Trouble Shooting List				
No.	***Subject***	***Model***	***System***	***Remark***
1	Intermittent engine check lamp on / engine hesitation	DI All	D27DTP	
2	Cooling Fan Noise at Cold Start	RV All	DI Engine	
3	DI Engine Cylinder Head Gasket Leakage	Actyon	D20DT	
4	Turbo Charger Whistle Noise at Accelerating	Actyon	D20DT	
5	REXTON II CDPF EGT Sensor Removal/Installation	Rexton II	D27DTP	
6	Engine Hesitation after First Delivery	RV All	EURO IV Engine	
7	Rework Procedure for DI Engine Oil Pan Leak	C/D/Q-Car	D20DT	
8	Troubleshooting for DI Engine Alternator Noise	RV All	DI Engine	
9	Installation Notice for Air Cleaner Assembly	C/D/Q-Car	D20DT	
10	Modification of DI Fuel Tank Vent. Tube	C/D/Q-Car	D20DT	
11	DI Engine Cylinder Head Cover Gasket Leakage	Y/C/D/Q	Engine	
12	E-EGR & Throttle Body Initialization	RV All	EURO IV Engine	
13	Engine Noise Come inside Vehicle	A/Sports	D20DT	
14	Engine Power Lack at Accelerating	C/D-Car	D20DT	
15	Engine Check Lamp ON caused by HID Modification	Rexton II	D27DT	
16	Intermittent Engine Not Start	Kyron	DI Engine	
17	Engine Stop Caused by IMV Malfunction	Rexton/Rodius	D27DT	
18	Engine Check Lamp Turn ON (P0400)	Rexton	D27DT	
19	Engine Abnormal Noise at Idle Condition	Actyon	D20DT	
20	Troubleshooting for Compression Pressure Leak	RV All	DI Engine	
21	Engine Check Lamp ON (Vacuum Hose Damage)	Rexton	D27DT	
22	Engine Check Lamp Turn ON (P0400)	Rexton	D27DT	
23	Lack of Engine Power (Fuel Pipe Leak)	Kyron	D20DT	
24	Instruction of Belt Tensioner Replace	RV All	DI Engine	
25	Lack of Engine Power (Injector Corrosion)	RV All	DI Engine	
26	Turbo Charger Whistle Noise_Case 1	Kyron	D20DT	
27	Turbo Charger Noise_Case 2	Rexton II	DI Engine	
28	Precautions when removing and installing tire wheel nut	RV All	Chassis	
29	How to check DC5 speed A/T DTC code	RV All	DC5 A/T	
30	DC 5 speed A/T Limp Home Mode	Y/D/A	DC5 A/T	
31	MB 5 speed A/T N2, N3 abnormal speed sensor	Y/D/A	DC5 A/T	
32	How to distingush T/C motor	All	T/C	
33	Impossible to change from 4H to 2H	All	T/C	

34	New REXTON under part Noise	New Rexton	Chassis	
35	4WD Abnormal	All	T/C	
36	TGS LEVER bearing bushing part supply	All	Chassis	
37	REXTON II Poor shifting	Rexton II	Chassis	
38	Limp Home Mode by abnormal vehicle speed sensor	Actyon	Chassis	
39	Tightening torque of vehicle lower part	All	Chassis	
40	REXTON II Air con Gas leakage	Rexton II	HVAC	
41	Noise occurrence when depressing brake pedal fully	Rexton II	Chassis	
42	Rework case due to diagnosis error regarding brake syst	Rexton II	Chassis	
43	DC A/T electric fault	Y/D/A	DC5 A/T	
44	Trouble shooting for front hub noise occurrence	Y/C/D/Q	Chassis	
45	Troubleshooting for front shock absorber	A/Sports	Chassis	
46	Coolant temperature rises while driving	Actyon	Electric	
47	Cooling Fan Noise at Cold Start	All	DI Engine	
48	Electric wiring connection failure - DC5 A/T Electric Kit	Y/D/A	DC5 A/T	

Intermittent Engine Check Lamp On & Engine Hesitation

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
DI ALL	D27DTP ENGINE	

♠ *Symptoms*

1) Intermittent (1-2 time / week) engine check lamp turn ON and engine hesitating
2) Engine RPM unstable after starting
3) DTC (on ECU)
   P1253 - Minimum Rail Pressure Control Malfunction (IMV Fault)
   P1259 - Too Large High Pressue Fuel in Rain Pressure System

♠ *Repair History*

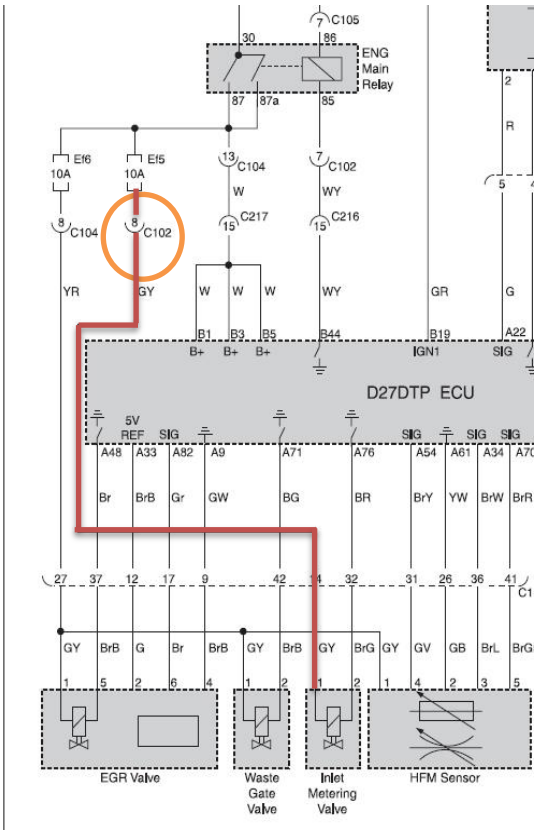
Replace HP pump
Replace Injectors
Replace engine main wiring, HP Pump (2nd), Injector (No. 5 again), Fuel Sender
Check IMV valve at idle : - Spec. : 650 mA - Actual : 710 ~ 850 mA
Check IMV power line (between fuse box and IMV)
Symptom (engine hesitation) reproduce while checking the wiring of engine room fuse box

♠ *Troubleshooting*

Poor contact on C102 Pin no. 8 of engine room fuse box
Repair the connector pin and symptoms cleared
This sysmptom was caused by poor contact of connector pin of IMV power line, please check related wiring before fuel system replace

Check Details

▶ EWD for Rexton II D27DTP



Cooling Fan Noise at Cold Start

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
RV ALL	ALL DI ENGINE	

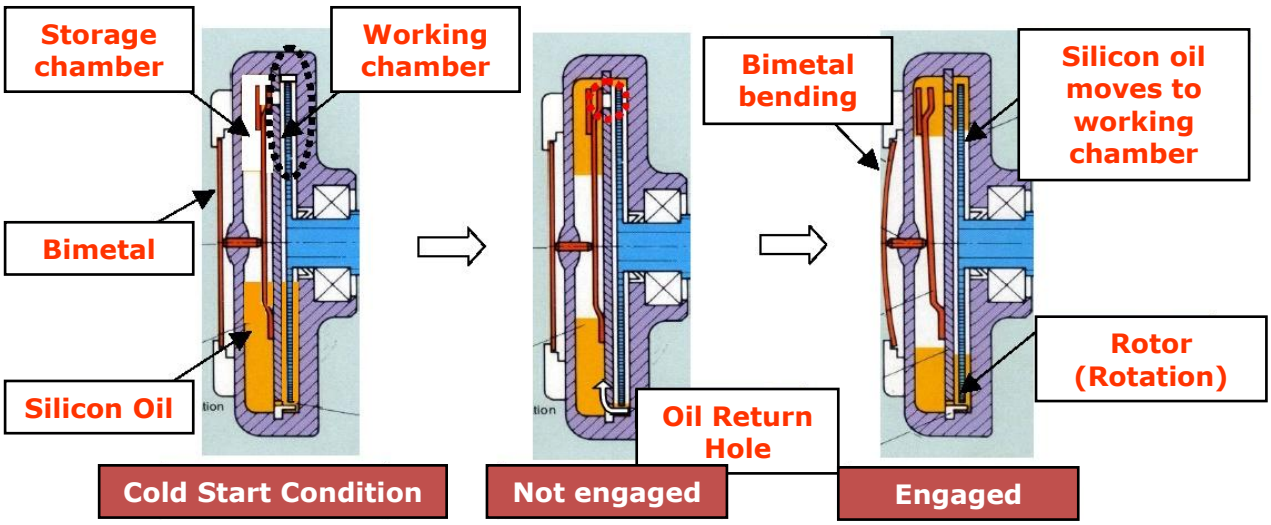
♠ *Symptoms*

- Noise like "U~ng, U~ng" from engine room for 2 or 3 minutes after 10 seconds of engine cold start
- Noise is louder and then disappear when the accel. Pedal is pressed a little bit right after engine cold start
- Engine idle condition, noise can be heard easily around engine room then inside vehicle

♠ *Possible Causes*

Operation Principle

This noise is operating sound of viscous clutch at engine cold start condition□
Noise can be heard temporary because the viscous clutch is engaged during□□e time period for movement of silicon oil from working chamber to storage□□amber□
Especially, in case of long time parking, silicon oil exists in the working chamber□□efer to the operating□ principle of viscous clutch



Viscous is engaged by the friction force of viscosity of silicon oil

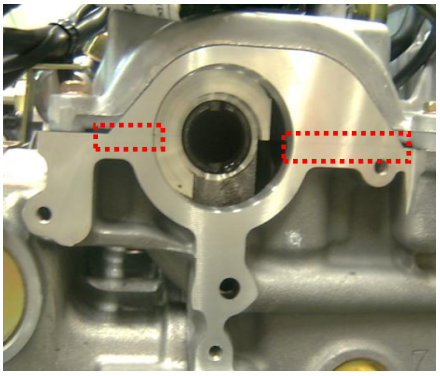
DI Engine Cylinder Head Gasket Leakage

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
ACTYON	D20DT ENGINE	

♠ *Symptoms*

Oil leak from cylinder head gasket
Symptom doesn't be cleared with cylinder head gasket.



