driving to prevent transmission failure.

The three most common ways to check transmission fluid are:

- Filler tube and dipstick
- Check valve/tube in transmission pan
- Check bolt on side of transmission

Depending on your transmission manufacturer they will generally use one of the ways listed above. In the vehicle details guide at the back of this instruction we provide a list of the common vehicles we fit the transmission temperature gauges to and which of the three ways you would expect to use for that vehicle.

In all vehicles to check the transmission fluid level correctly it is recommended to adhere to the following guidelines:

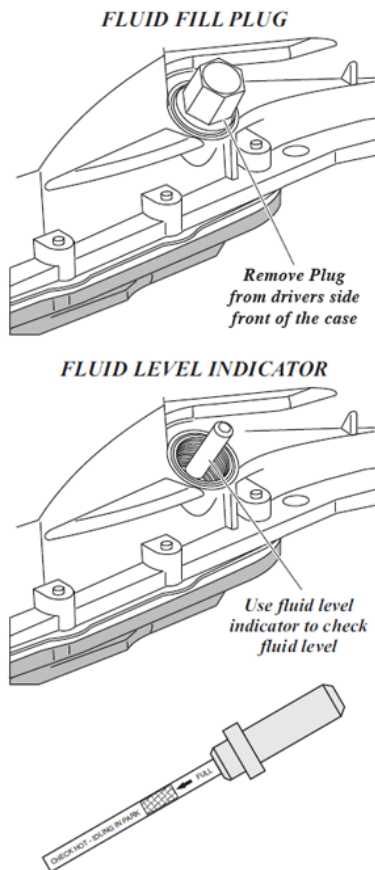
- The engine must be running.
- The transmission is in Park position.
- Transmission temperature must be at least 40° C (105°F).
- Vehicle must be on a flat surface.

1. Filler Tube and Dipstick.

Usually located in the engine bay, the filler tube and dipstick types are generally used on older vehicles (pre 2005). However, some new vehicles use a smaller version of this idea by having a mini filler hole with a dipstick located just above the pan.

With the engine bay filler tubes you will need to allow a few minutes after adding fluid to check the level as it takes time for the fluid to run all the way down to the bottom of the filler tube. If you take a measurement immediately after filling the transmission you are likely to get an incorrect reading.

Mini dipstick on side of transmission



Engine bay filler tube & dipstick



2. Check Valve/Tube

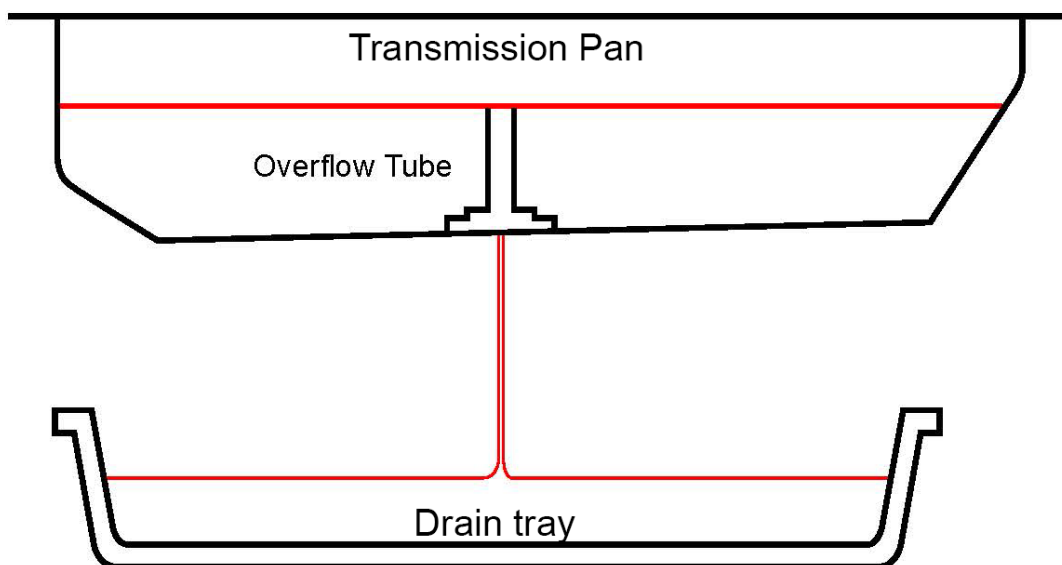
For many later model vehicles manufacturers have turned to a check tube that is welded to the inside of the pan that provides the set height for the transmission fluid at the top of the tube.

A bolt labeled 'Check' is usually located in the bottom of the tube on the bottom of the transmission pan. There is also a large bolt located on the side of the transmission, usually half way up, that is the fill location for adding transmission fluid.

