

NISSAN RE6R01A (A466) PRELIMINARY INFORMATION

The RE6R01A (A466) was produced by Aisin in Japan and is currently being used in the 2015 to 2021 Nissan Titan XD when equipped with the 5.0 Liter Turbo Diesel engine only. This transmission may look very much like the AS68RC (A465) because it is a variant of this transmission, however, it is a combination of the AS68RC and the AS69RC.

Although the RE6R01A functions like the AS units, some components are the same as the AS68RC and some are a variation of both AS transmissions. Components such as the K1, K2, K3 and B1 clutch are the same as the 2012 and later AS68RC. The B2 clutch is similar and like the AS69RC the one-way clutch has been eliminated which leaves shift duties to five clutch packs.

Planetary gear sets are the same as the 2012 and later AS68RC however the valve body is the same as the 2013 and later AS69RC. The transmission fluid pump design is a combination of both AS units.

The torque converter uses the same spline count as the AS68RC but contains a smaller friction surface in order to fit into the smaller bell housing, it uses six mounting pads to connect to the flexplate. Industry experts advise against increasing the 5.0 diesels power due to possible durability issues.

The RE6R01A uses the same sensor and solenoid array as well as the two connector arrangement that the AS units use to connect to the internal electrical components.

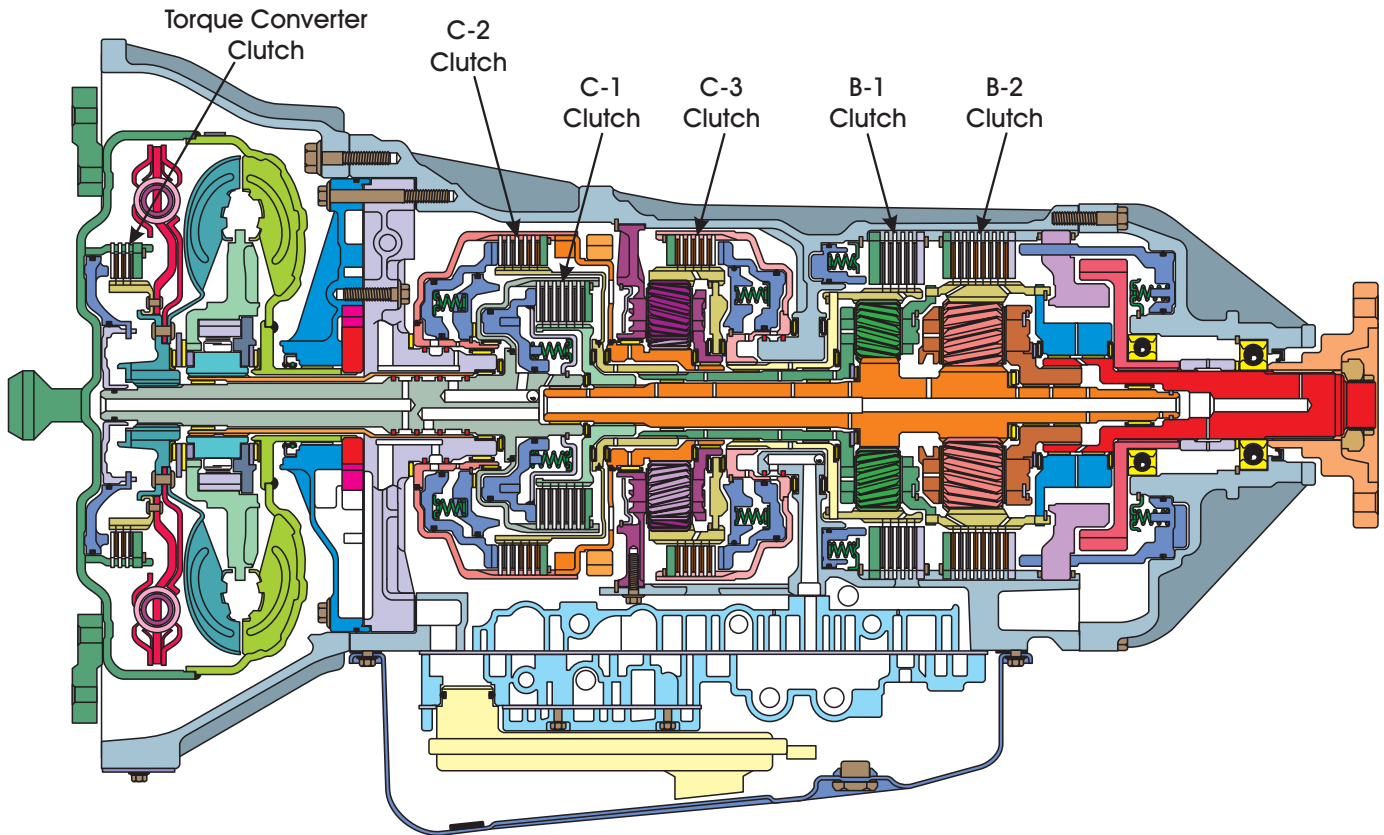


Figure 1

NISSAN RE6R01A (A466)

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RE6R01A INTERNAL COMPONENT IDENTIFICATION AND LOCATION



COMPONENT APPLICATION CHART

RANGE	C-1 Clutch	C-2 Clutch	C-3 Clutch	B-1 Clutch	B-2 Clutch		Torq Conv Clutch	Gear Ratio
Park					On			
Reverse			On		On			3.54
Neutral					On			
"D"-1st	On				On			3.74
"D"-2nd	On			On			Applied*	2.00
"D"-3rd	On		On				Applied*	1.34
"D"-4th	On	On					Applied*	1.00
"D"-5th		On	On				Applied*	0.77
"D"-6th		On		On			Applied*	0.63

* TCC is available in 2nd thru 6th gear, based on throttle position, fluid temp and vehicle speed. TCC can be applied as early as 15 MPH, with release occurring at 11 MPH.