♠ *Troubleshooting*

Remove cylinder head cover and vacuum pump and then repair the unmatching pace of intake camshaft cap and cylinder head

▶ Note
If there is oil leak around cylinder head gasket on DI eigine, firstly check leak from vacuum pump

SYMC engine inclines to right side about 15 degrees, so leaked engine oil can move to front side of cylinder head gasket (cylinder No.1) at driving condition.
Please don't make misjudgement cylinder head gasket to oring of oil leak

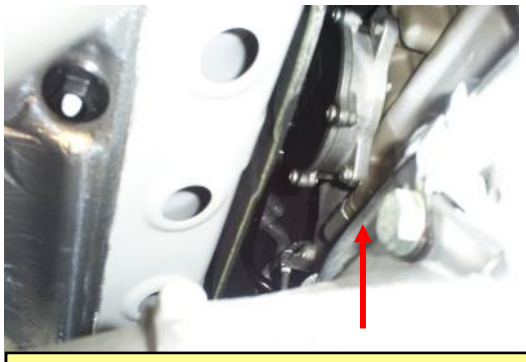
Check the origin of oil leak at engine idle and driving condition using centain developer (white material)

Check Details

▶ Check and rework procedure of vacuum pump oil leak

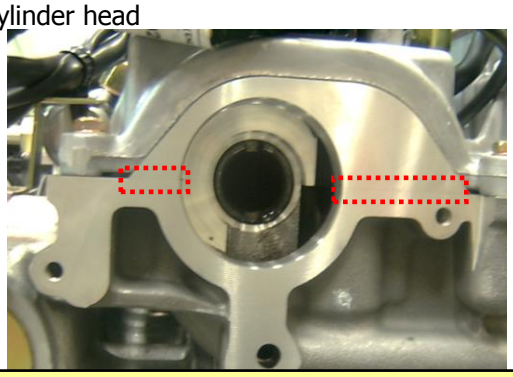
* volumn of oil leak from vacuum pump will be increased at engine driving condition when engine oil pressure reach to maxmimum level (about 5 bar). Small amount oil leak at engine idle condition is hard to detect
* If necessary, lower the A/T mounting parts using lift jack and check the origin of oil leak directly

1. Check oil leak of vacuum pump on the naked eyes



Oil leak should be checked firstly

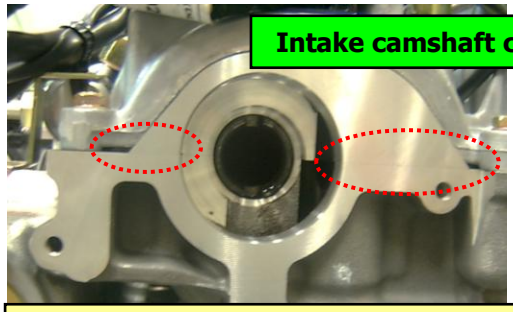
2. Check the matching face of intake camshaft cap and cylinder head



Spec. of matching face (gap)
: within 0.03mm

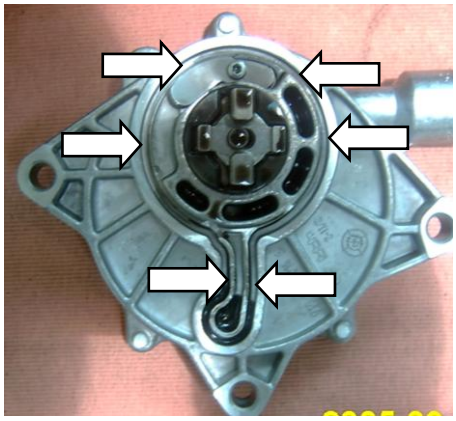
Check Details

3. Replace intake camshaft cap if the gap is more than specification



- Spray the loctite on lower face of camshaft cap when installation
- You should feel nothing when you scrach matching facing with finger nail

4. Check vacuum pump internal roughness



5. Tighten vacuum pump mounting bolt (10 NM)

Remark

- Do not reuse vacuum pump o-ring, replace with new one
- Clean the oil contamination on cylinder head gasket and cylinder block using cleaner
- Keep the tightening torque of cylinder head camshaft cap (#12, for vacuum pump area)

Tightening Torque

Camshaft cap mounting bolt : 25 Nm

→ Do not make gab by over-tightening

Turbo Charger Whistle Noise at Accelerating

♠ *Vehicle Information*

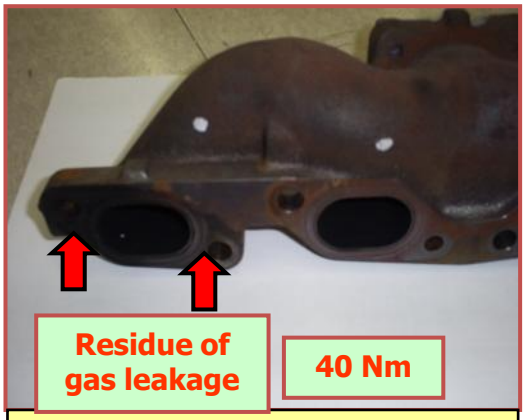
MODEL	SYSTEM	S.G.N
ACTYON	D20DT ENGINE	

♠ *Symptoms*

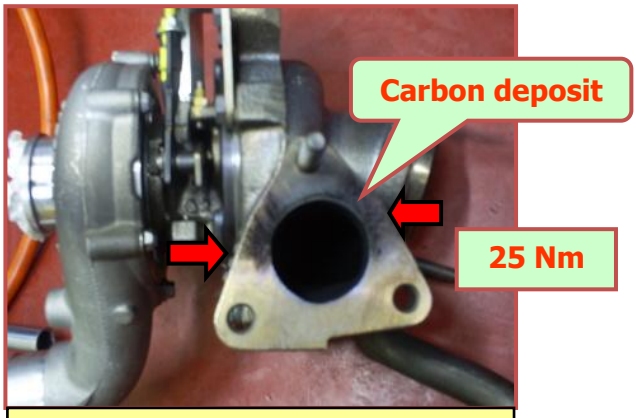
- Whistle noise (beep sound) from turbo charger area at accelerating (over 1,500 RPM)
- Noise is gone while VGT vacuum hose is disconnected by hand
  ; because of less turbo pressure generation
- Distinguishable noise tone (like high tone beep sound) compare to normal operation sound of D20DT VGT turbo charger

♠ *Possible Cause*

Tubro charger noise caused by gas leakage from turbo charger mounting area and loosened exhaust manifold



Nut loosen on #5 Ex. manifold



Turbo charger gas leakage

♠ *Troubleshooting*

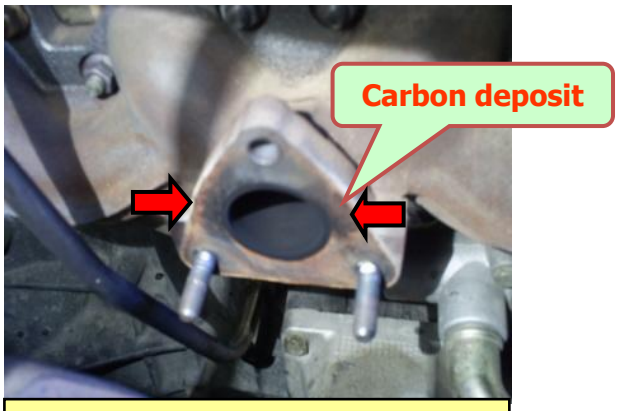
Retightened #5 exhause manifold and clean the carbon deposit of turbo charger

Tightening Torque

- Ex. Manifold mounting nut : 40 Nm
- Turbo Charger mounting nut : 25 Nm

Notice

In case of turbo charger noise, check the gas leaking from exhaust mounting area frist
(Do not replace turbo charger without checking gas leakage)



Ex manifold gas leakage

Check Details

▶ In case of turbo charger noise…

※ Turbo charger truns about 200,000 RPM while accelerating, if there is abnormal operating sound (whistle), find the root cases with reference to below sample cases.