With the engine running the level check process involves removing the check bolt from the transmission pan and observing what the transmission fluid is doing.

- No fluid coming out of hole = Fluid level is too low - add more fluid
- Fluid flowing out quickly = Too much fluid - let it drain
- Fluid dribbling out slowly = Correct fluid level - re-install check bolt.

Fluid level on a 'Check/Overflow Tube' style transmission

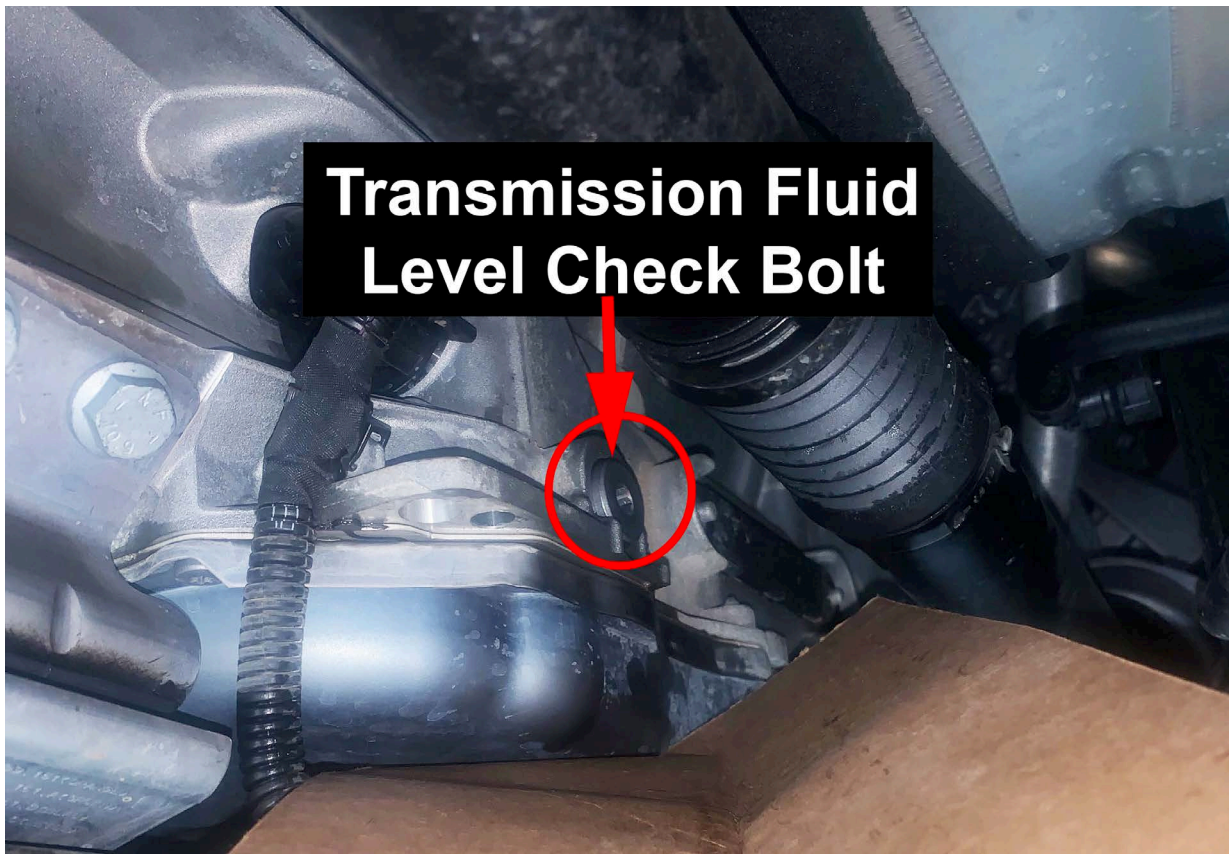


3. Check Bolt

Very similar to check valve/tube style transmissions, however these are usually located on the side of the transmission and function as both filler hole and fluid level check.

With the engine running the level check process involves removing the check bolt from the side of the transmission and observing what the transmission fluid is doing.

- No fluid coming out of hole = Fluid level is too low - add more fluid
- Fluid flowing out quickly = Too much fluid - let it drain
- Fluid dribbling out slowly = Correct fluid level - re-install check bolt.



Operation of the gauge

Celsius Gauge



Fahrenheit Gauge



In the images above you can see that we have provided a guide to the temperatures ranges on the gauge by showing them in 3 temperature zones.

Green Zone (Good) are temperatures of 50°C to 110°C (120°F to 230°F)

Orange Zone (Warm) are temperature of 110°C to 130°C (230°F to 265°F)

Red Zone (Hot) are temperatures of 130°C to 150°C (265°F to 300°F)

During normal operation of the vehicle you should find the gauge to be within the green zone. This includes when towing on flat ground and minor off road activity. If the temperature stays within the green zone this generally indicates that your transmission and cooling system are operating correctly.

