

SYMPTOM RELATED DIAGNOSTIC

Automatic Transmission (Diagnostics)

16. Symptom Related Diagnostic S004519

A: INSPECTION S004519A10

Symptom	Problem parts
Starter does not rotate when the select lever is in "P" or "N"; starter rotates when the select lever is in "R", "D", "3" or "2".	<ul style="list-style-type: none"> ● Inhibitor switch ● Select cable ● Select lever ● Starter motor and harness
Abnormal noise when the select lever is in "P" or "N".	<ul style="list-style-type: none"> ● Strainer ● Transfer duty solenoid ● Oil pump ● Drive plate ● ATF level too high or too low
Hissing noise occurs during standing start.	<ul style="list-style-type: none"> ● Strainer ● ATF level too high or too low
Noise occurs while driving in "D1".	<ul style="list-style-type: none"> ● Final gear ● Planetary gear ● Reduction gear ● Differential gear oil level too high or too low
Noise occurs while driving in "D2".	
Noise occurs while driving in "D3".	<ul style="list-style-type: none"> ● Final gear ● Low & reverse brake ● Reduction gear ● Differential gear oil level too high or too low
Noise occurs while driving in "D4".	<ul style="list-style-type: none"> ● Final gear ● Low & reverse brake ● Planetary gear ● Reduction gear ● Differential gear oil level too high or too low
Engine stalls while shifting from one range to another.	<ul style="list-style-type: none"> ● Control valve ● Lock-up damper ● Engine performance ● Input shaft
Vehicle moves when the select lever is in "N".	<ul style="list-style-type: none"> ● TCM ● Low clutch
Shock occurs when the select lever is moved from "N" to "D".	<ul style="list-style-type: none"> ● TCM ● Harness ● Control valve ● ATF deterioration
Excessive time lag occurs when the select lever is moved from "N" to "D".	<ul style="list-style-type: none"> ● Control valve ● Low clutch ● Line pressure duty solenoid ● Seal ring ● Front gasket transmission case
Shock occurs when the select lever is moved from "N" to "R".	<ul style="list-style-type: none"> ● TCM ● Harness ● Control valve ● ATF deterioration
Excessive time lag occurs when the select lever is moved from "N" to "R".	<ul style="list-style-type: none"> ● Control valve ● Low & reverse clutch ● Reverse clutch ● Line pressure duty solenoid ● Seal ring ● Front gasket transmission case
Vehicle does not start in any shift range (engine stalls).	<ul style="list-style-type: none"> ● Parking brake mechanism ● Planetary gear

SYMPTOM RELATED DIAGNOSTIC

Automatic Transmission (Diagnostics)

Symptom	Problem parts
Vehicle does not start in any shift range (engine revving up).	<ul style="list-style-type: none"> ● Strainer ● Line pressure duty solenoid ● Control valve ● Drive pinion ● Hypoid gear ● Axle shaft ● Differential gear ● Oil pump ● Input shaft ● Output shaft ● Planetary gear ● Drive plate ● ATF level too low ● Front gasket transmission case
Vehicle does not start in "R" range only (engine revving up).	<ul style="list-style-type: none"> ● Select cable ● Select lever ● Control valve ● Low & reverse clutch ● Reverse clutch
Vehicle does not start in "R" range only (engine stalls).	<ul style="list-style-type: none"> ● Low clutch ● 2-4 brake ● Planetary gear ● Parking brake mechanism
Vehicle does not start in "D", "3" range only (engine revving up).	<ul style="list-style-type: none"> ● Low clutch ● One-way clutch
Vehicle does not start in "D", "3" or "2" range only (engine revving up).	<ul style="list-style-type: none"> ● Low clutch
Vehicle does not start in "D", "3" or "2" range only (engine stalls).	<ul style="list-style-type: none"> ● Reverse clutch
Vehicle starts in "R" range only (engine revving up).	<ul style="list-style-type: none"> ● Control valve
Acceleration during standing starts is poor (high stall rpm).	<ul style="list-style-type: none"> ● Control valve ● Low clutch ● Reverse clutch ● ATF level too low ● Front gasket transmission case ● Differential gear oil level too high or too low
Acceleration during standing starts is poor (low stall rpm).	<ul style="list-style-type: none"> ● Oil pump ● Torque converter one-way clutch ● Engine performance
Acceleration is poor when the select lever is in "D", "3" or "2" range (normal stall rpm).	<ul style="list-style-type: none"> ● TCM ● Control valve ● High clutch ● 2-4 brake ● Planetary gear
Acceleration is poor when the select lever is in "R" (normal stall rpm).	<ul style="list-style-type: none"> ● Control valve ● High clutch ● 2-4 brake ● Planetary gear
No shift occurs from 1st to 2nd gear.	<ul style="list-style-type: none"> ● TCM ● Rear vehicle speed sensor ● Front vehicle speed sensor ● Throttle position sensor ● Shift solenoid 1 ● Control valve ● 2-4 brake
No shift occurs from 2nd to 3rd gear.	<ul style="list-style-type: none"> ● TCM ● Control valve ● High clutch ● Shift solenoid 2