1) Check the intake hose clamp connection of front and rear side of turbo charger
   Especially, air leaking from rubber crack makes abnormal noise.
2) Check air cleaner housing bolt connection.
   Intake air leak caused by air cleaner housing positiong problem
3) Exhause gas leak caused by EGR pipe bellow lower area crack
   Check the carbon deposit of bellow lower area
4) Alternator noise (whistle noise while accelerating)
   Check the noise after disconnecting fan belt
5) Exhaust manifold mounting nut and turbo charger mounting nut (beep sound while accelerating)
   Retightent mounting nut
   Replace gasket in case of damage

REXTON II CDPF EGT Sensor Removal/Installation

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
REXTON II	D27DTP CDPF	

♠ *Background*

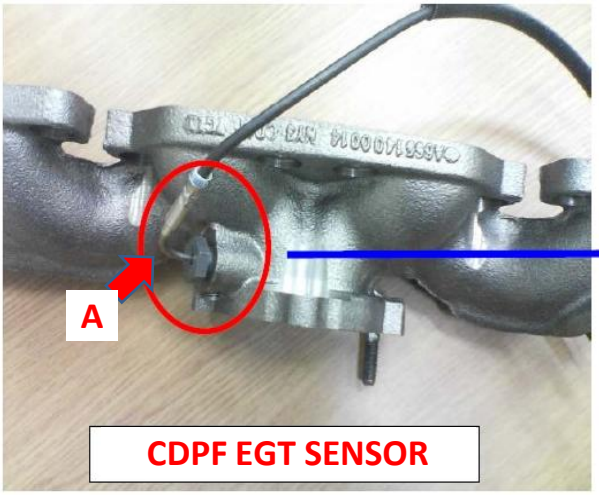
This is a insturction manual for Rexton II CDPF EGT Sensor

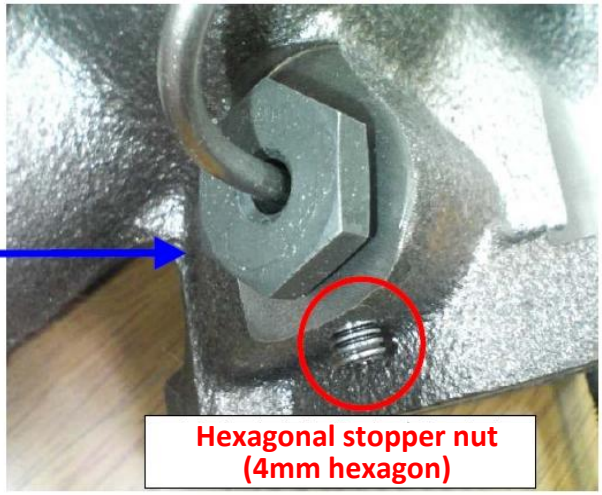
Check Details

▶ How to replace CDPF EGT Sensor

1. Loosen the hexagonal stopper bolt (4mm)
2. Remove the EGT Sensor

   Tightening Specification : 45 ± 4.5 Nm





※ To prevent EGT Sensor loosening, lock-up using stopper bolt

▶ Caution

- If the stopper bolt doesn't be removed, EGT sensor's bitch can be damaged
- Take care not to be damaged bending area (A) of EGT sensor while installation by wrench
- Keep the tightening torque

Engine Hesitation after First Delivery

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
RV ALL	EURO IV ENGINE	

♠ *Symptoms*

- Engine hesitation just after customer delivery at cold engine condition (coolant temp. less than 60 º C)
- D20DT Engine : cylinder balance fault
- D27DT Engine : No DTC

♠ *Possible Causes*

- Unfinished initial Idle MDP learning
  : in case of unfinished initial Idle MDP learning, there could be engine small hesitation after first delivery

※ EURO IV model has MDP learning condition at idle condition

♠ *Troubleshooting*

- Keep the engine running at idle condtion more than 1 minute over coolant temp more than 60 ºC
- At idle MDP learning, there could be engine noise and vibration.

Notice

- Vehicle could be sign off with unfinished Idle MDP learning at winter season because it takes time to increase coolant temp. In this case, there could be a little engine noise and vibration sfter first delivery

- Be sure to finish initial idle MDP learning when the ECU or Injector is replaced.

※ SCAN-100 just disply driving MDP count only, you can't see learning count of idle MDP.

Check Details

▶ Initial MDP learning condition

- Coolant temp : over 60 ºC
- Learning time : 30 ~ 120 seconds (considering MDP learning failure)
- After ECU or Injector (C3I coding) replace
- Recode C3I code value through SCAN-100

; ECU carry out initial MDP learning one time at above condition

※ if the initial MDP learning is not finished successfully, engine makes small vibration at engine is cold

Rework Procedure for DI Engine Oil Pan Leak

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
KYRON/ACTYON/ACTYON_SUT	D20DT ENGINE	

♠ *Symptoms*

Recently SYMC has been reported field claim of engine oil fan replace on D20DT engine caused by oil leak
Especially, oil leak from lower area of alternator

♠ *Troubleshooting*

Spray sealant on engine oil pan and then install the oil fan.

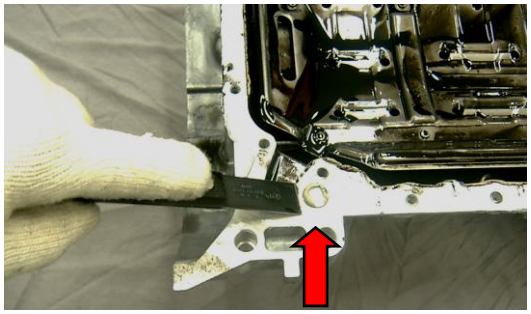
Notice

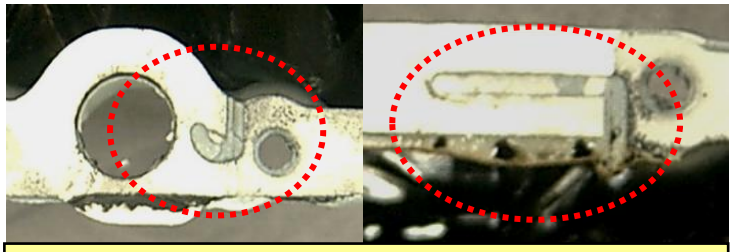
- Do not replace engine oil pan in case of oil leak
- Do not disassemble the engine by this reason (for 4WD model, disassemble front axle first)

Check Details

▶ REWORK PROCEDURE

1) Disassemble front axle assy for 4WD model. (don't need to disassembly front model for 2WD model)
2) Remove engine oil fan for enough work space
3) Clean up remaining sealant using scraper or brush (clean up cylinder block side as well)
   (Take care remaining material do not go engine oil pan inside)

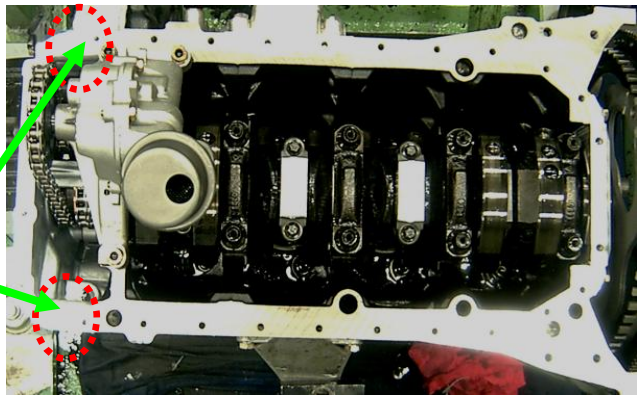




Remove the sealant inside oil pan groove clearly

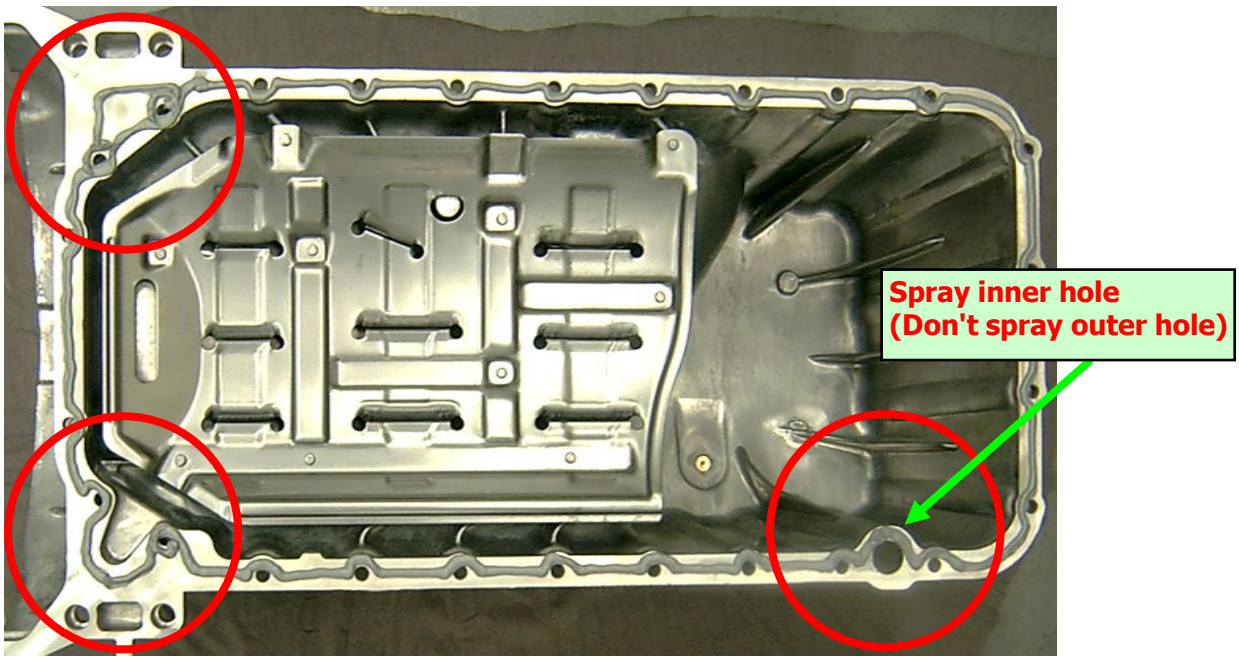
4) Remove sealant on cylinder block side and then check the gap between front timing gear case cover and cylinder block
   [if there is gap, fix it using sand paper (No. 600)]