If you are in a heavy load situation such as towing a caravan up a long steep hill or you are in soft sand you may find your transmission temperatures will enter the orange zone, without reaching the red zone. This is normal to see and not anything to be concerned about as long as the needle drops back to the green zone once you have reached the top of the hill or made your way through the sand.

If your transmission is regularly sitting in the orange zone or often approaches the red zone then you may have an issue with the cooling system or you may be overworking the transmission. You should seek professional advice to check if there is an issue with your transmission or cooling system.

If you are normally in the green zone but due to a heavy load situation you have moved through the orange zone and are approaching the red zone we recommend that you shift the transmission into a lower gear. For example, if you are in 4th, manually shift down into 3rd. This will reduce the load on the transmission and hopefully stop the transmission temperature from rising. If this is still not enough to stop the transmission temperature from rising then you need to find a suitable and safe location to pull over **BEFORE REACHING THE RED ZONE** to allow the transmission to cool down. Stop the vehicle, leaving the transmission in park with the engine running to help the transmission cool down faster.

Make sure you always engage low range before driving on soft sand.

If your vehicle is fitted with one of our torque converter lockup kits you can, as a last resort, back off the accelerator and apply the torque converter lockup and continue up the hill. Remember to disengage the torque converter lockup once you are over the hill to go back to normal driving.

Should you reach the red zone for any period of time we highly recommend seeking a transmission service and flush. This will flush out and replace any transmission fluid that may have been degraded due to the high temperatures.

Vehicle Data List

Vehicle	Hotline	Fluid Level
Ford Ranger PJ, PK with 5 Speed Auto	Bottom	Tube & Dipstick
Ford Ranger PK or Next-Gen Turbo Diesel with 6 Speed Auto	Bottom	Mini Dipstick
Ford Ranger PK or Next-Gen Turbo Diesel with 10 Speed Auto	Rear	Mini Dipstick
Ford F- Truck Super Duty Turbo Diesel with 4 Speed Auto	Front	Tube & Dipstick
Holden Colorado RG, Colorado 7 or Trailblazer	Top	Check Tube
Isuzu D-Max Turbo Diesel with 4 Speed Auto	Front	Tube & Dipstick
Isuzu D-Max Turbo Diesel with 5 Speed Auto	Bottom	Check Tube
Isuzu D-Max Turbo Diesel with 6 Speed Auto	Bottom	Check Tube
Isuzu MU-X Turbo Diesel with 5 Speed Auto	Bottom	Check Tube
Isuzu MU-X Turbo Diesel with 6 Speed Auto	Bottom	Check Tube
Lexus LX570 V8 Petrol with 6 Speed Auto	Bottom	Check Tube
Mazda BT50 with 5 Speed Auto	Bottom	Tube & Dipstick
Mazda BT50 Turbo Diesel with 6 Speed Auto	Bottom	Mini Dipstick
Mitsubishi Challenger Turbo Diesel with 5 Speed Auto	Rear	Tube & Dipstick
Mitsubishi Pajero NT, NW, NX Turbo Diesel with 5 Speed Auto	Bottom	Check Tube
Mitsubishi Pajero NM, NP, NS with 5 Speed Auto	Rear	Tube & Dipstick
Mitsubishi Triton ML, MN with 5 Speed Auto	Rear	Tube & Dipstick
Mitsubishi Triton MQ with 5 Speed Auto	Rear	Check Tube
Mitsubishi Triton ML, MN with 4 Speed Auto	Rear	Tube & Dipstick
Mitsubishi Triton MR, MV with 6 Speed Auto	Bottom	Check Tube
Nissan Navara D22 and Pathfinder R50 with 4 Speed Auto	Drivers	Tube & Dipstick
Nissan Navara D40 and Pathfinder R51 with 5 Speed Auto	Front	Tube & Dipstick
Nissan Navara STX-550 with 7 Speed Auto	Front	Check Tube