SYMPTOM RELATED DIAGNOSTIC

Automatic Transmission (Diagnostics)

Symptom	Problem parts
No shift occurs from 3rd to 4th gear.	<ul style="list-style-type: none"> ● TCM ● Shift solenoid 1 ● ATF temperature sensor ● Control valve ● 2-4 brake
Engine brake is not effected when the select lever is in "3" range.	<ul style="list-style-type: none"> ● Inhibitor switch ● TCM ● Throttle position sensor ● Control valve
Engine brake is not effected when the select lever is in "3" or "2" range.	<ul style="list-style-type: none"> ● Control valve
Engine brake is not effected when the select lever is in "1" range.	<ul style="list-style-type: none"> ● Control valve ● Low & reverse brake
Shift characteristics are erroneous.	<ul style="list-style-type: none"> ● Inhibitor switch ● TCM ● Front vehicle speed sensor ● Rear vehicle speed sensor ● Throttle position sensor ● Control valve ● Ground earth
No lock-up occurs.	<ul style="list-style-type: none"> ● TCM ● Throttle position sensor ● ATF temperature sensor ● Control valve ● Lock-up facing ● Engine speed signal
Parking brake is not effected.	<ul style="list-style-type: none"> ● Select cable ● Select lever ● Parking mechanism
Shift lever cannot be moved or is hard to move from "P" range.	
ATF spurts out.	<ul style="list-style-type: none"> ● ATF level too high
Differential oil spurts out.	<ul style="list-style-type: none"> ● Differential gear oil too high
Differential oil level changes excessively.	<ul style="list-style-type: none"> ● Seal pipe ● Double oil seal
Odor is produced from ATF supply pipe.	<ul style="list-style-type: none"> ● High clutch ● 2-4 brake ● Low & reverse clutch ● Reverse clutch ● Lock-up facing ● ATF deterioration
Shock occurs from 1st to 2nd gear.	<ul style="list-style-type: none"> ● TCM ● Throttle position sensor ● 2-4 brake duty solenoid ● ATF temperature sensor ● Line pressure duty solenoid ● Control valve ● 2-4 brake ● ATF deterioration ● Engine performance ● 2-4 brake timing solenoid
Slippage occurs from 1st to 2nd gear.	<ul style="list-style-type: none"> ● TCM ● Throttle position sensor ● 2-4 brake duty solenoid ● ATF temperature sensor ● Line pressure duty solenoid ● Control valve ● 2-4 brake ● 2-4 brake timing solenoid ● High clutch

SYMPTOM RELATED DIAGNOSTIC

Automatic Transmission (Diagnostics)