Check gap



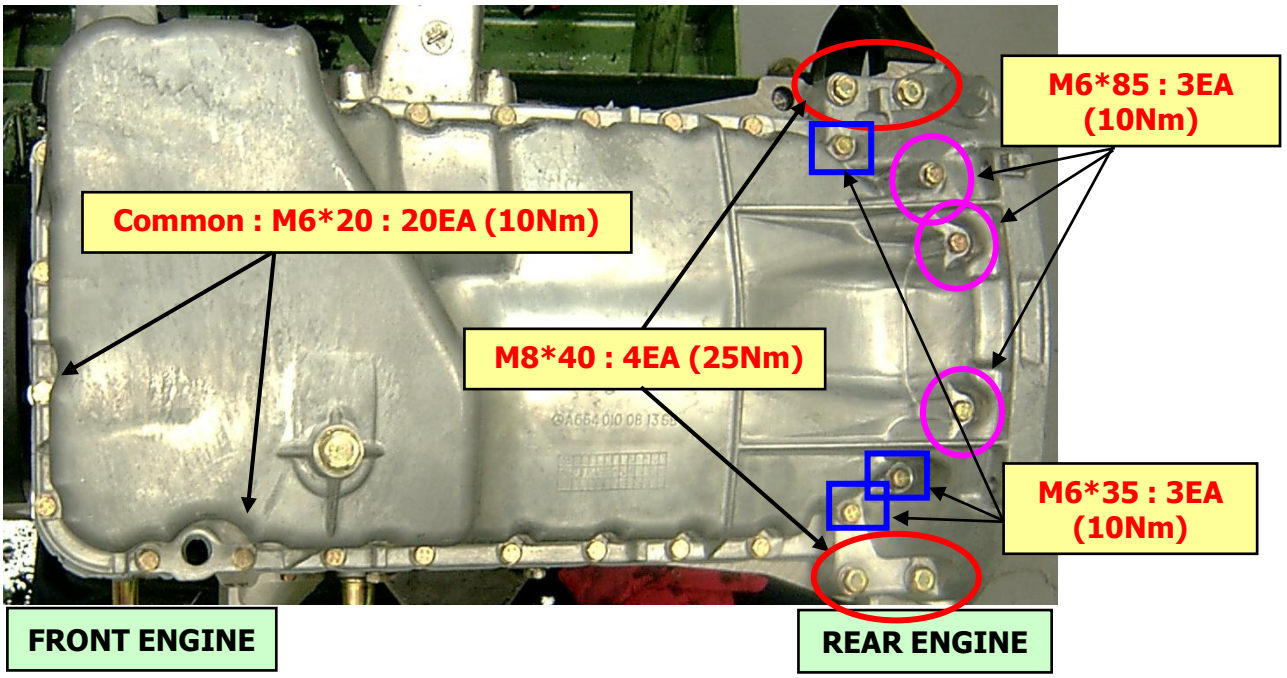
Check Details

5) Spray sealant on engine oil pan like below photo



Note 1) Pay attention to spary sealat circled area as shown above photo
Note 2) Sealant Spec. : DOBO Sealant, P/No. : 665 989 50 A0

6) Clean any dirty material (like engine oil) on matching face of cylinder block and then assemble engine oil pan
Keep tightening torque as below



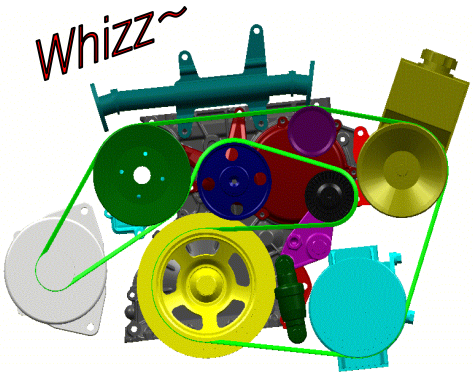
Troubleshooting for DI Engine Alternator Noise

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
RV ALL	DI ENGINE	

♠ *Symptoms*

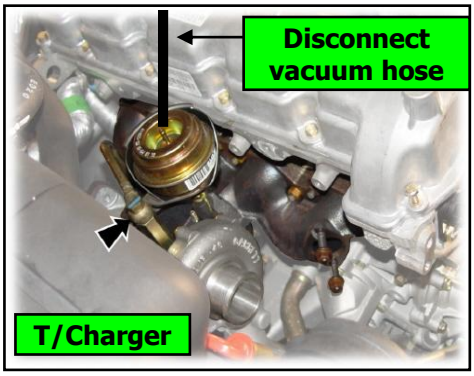
- Turbo charger whistle noise (wind noise) from engine front side at idle and at engine acceleration condition (between 1,200 ~ 1,800 RPM) like turbo charger sound.
- Noise is gone when vacuum hose of turbo actuator is disconnected



♠ *Possible Causes*

This is turbo charger normal operation sound
; VGT air boosting sound and passing sound of exhaust gas

. VGT type turbo charger used on Actyon / Actyon sports / Kyron/Rexton II models, vane inside turbo charger is widen at accelerating and it increase input air volume very quickly
. In this time, turbo charger makes whistle noise (whizz~)
→ Normal operating sound



in case of D20DT engine, check the sound after disconnecting vacuum hose for turbo charger.
If there is no sound, **DO NO REPLACE ALTERNATOR**
(VGT turbo charger operating sound)

♠ *Troubleshooting*

Refer to below check details

Check Details

▶ CHECK PROCEDURE FOR ALTERNATOR NOISE

. Disconnect vacuum hose for turbo charger and check whether noise caused by trubo charger whistle noise

→ **No Noise** → Turbo charger noise (check turbo charger such as oil leas, wheel balancing etc)

Refer to turbo charger check procedure on service manual

↓ **Noise**

. Check noise pattern at max. electric load condition (with A/C, seat warmer, head lamp) and acceleration/deceleration condition

→ **No Noise** → Check sub component around engine except alternator

Check EGR pipes

↓ **Noise increase at electric load condtion**

. Check whether noise is gone after disconnecting engine fan belt about 3 minute at engine accelerating condition

→ **No Noise** → Check alternator charging voltage (over 13.7 V at engine idle)

↓ **Noise**

. Check engine condtion except alternator and pulleys around fan belt

: if you remove engine fan belt, pulleys including alternator don't rotate

(REMARK)
- In cas of damaged diaod inside alternator, there could be abnormal alternator noise (whizz ~).
- This noise usually get increases at the electric load condtion (head lamp, warmer etc) and also charging voltage is abnormally high

Installation Notice for Air Cleaner Assembly

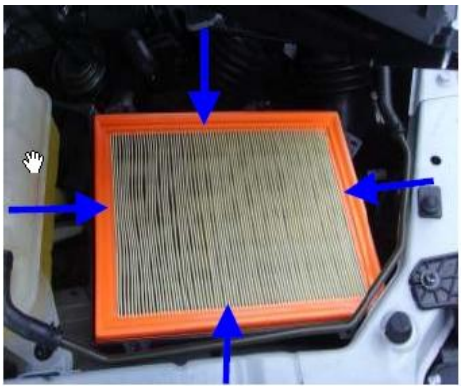
♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
KYRON/ACTYON/ACTYON_SUT	D20DT ENGINE	

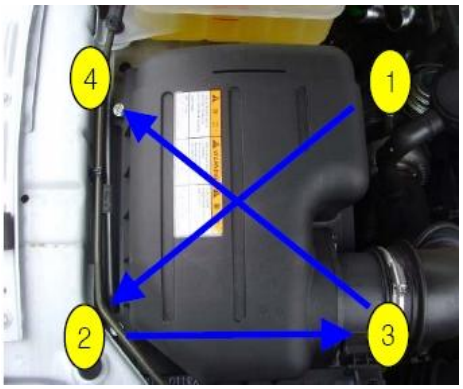
♠ *Symptoms*

This is installtion notice for air cleaner assembly
Please refer to below work procedure when you replace air cleaner assembly

♠ *Work Procedure*



: Push air clearner element up / down / left /right side by hand and make tight position inside housing while replacing air cleaner element
Do not air cleaner element come off the housing.



: Tighten the air cleaner housing bolt by numeric order as shown left photo by pushing upper housing cover by hand

: While installation air cleaner house, use only '-' screw driver or electric tool

Tightening Torque

- Air cleaner mousing bolt : 5 Nm

CAUTION

Do not over tighten air clear housing using such as air tool

Modification of DI Fuel Tank Vent. Tube

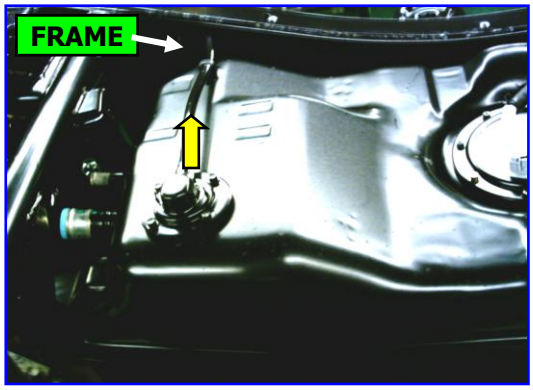
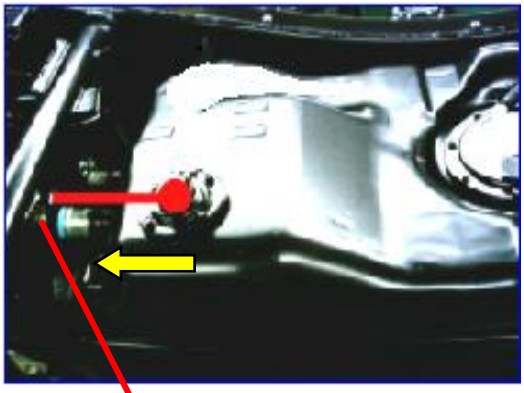
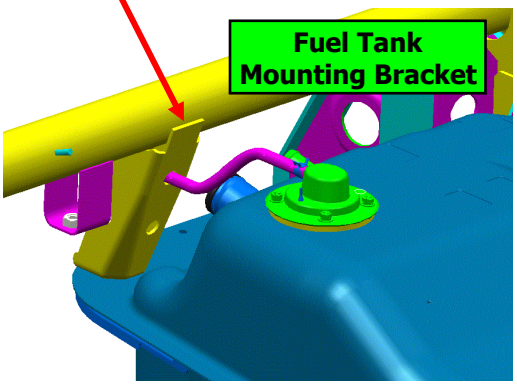
♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
KYRON/ACTYON/ACTYON_SUT	D20DT ENGINE	