Vehicle	Hotline	Fluid Level
Nissan Patrol GQ and GU with 4 Speed Auto	Drivers	Tube & Dipstick
Nissan Patrol GU Petrol with 5 Speed Auto	Front	Tube & Dipstick
Nissan Patrol Y62 V8 Petrol with 7 Speed Auto	Front	Check Tube
Toyota FJ Cruiser with 5 Speed Auto	Bottom	Check Tube
Toyota Fortuner with 6 Speed Auto	Bottom	Check Tube
Toyota Hilux with 4 Speed Auto	Front	Tube & Dipstick
Toyota Hilux with 5 and 6 Speed Auto	Bottom	Check Tube
Toyota Land Cruiser 60 Series with 4 Speed Auto	Front	Tube & Dipstick
Toyota Land Cruiser 79 Series 2.8L with 6 Speed Auto	Bottom	Check Tube
Toyota Land Cruiser 80 Series with 4 Speed Auto	Front	Tube & Dipstick
Toyota Land Cruiser 100 Series with 4 Speed Auto	Front	Tube & Dipstick
Toyota Land Cruiser 100 Series with 5 Speed Auto (2002-2003)	Bottom	Tube & Dipstick
Toyota Land Cruiser 100 Series with 5 Speed Auto (2003-2006)	Bottom	Check Tube
Toyota Land Cruiser 200 Series with 5 Speed Auto	Bottom	Check Tube
Toyota Land Cruiser 200 Series with 6 Speed Auto	Bottom	Check Tube
Toyota Land Cruiser 300 Series with 10 Speed Auto	Bottom	Check Tube
Toyota Prado 90 Series with 4 Speed Auto	Front	Tube & Dipstick
Toyota Prado 120 Series with 4 Speed Auto	Bottom	Tube & Dipstick
Toyota Prado 120 Series with 5 Speed Auto	Bottom	Check Tube
Toyota Prado 150 Series with 5 Speed Auto	Bottom	Check Tube
Toyota Prado 150 Series with 6 Speed Auto	Bottom	Check Tube
Volkswagen Amarok with 6 Speed Auto	Bottom	Mini Dipstick
Volkswagen Amarok with 8 Speed Auto	End-cap	Check Bolt
Volkswagen Amarok with 10 Speed Auto	Rear	Mini Dipstick

Trouble Shooting Installation

Symptom

Temperature gauge quickly shoots up to 150°C when ever the gauge is powered and connected to the sensor. Disconnecting the sensor sees the gauge return to 50°C.

Possible Cause

Most likely caused by the signal wire being shorted to ground.

Try This

Possible Solution 1

Check continuity between the blue wire and ground. If you get continuity, look for damage to the twin core signal wires somewhere that is shorting to ground.

Possible Solution 2

Check the connection on the back of the gauge (page 9) to verify everything is installed correctly.

Possible Solution 3

Disconnect the temperature sensor at the Deutsch connector. If the gauge returns to 50° when the temperature sensor is disconnected, we need to check the temperature sensor resistance using a multimeter. The resistance of the sensor will be based on the temperature the sensor is reading at that time. To test the sensor, use a multimeter in resistance mode and connect a probe to each terminal in the Deutsch connector of the sensor. You will need a temperature probe or thermometer to know the temperature of the sensor first.

The polarity does not matter. The resistance should be approximately:

1500 ohms at 20° C

580 ohms at 35° C

292 ohms at 50° C

Symptom

Temperature gauge rises slowly up to 150°C when ever the sensor is connector.

Possible Cause

Most likely caused by an issue in the gauge.

Try this

Disconnect the temperature sensor at the Deutsch connector. If the gauge returns to 50° slowly when the temperature sensor is disconnected, we need to check the temperature sensor resistance using a multimeter. The resistance of the sensor will be based on the temperature the sensor is reading at that time. To test the sensor, use a multimeter in resistance mode and connect a probe to each terminal in the Deutsch connector of the sensor. You will need a temperature probe or thermometer to know the temperature of the sensor first.

The polarity does not matter. The resistance should be approximately:

1500 ohms at 20° C

580 ohms at 35° C

292 ohms at 50° C

If the resistance of the sensor is close to the above values then it is likely that the gauge itself has a fault. Contact Wholesale Automatics for further instructions.

Symptom

Temperature appears to be very low all the time. Even when the vehicle is working hard the temperature seems to only fluctuate a small amount.

Possible Cause

Most likely caused by the replacement union has been installed into the wrong location. As there are two unions on a transmission, one will be the hot line heading to the cooler, the other will be the cold line coming back from the cooler.

Try this

Swap the union with the temperature sensor to the other line and test again. Also refer to the vehicle data list on pages 30 and 31 for assistance.

Symptom

The needle moves but the gauge isn't visible during the night.

Possible Cause

Most likely caused by the globe in the gauge being blown

Try This

Refer to 'Changing the backlight bulb on page 10 for instructions on how to change the backlight bulb.

This completes the installation of the Analogue Transmission Temperature Gauge Kit

Please remember ALL automatic transmissions have a service interval of 2 years or 40,000km to improve the longevity of the transmission.

If you have a moment to spare, we would greatly appreciate your feedback about the kit and the installation process.

Use the camera app on your smart device to scan the QR code below to take you to our Feedback page on our website.