Symptom	Problem parts
Shock occurs from 2nd to 3rd gear.	<ul style="list-style-type: none"> ● TCM ● Throttle position sensor ● 2-4 brake duty solenoid ● ATF temperature sensor ● Line pressure duty solenoid ● Control valve ● High clutch ● 2-4 brake ● ATF deterioration ● Engine performance ● 2-4 brake timing solenoid
Slippage occurs from 2nd to 3rd gear.	<ul style="list-style-type: none"> ● TCM ● Throttle position sensor ● 2-4 brake duty solenoid ● ATF temperature sensor ● Line pressure duty solenoid ● Control valve ● High clutch ● 2-4 brake ● 2-4 brake timing solenoid
Shock occurs from 3rd to 4th gear.	<ul style="list-style-type: none"> ● TCM ● Throttle position sensor ● 2-4 brake duty solenoid ● ATF temperature sensor ● Line pressure duty solenoid ● Control valve ● 2-4 brake timing solenoid ● 2-4 brake ● ATF deterioration ● Engine performance ● Low clutch timing solenoid ● Low clutch
Slippage occurs from 3rd to 4th gear.	<ul style="list-style-type: none"> ● TCM ● Throttle position sensor ● 2-4 brake duty solenoid ● ATF temperature sensor ● Line pressure duty solenoid ● Control valve ● 2-4 brake ● 2-4 brake timing solenoid
Shock occurs when the select lever is moved from "3" to "2" range.	<ul style="list-style-type: none"> ● TCM ● Throttle position sensor ● ATF temperature sensor ● Line pressure duty solenoid ● Control valve ● 2-4 brake duty solenoid ● 2-4 brake ● ATF deterioration ● 2-4 brake timing solenoid
Shock occurs when the select lever is moved from "D" to "1" range.	<ul style="list-style-type: none"> ● TCM ● Throttle position sensor ● ATF temperature sensor ● Line pressure duty solenoid ● Control valve ● ATF deterioration ● 2-4 brake duty solenoid ● 2-4 brake timing solenoid ● Low clutch timing solenoid

SYMPTOM RELATED DIAGNOSTIC

Automatic Transmission (Diagnostics)

Symptom	Problem parts
Shock occurs when the select lever is moved from "2" to "1" range.	<ul style="list-style-type: none"> ● TCM ● Throttle position sensor ● ATF temperature sensor ● Line pressure duty solenoid ● Control valve ● Low & reverse clutch ● ATF deterioration ● 2-4 brake duty solenoid ● 2-4 brake timing solenoid ● Low clutch timing solenoid
Shock occurs when the accelerator pedal is released at medium speeds.	<ul style="list-style-type: none"> ● TCM ● Throttle position sensor ● ATF temperature sensor ● Line pressure duty solenoid ● Control valve ● Lock-up damper ● Engine performance ● 2-4 brake duty solenoid ● 2-4 brake timing solenoid ● Low clutch timing solenoid
Vibration occurs during straight-forward operation.	<ul style="list-style-type: none"> ● TCM ● Lock-up duty solenoid ● Lock-up facing ● Lock-up damper
Vibration occurs during turns (tight corner "braking" phenomenon).	<ul style="list-style-type: none"> ● TCM ● Front vehicle speed sensor ● Rear vehicle speed sensor ● Throttle position sensor ● ATF temperature sensor ● Transfer clutch ● Transfer valve ● Transfer duty solenoid ● ATF deterioration ● Harness
Front wheel slippage occurs during standing starts.	<ul style="list-style-type: none"> ● TCM ● Front vehicle speed sensor ● Throttle position sensor ● ATF temperature sensor ● Control valve ● Transfer clutch ● Transfer valve ● Transfer pipe ● Transfer duty solenoid
Vehicle is not set in FWD mode.	<ul style="list-style-type: none"> ● TCM ● Transfer clutch ● Transfer valve ● Transfer duty solenoid
Select lever is hard to move.	<ul style="list-style-type: none"> ● Select cable ● Select lever ● Detent spring ● Manual plate
Select lever is too high to move (unreasonable resistance).	<ul style="list-style-type: none"> ● Detent spring ● Manual plate
Select lever slips out of operation during acceleration or while driving on rough terrain.	<ul style="list-style-type: none"> ● Select cable ● Select lever ● Detent spring ● Manual plate