♠ *Background*

This is a modification notice for fuel tank ventilation tube on D20DT engine

♠ *Modification Details*

ITEM	BEFORE	AFTER
Changes	- Vantilation hose is connected to right side of frame (refer to below photo)	- Rotate ventilation hose 90 º and make connection to mounting bracket for fuel tank - Change hose size (370 → 165 mm) & delete mounting clip
Photos		  * Insert the ventilation hose into upper hole of fuel tank mounting bracket
Parts Info.	- Fuel Tank Assy : 2211009**404** - Ventilation Tube : 2218009**401**	- Fuel Tank Assy : 2211009**405** - Ventilation Tube : 2218009**402**

Check Details

▶ Effective date by model

Model	Effective Date	VIN No.	Remark
ACTYON	Oct. 20th, 2008	049664	We will inform effective date & VIN no. for ACTYON SPORTS
ACTYON SPORTS		-	
KYRON		084772	

▶ Interchangeability

ITEM	Interchangeability (between old & new)	Remark
Fuel Tank Assy	**YES**	Should replace ventilation tube (new type) together
Ventilation Tube	**NO**	Should use correct ventilation tube Check the part no for fuel tank assy first

CAUTIONS

- If you use new type fuel tank assy in steady of old type fuel tank, you should replace ventilation tube with new type (part no. **22180009402**) at the same time
- SYMC do not allow any modification for fuel system, please don't make any changed to rework
  . Don't cut off ventilation tube for voluntary modificaction
  . Other voluntary modification

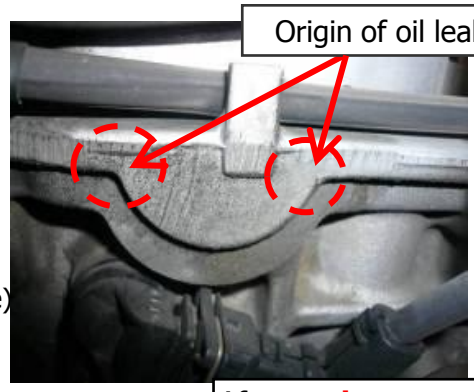
DI Engine Cylinder Head Cover Gasket Leakage

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
REXTON/RODIUS/ACTYON/KYRON	ENGINE	

♠ *Symptoms*

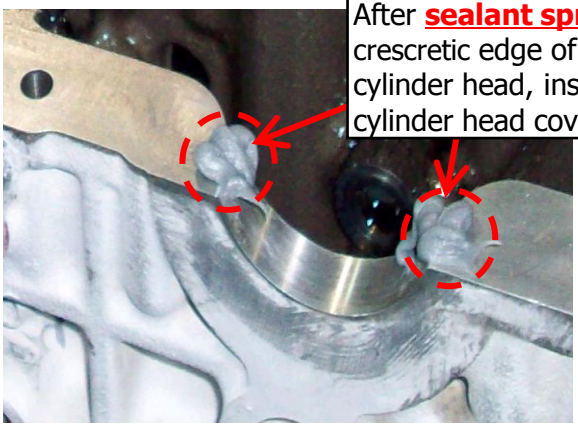
Oil leakage from cylinder head cover



♠ *Troubleshooting*

Remove the cylinder head cover and then spray sealant (loctite) on crescretic seal

Spray sealant (loctitie) on cylinder head cover gasket not to be damaged by the edge of cylinder cover



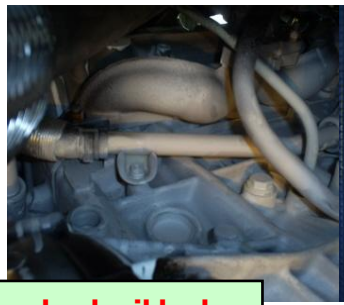
Check Details

▶ Note

- Spray a small sealant (loctite) and take care not to flow inside engine
- Do not replace cylinder head cover by this reason
- RECHECK OIL LEAKAGE USING CERTAIN DEVELOPER

▶ How to check oil leak

1. Clean leak oil using certain cleaner (WD40) and then spray developer (white material) around leak area
2. Check oil leak at engine idle and at driving condition
3. Clean developer using cleaner



Spray developer to check oil leak

Developer

E-EGR & Throttle Body Initialization

♠ ***Vehicle Information***

MODEL	SYSTEM	S.G.N
RV ALL	ALL EURO IV ENGINES	

♠ ***Background***

This is a SCAN-100 update function for EURO IV engine

♠ ***Update details***

New function of "INITIALIZATION & RELEARNING" on EURO IV DI engine

1] Rail Pressure Reset

; To reset ECU relarn value according to HP Pump aging
ECU memorize offset valuve to HP Pump performance correction

HP Pump max. offset value : 50 Nm

2] EGR Position Relearning

; To relearn max. open position and max. close position for E-EGR.

Display DTC in case of incorrect EGR position
P1407, 8 Fault EGR close (open) position

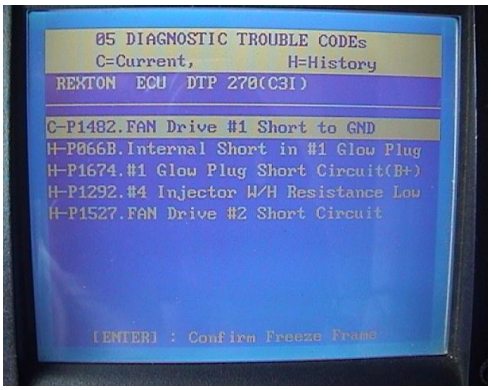
3] Throttle Body Relearning

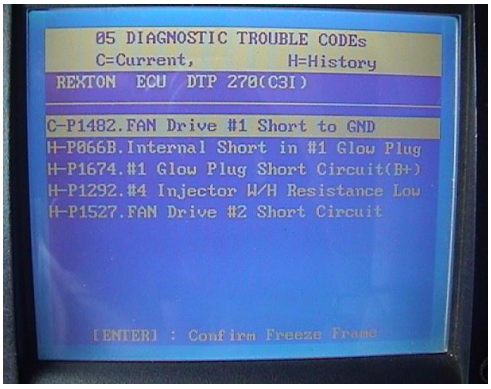
; To relearn max. open position and max. close position for throttle body

In case of incorrect T/Body position, abnormal tapping noise happens at engine off and driving condition

Notice

Please carry out initialization & relearning when you replace related component (HP Pump, E-EGR, Throttle Body, ECU)





Engine Noise Come inside Vehicle

♠ *Vehicle Information*

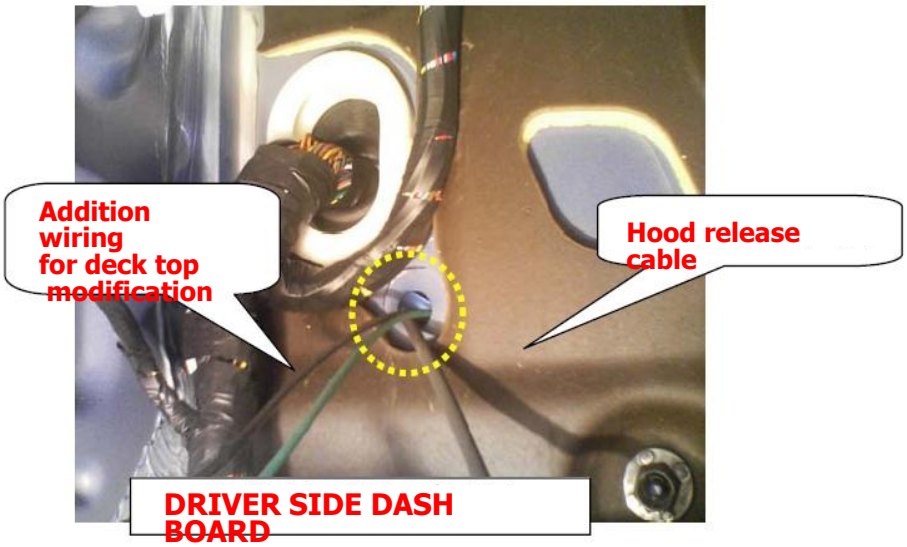
MODEL	SYSTEM	S.G.N
ACTYON SPORTS	D20DT	

♠ *Symptoms*

Customer complain engine noise come inside vehicle at idling and driving
; actual engine noise at idle condition is normal level

♠ *Possible Causes*

Engine noise come inside vehicle trough hole for rubber seal of hood release cable
Rubber seal of target vehicle was deleted because of deck top modificaion



Notice
If the rubber seal of hood release cable should be removed for certain purpose, you should block this hole using sealant or something
In case of without rubber seal, high tone engine noise come inside vehicle (2 ~ 3 dB incresing)

Engine Power Lack at Accelerating

♠ *Vehicle Information*

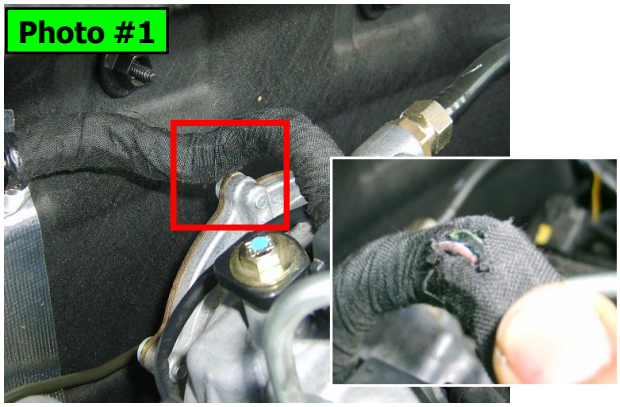
MODEL	SYSTEM	S.G.N
ACTYON/KYRON	D20DT ENGINE	