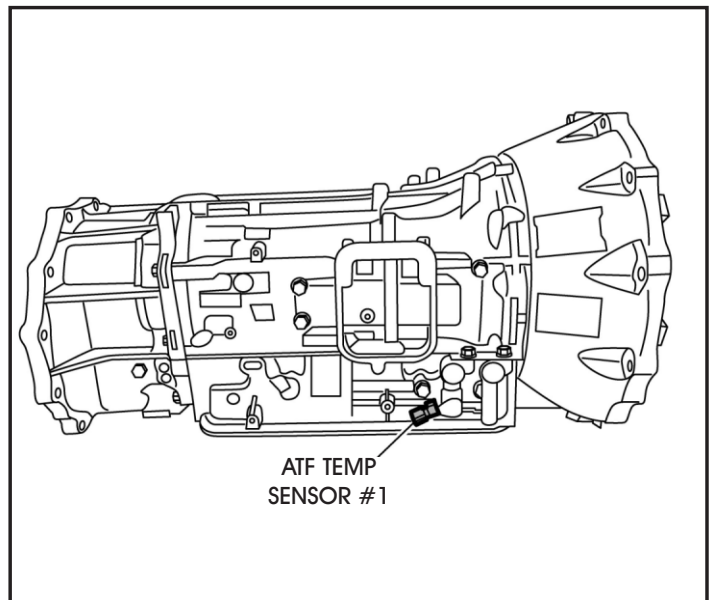
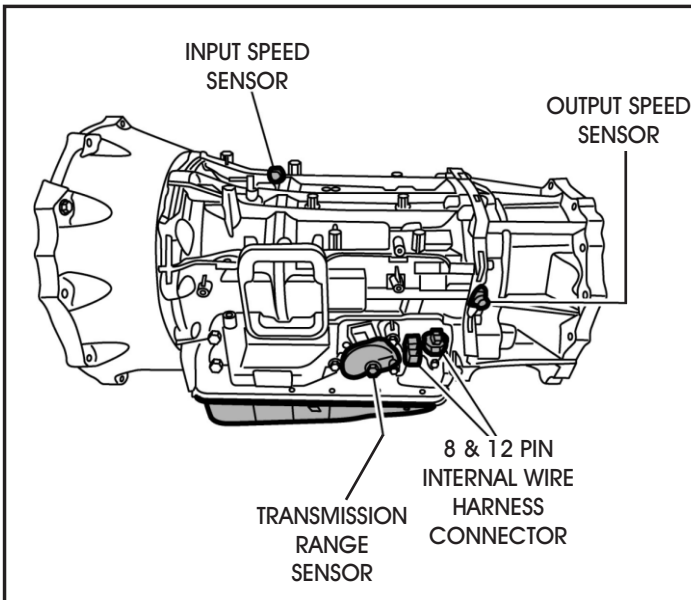
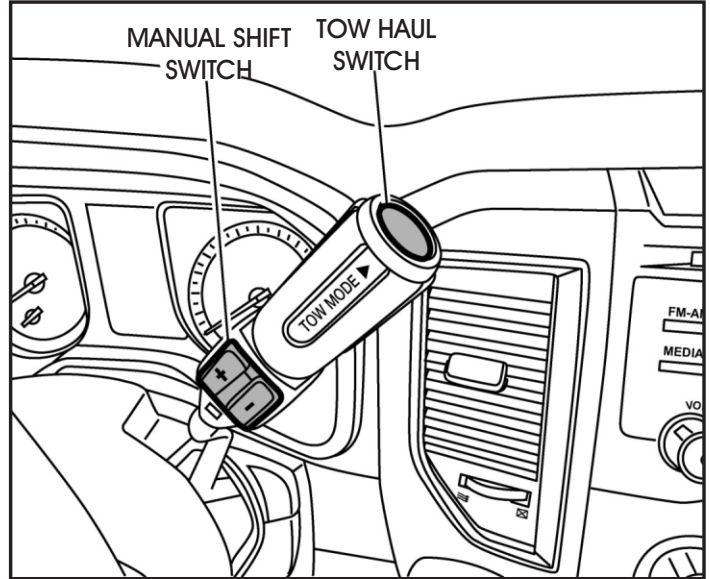
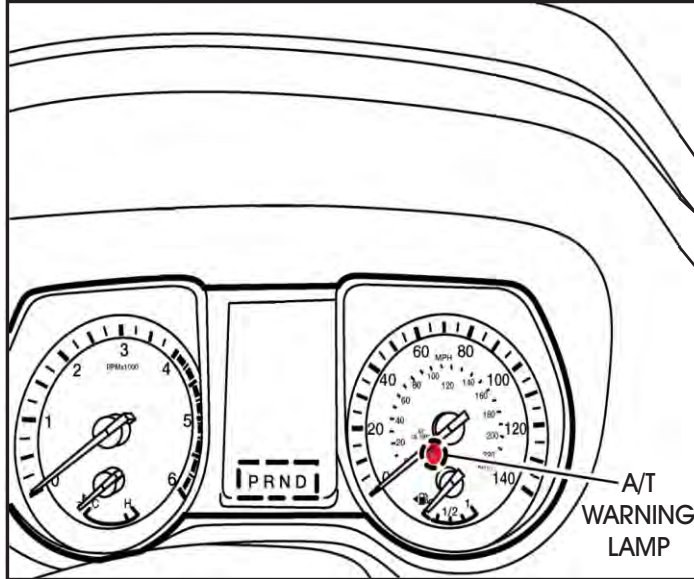
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Figure 2

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RE6R01A ELECTRICAL COMPONENT LOCATION



The TCM is located under the gash on the driver side.

ATF Temp Sensor #2 is located on the valve body.

There is only one pressure switch located on the valve body which informs the TCM when the B2 clutch circuit is charged.

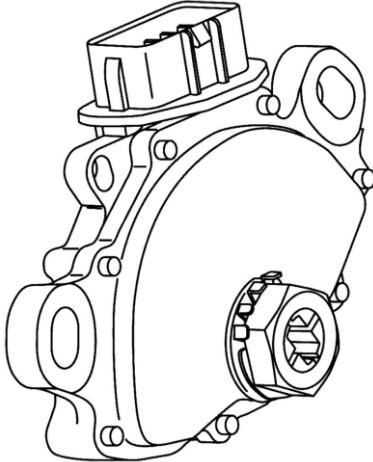
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Figure 3

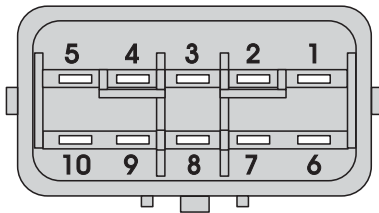
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RE6R01A TRANSMISSION RANGE SENSOR



