

5. Stall Test

A: INSPECTION

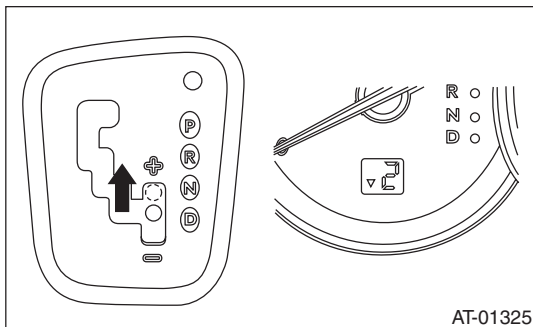
NOTE:

The stall test is of extreme importance in diagnosing the condition of automatic transmission and engine. It should be conducted to measure the engine stall speeds in "R" and "2nd of manual mode".

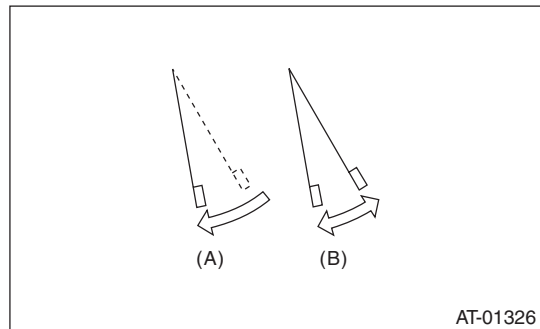
Purposes of the stall test:

- To check the operation of automatic transmission clutch.
- To check the operation of torque converter clutch.
- To check engine performance.

- 1) Check that the throttle valve opens fully.
- 2) Check that the engine oil level is correct.
- 3) Check that the coolant level is correct.
- 4) Check that the ATF level is correct.
- 5) Check that the differential gear oil level is correct.
- 6) Raise the ATF temperature by driving a distance of 5 to 10 km (3 to 6 miles). Otherwise, idle the engine to raise ATF temperature to 70 to 80°C (158 to 176°F) on Subaru Select Monitor. <Ref. to 5AT(diag)-16, READ CURRENT DATA, OPERATION, Subaru Select Monitor.>
- 7) Place the wheel chocks at the front and rear of all wheels and engage the parking brake.
- 8) Move the manual linkage to ensure it operates properly, and then set "2nd on manual mode".



- 9) While forcibly depressing the foot brake pedal, gradually depress the accelerator pedal until the engine operates at full throttle.



- (A) Brake pedal
(B) Accelerator pedal

- 10) When the engine speed is stabilized, quickly record that speed and release the accelerator pedal.
- 11) Shift the select lever to "N" range, and cool down the engine by idling it for more than one minute.
- 12) Perform the procedure for "R" range in the same way as "2nd on manual mode".

NOTE:

- Do not continue the stall test for MORE THAN FIVE SECONDS at a time (from fully closed throttle to fully open throttle until stall speed reading). Engine oil and ATF to deteriorate and the clutch and brake to be adversely affected.
- Be sure to cool down the engine for at least one minute with the select lever set in "P" or "N" range and with the idle speed lower than 1,200 rpm after performing stall test.
- If the stall speed is higher than the specified range, attempt to finish the stall test in as short a time as possible, in order to prevent the automatic transmission from sustaining damage.

Stall speed (at sea level):

TURBO MODEL

3,100 — 3,500 rpm

NON-TURBO MODEL

2,400 — 2,800 rpm

Stall Test

AUTOMATIC TRANSMISSION

Stall speed (at sea level)	Range	Possible faulty part
Less than standard	R	<ul style="list-style-type: none"> • Engine • One-way clutch of the torque converter clutch
More than standard	2nd gear of manual mode	<ul style="list-style-type: none"> • Line pressure too low • Forward brake • Forward brake one-way clutch • Direct clutch • 3rd one-way clutch
	R	<ul style="list-style-type: none"> • Line pressure too low • Reverse clutch
Within specifications	2nd gear of manual mode	<ul style="list-style-type: none"> • Reverse clutch • One-way clutch of the torque converter
	R	<ul style="list-style-type: none"> • Forward brake • Forward brake one-way clutch • Direct clutch • 3rd one-way clutch • One-way clutch of the torque converter