♠ *Symptoms*

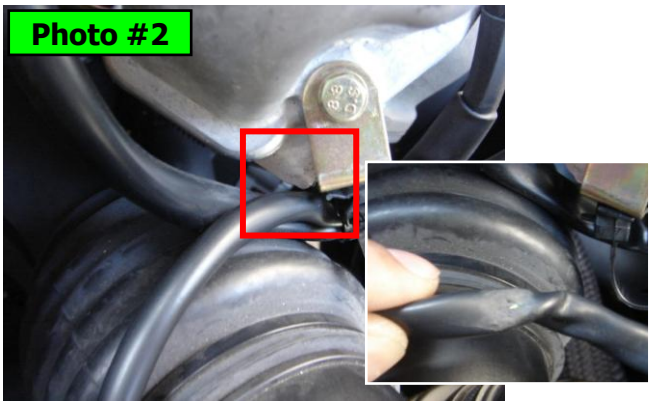
- Engine lack of power at re-accelerating after accelerating/decelerating ; **refer to photo #1**
- Engine lack of powe at quick accelerating, nomal at smooth accelerating ; **refer to photo #2**
- No DTC or DTC related Intake Air Sensor

♠ *Possible Causes*

Wiring damage caused by engine running movement



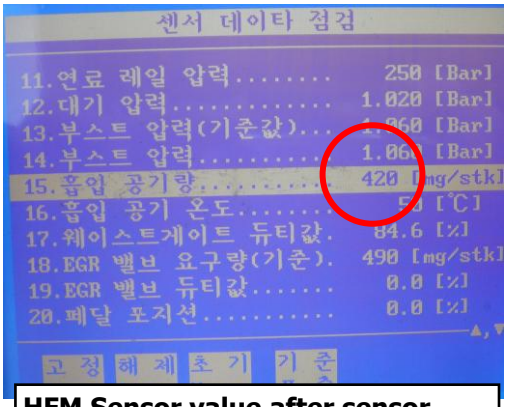
Short circuit at decelerating



Short circuit at accelerating

♠ *Troubleshooting*

- Same sympotm could be happened when HFM sensor disconnected, at this time ECU substitute intake air value as internal MAP data and decide engine power *(substitution : change from 420 to 800 according to engine RPM)*
- In case of wiring damage, there is large variation on the value for intake air volume (5 ~ 1,000 m/stk)



HFM Sensor value after sensor disconnection
ECU substitution at idle condition

♠ *Request*

When a customer complaint enigne lack of power, check intake air value on SCAN-100 after disconnection sensor connector.

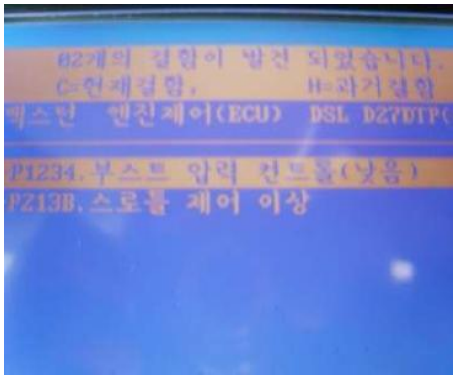
Engine Check Lamp ON caused by HID Modification

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
REXTON II (EURO IV)	D27DT	

♠ *Symptoms*

Engine check lamp turns ON and lack of power at driving
DTC in ECU : P1234 - VGT Operation Fault
P213B - Abnormal Throttle Control



♠ *Possible Causes*

Unstable power source caused by HID modification
(Symptom happens when head lamps turn ON)

Ballast and Bulb

♠ *Recommendation*

- Check symptom happens whether head lamp turns ON
- HID (High Intensity Discharge) consumes a lot current, 13 ~ 15 A, when it turns ON/OFF and high-frequency waves generated by ballast makes unexptected errors on vehicle CAN system (ex. Warning lamp of curise control and ABS)

Check Details

▶ Symptoms by unauthorized HID modification

1) cluster warning lamps turns ON when head lamp auto ON at Auto mode or turn on head lamp switch
   - ESP warning lamp ON (on the vehicle without ESP option)
   - 4WD check, 4 Low lamp ON (on 2WD model)
   - Auto curise ON (on the vehicle without Auto Cruise option)
   - POWER lamp ON (regardless of operation of WINTER/POWER switch)
2) A/T LHM (gear holding) caused by CAN system error
3) Malfunction on electric units

Intermittent Engine Not Start

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
KYRON	DI ENGINE (D27DT, D20DT) A/T	

♠ *Symptoms*

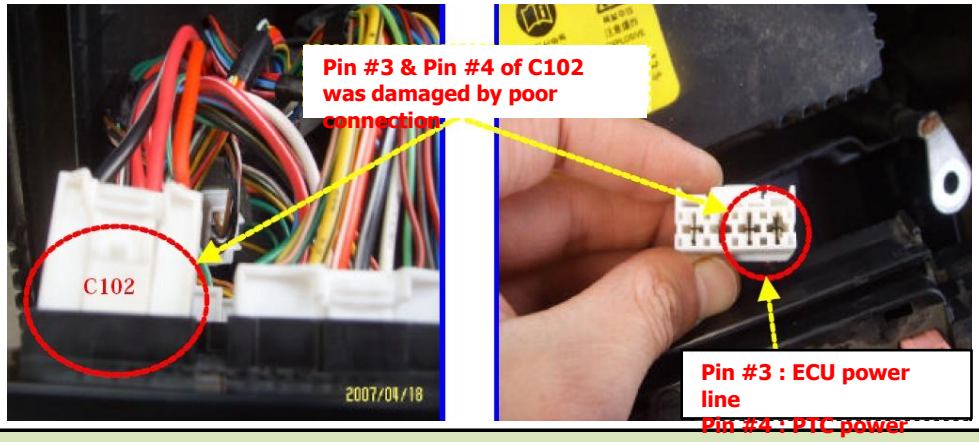
Engine intermittent not start (only engine cranking)
Engine check lamp turns ON and glow plug warning lamp turns ON
Engine could start after 3-4 time cranking repeatly

♠ *Repair History*

ECU replace
Immobilizer antenna replace
Main (IP) wiring replace

♠ *Troubleshooting*

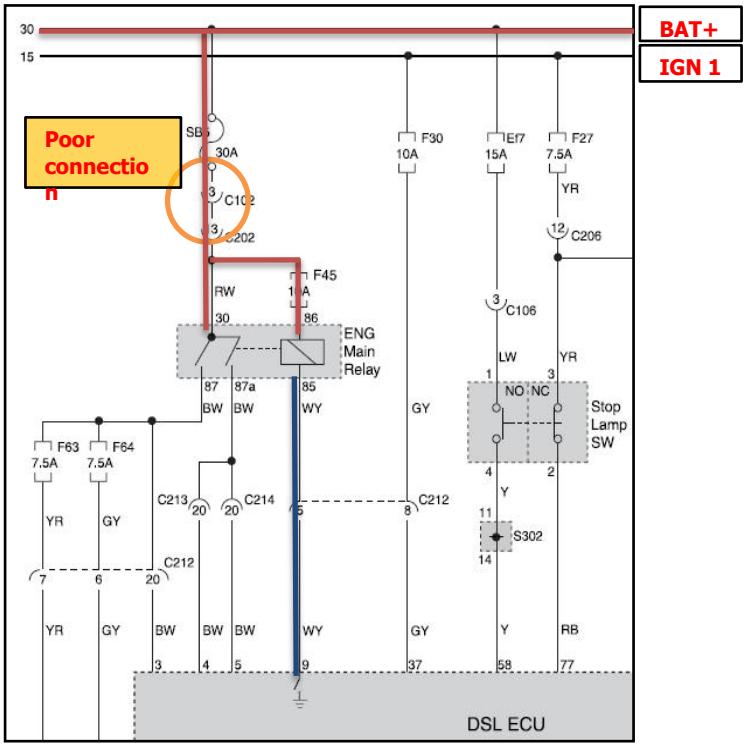
Engine intermittent not start caused by poor connection of C102 in engine room fuse box



Check Details

▶ Check details

1. Check all related fuses and relayes
2. Check battery output (12 v) at engine main relay Pin 30 and Pin 86
   → If battery power doesn't check, check B+ is transferred through C102 Pin #3 and C202 Pin #13
3. At IG ON, check ECU Pin #9 is grounded
   → At IG ON condition, engine main relay operates and battery power is transferred to ECU through Pin #87 and Pin #87a



Engine Stop Caused by IMV Malfunction

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
REXTON/STAVIC	D27DT ENGINE	

♠ *Symptoms*

- DTC P1253 - Minimum Rail Pressure Control Malfunction (IMV Fault)
- Engine impossible to start, Engine stop just after restarting
- Engine stop at decelerating

♠ *Possible Causes*

IMV Malfunction

- After disconnecting EF5 (15A) of engine room fuse box, engine can start with loud noise (you should turn off the engine immediately)
- Unstable engine idle RPM 704 ~ 768 RPM (normal : 736 RPM at hot engine condition)
- Bad fuel is the major cause of IMV malfunction, check fuel quality (color, smell, water contamination)

♠ *Recommendation*

- There was some other reason of engine stop except HP Pump problem, please diagnose based on symptom through customer interview (vehicle speed, engine temp., RPM, engine check lamp, noise etc)

Note

※ *If you disconnect IMV fuse, IMV is fully opened and make maximum fuel pressure (over 1,000 BAR)*
; In case of engine not start after removal and installation of fuel system (cylinder head, engine main wiring, common rail, cylinder head cover, HP Pump, Injector etc), run the fuel system at IMV full open condition and let remaining air goes out.
You should turn off engine immediately after engine start and insert IMV fuse.