Transmission Range Switch Logic				
Gear Select Lever Position	Transmission Range Switch Position			
	Range A (SW1)	Range B (SW2)	Range C (SW3)	Range PA (SW4)
P	ON	OFF	OFF	ON
Between P & R	ON	ON	OFF	ON
R	ON	ON	OFF	OFF
Between R & N	ON	ON	OFF	ON
N	OFF	ON	OFF	ON
Between N & D	OFF	ON	ON	ON
D	OFF	ON	ON	OFF



10-Way Transmission Range Switch Connector	
Terminal	Function
1	Transmission Range Switch "C"
2	Transmission Range Switch "B"
3	12 Volt Power Supply From Ignition
4	Transmission Range Switch "PA"
5	Transmission Range Switch "A"
6	12 Volt Power Supply From Battery
7	Transmission Range Switch Reverse
8	Neutral Park Start From Relay
9	Ignition Relay
10	Not Used

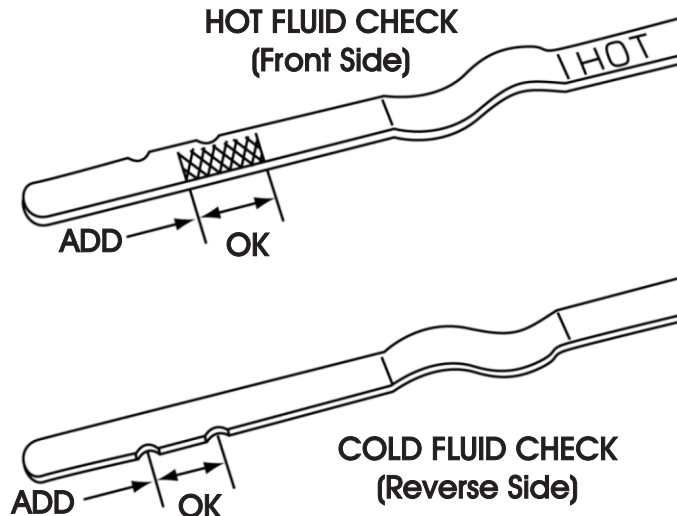
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Figure 4

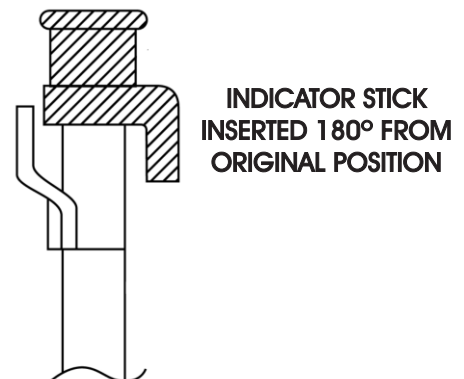
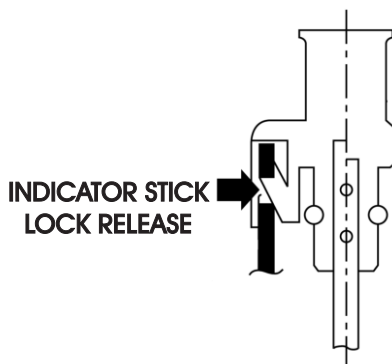
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RE6R01A TRANSMISSION FLUID LEVEL CHECK PROCEDURE



1. Before driving, check the cold transmission fluid level with the transmission temperature between 86°F to 122°F (30°C to 50°C) using the "Cold" range on the reverse side of the indicator stick as seen above.
2. With the vehicle on level ground, start the engine and move the gear selector lever through all gear positions ending up in park.
3. With the engine idling, pull the indicator stick out of the filler tube after pressing the release lock in the direction shown below left ➡ and wipe clean.
4. Reinsert stick rotating it 180° from its originally installed position as seen below right.
5. With the transmission fluid temperature between 122°F to 176°F using the "Hot" range on the indicator stick as seen above, remove stick and note fluid level.
6. The fluid level should be in the cross hatch area of the indicator stick which indicates the fluid level is correct. Reinstall indicator stick into filler tube in its original position.
7. Be sure to use Nissanmatic K or J transmission fluid or a suitable substitute.
8. Fluid capacities are as follows:
Service Fill - 7.5 Qts. (6.8 Liters)
Overhaul Fill - 14.75 Qts. (14 Liters)



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