Check Details

▶ Function of IMV (Inlet Metering Valve)

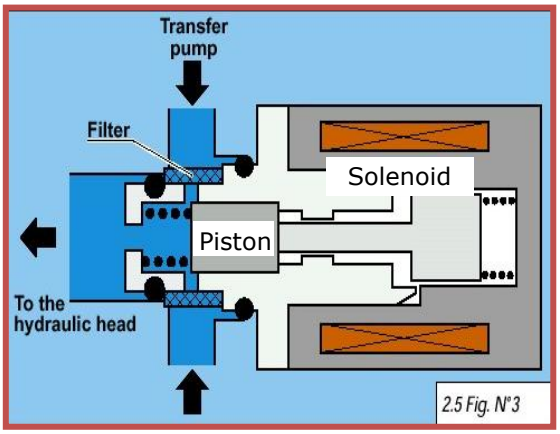
- Function : Control the rail pressure by regulating the amount of fuel which is sent to the pumping element of HP Pump

- Operation : ECU increase curret flow when rail pressure is higher than demand. Piston of IMV close orifice and block fuel flow

IMV

Specifications

- **Solenoid Control : PWM method Normal Open Type**
- **Piston Stroke : 1.4 mm**
- **Supply Voltage : Battery Voltage**
- **Filter Density : 140 ㎛**



Engine Check Lamp Turn ON (P0400)

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
REXTON	D27DT ENGINE	

♠ *Symptoms*

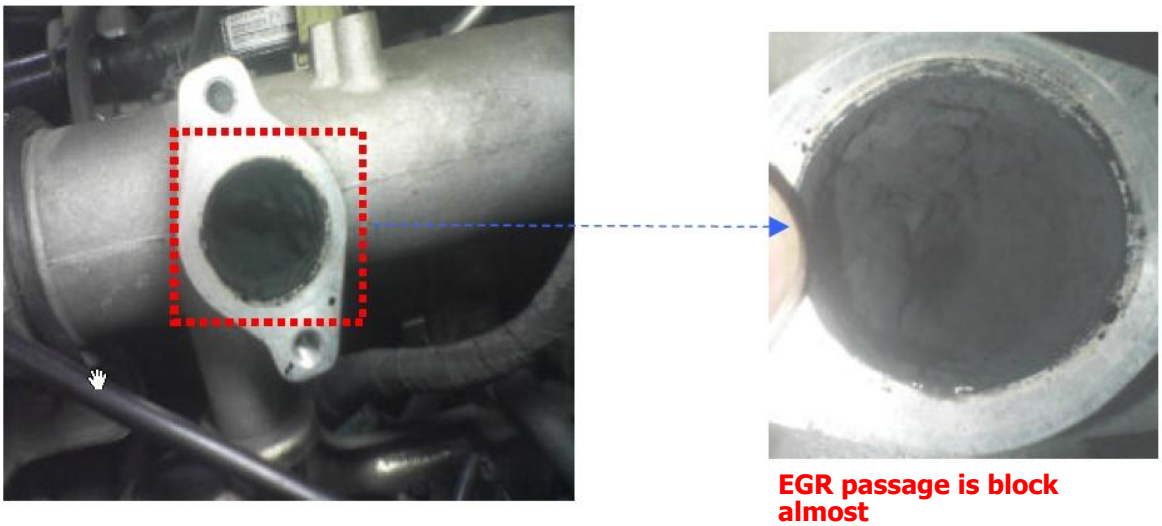
- Engine check lamp turns ON at driving
- DTC P0400 (EGR Control Valve Fault)

♠ *Repair History*

- EGR modulator replace
- Vacuum line check (leakage)
- Engine check lamp turns ON again (after delect DTC using SCAN 100) at EGR operation condition

♠ *Possible Causes*

- A lot carbon deposit at intake manifold and EGR valve mounting area



EGR passage is block almost 90% by carbon

♠ *Troubleshooting*

Clean the carbon deposit of intake manifold and reinstall EGR

Note

You could find carbon deposit at intake manifold at the vehicle of over 50,000 km mileage

Engine Abnormal Noise at Idle Condition

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
ACTYON	D20DT ENGINE	

♠ *Symptoms*

- Engine abnormal noise (tapping noise) at idling
- Noise repeart 3-4 second interval at engine idle condtion and noise can be heard minutely at driving

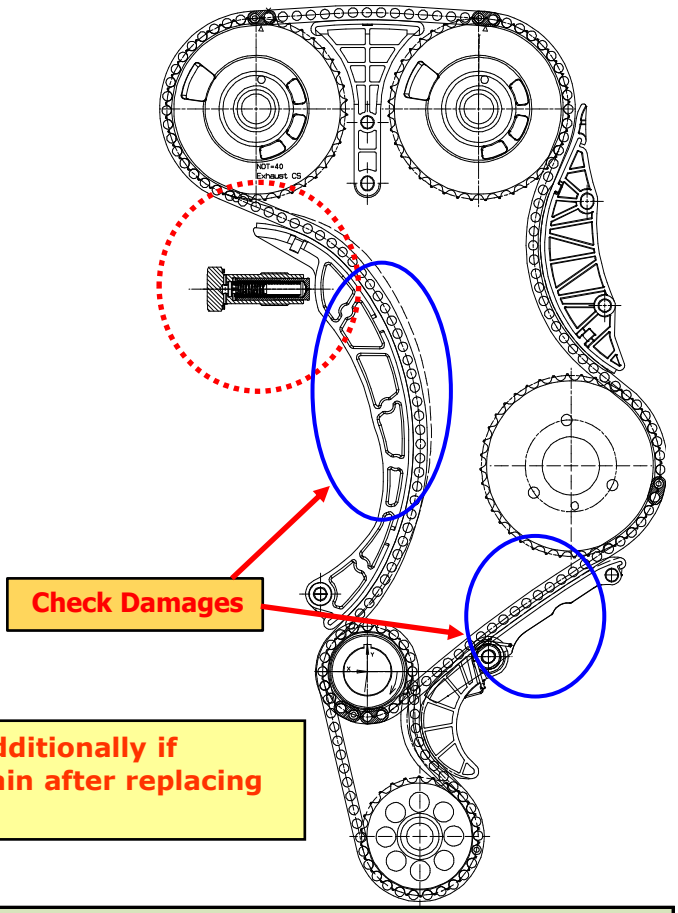
♠ *Repair History*

- Timing chain and belt tensioner removal & installation
- Timing damper removal & installation
- Engine acoustic cover removal & installation
- Belt, water pump, pulley and fan removal & installation

♠ *Possible Causes*

- Lossen timing chain and interference with head cover caused by lower guide rail assembly damage

Damaged area



Check the sliding rail additionally if engine noise comes again after replacing chain tensioner

Check Details

▶ Check the root cause according to below check procedure step by step

1. Remove chain tensioner and check the tension of timing chain
2. Remove cylinder head cover and check the damage inside head cover (especially area which located IN/EX camshaft sproket)
3. Replace chain tensioner if there is damage mark inside cylinder head cover
   Tightening Torque of chain tensioner : 65 Nm
4. If the noise don't be cleared after new chain tensioner, please check damage on guide rails
   ; check the engine noise again at idle condition after replacing chain tensioner

Troubleshooting for Compression Pressure Leak

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
RV ALL	ALL DI ENGINE	

♠ *Symptoms*

- Compression pressure leak (with air leaking sound) from injection mounting area caused by reuse of injector mounting bolt
- Symptom happen regardless of engine temperature

♠ *Troubleshooting*

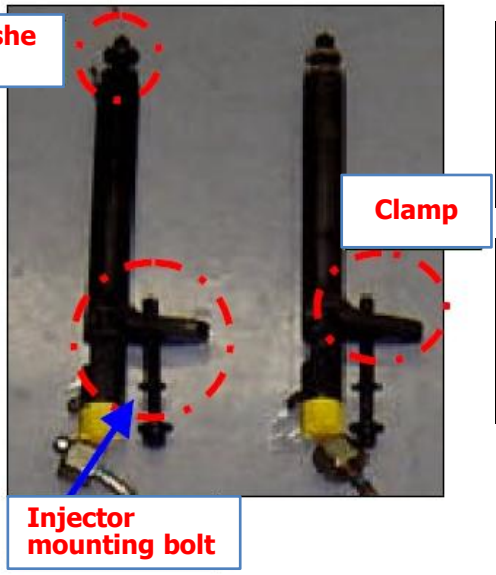
Remove injectors and clean the injection mounting area using air suction tool and then install the injector with new injector mounting bolt

Instruction of Injector mounting bolt replacement
- Injector bolt (M6*60) should be replaced with new one whenever Injector is removed

Caution
- In case of Injector mounting bolt reuse, engine compression pressure could leak by mounting bolt deformation

Check Details

▶



* Injector Bolt (M6*60), P/No. : 665 990 02 01
Tightening torque : 10 Nm + 180 º
→ Tighen the bolt about 10 Nm and then turn it about 180 degrees

* Remark
- Do not reuse Injector Washer (P/No. : 665 017 00 67)
- Do not use Injector Clamp (P/No. : 665 017 00 03) more than 5 times

Engine Check Lamp ON (Vacuum Hose Damage)

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
REXTON	D27DT ENGINE	

♠ *Symptoms*

- Intermittent engine check lamp turn ON
- DTC P0400 (EGR Control Valve Fault)

♠ *Possible Causes*

- Vacuum Hose for 4WD locking hub damage by interference with engine acoustic cover
  → EGR out of control by vacuum leakage

※ In case of vacuum leak, it effect EGR valve operation firstly

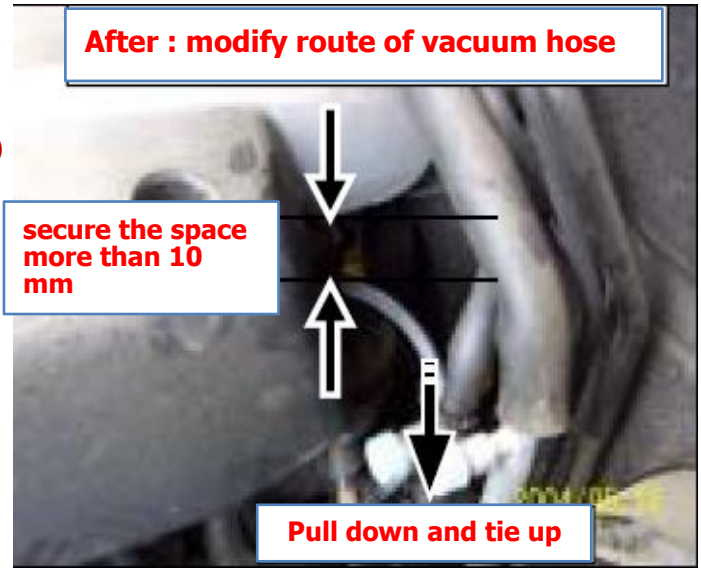
♠ *Troubleshooting*

- Cut out the damaged vacuum hose and reconnect
- If necessary, replace vacuum hose

Check Details

▶ In case of P0400 on Rexton D27DT model, check vacuum hose interference and modify hose route if necessary

→ Pull down vaccum hose a little bit and tie up with neighborhood pipe
(keep some space from engine acoustic cover)



Engine Check Lamp Turn ON (P0400)

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
REXTON	D27DT ENGINE	

♠ *Symptoms*

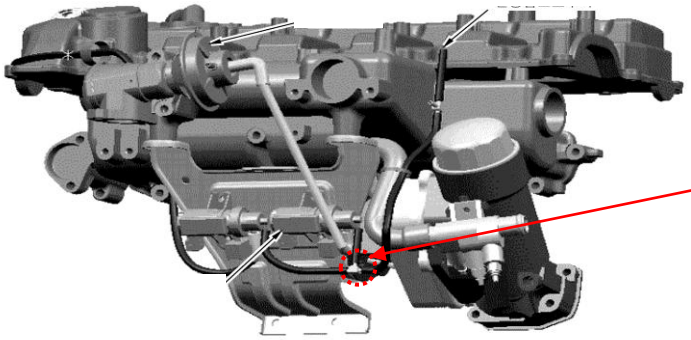
- Engine check lamp turns ON at driving
- DTC P0400 (EGR Control Valve Fault)

♠ *Repair History*

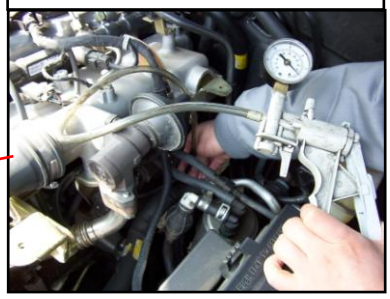
- EGR modulator replace
- EGR valve and EGR vacuum hose replace
- ECU replace

♠ *Troubleshooting*

- Check EGR vacuum pressure using vacuum gauge



Vacuum test from the EGR modulator



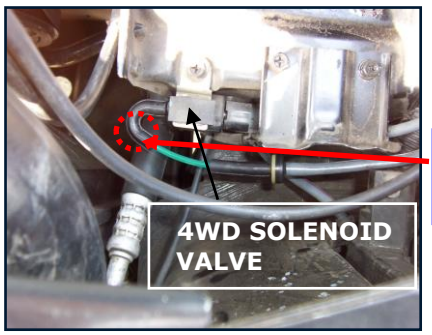
Normal : -0.9±0.02 bar

Unit:0.9bar=90kPa=675mm

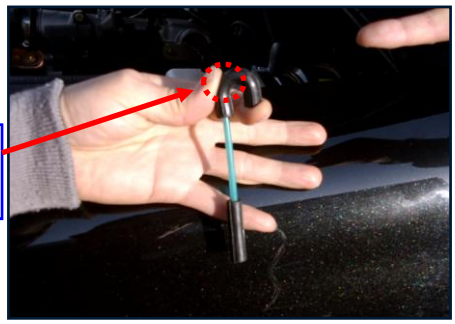
- Vacuum leak : less than -0.5 bar

→ Found 4WD solenoide valve vacuum hose crack

→ Replace damaged vacuum hose



vacuum leak by hose



Note

Do not replace EGR vacuum modulator without inspection, should check vacuum pressure and find actual reason of problem correctly

Lack of Engine Power (Fuel Pipe Leak)

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
KYRON	D20DT ENGINE	

♠ *Symptoms*

- Lack of engine power and poor acceleration

♠ *Possible Causes*

- Fuel leak from fuel return pipe

♠ *Troubleshooting*

- Replace fuel return pipe with new one

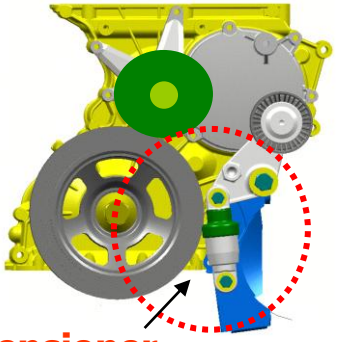
Instruction of Belt Tensioner Replace

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
RV ALL	ALL DI ENGINE	

♠ *Background*

On the investigation of replaced belt tensioner, SYMC figured out the it was replaced by mis-diagnosis. Please check belt tension according to this instruction guide and DO NOT REPLACE BELT TENSIONER DUE TO OIL CONTAMINATION



♠ *Instruction*

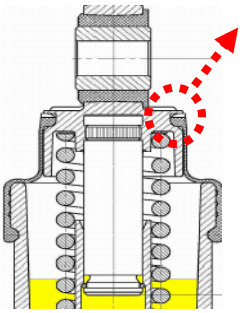
Check belt tensioner operation and clean oil contamination of belt tensioner housing according to below precedure

1. Remove the fan belt
2. Spray WD40 around contaminated area
3. Wait around 5 minutes
4. Blow the contamination away using compression air
   ; Take care not to direct contact compression air into rubber part of belt tensioner
5. Clean up the rubber part with clean cloth
6. Install the fan belt

VENTILATION HOLE

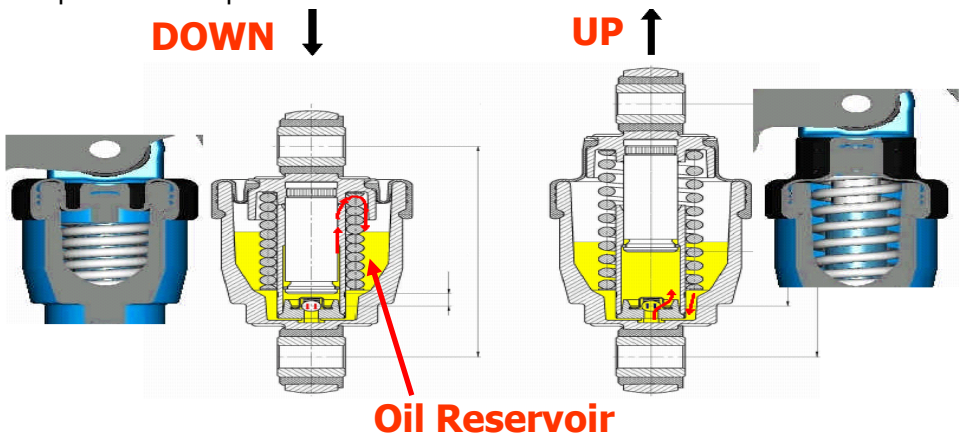
Belt tensionor has ventilation hole to discharge the hot and pressed evaporative oil gas which is generated during operation

This oil gas can misjudge as oil leakage if its mixed with dust around



Check Details

▶ Belt Tensioner Operation Principle



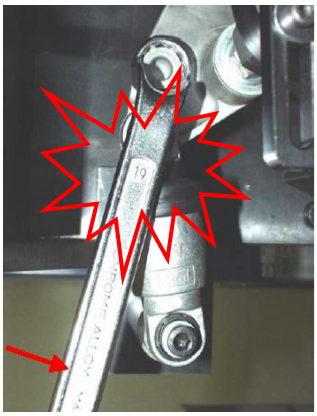
Expansion Stage (UP) : Oil flow into the Piston through check valve
Compression Stage (DOWN) : Oil flow out though oil gap of piston upper to oil reservoir

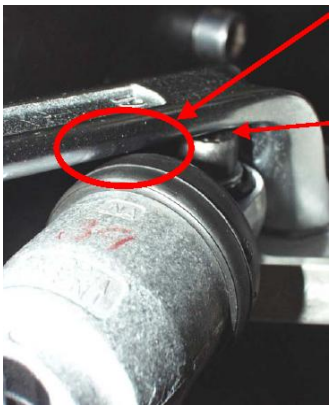
Check Details

▶ Caution

Take care not to damage the rubber bellow of belt tensioner while removal and installation of fan belt using wrench

Special attention to interference using the wrench

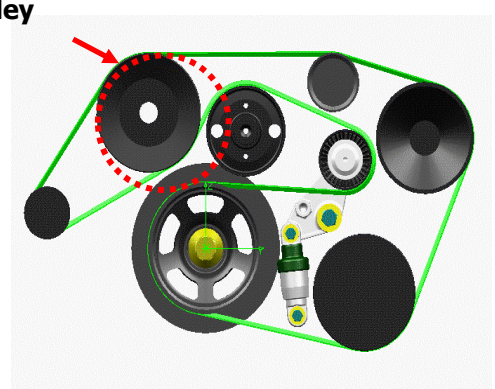




Note

- There is no functional problem if belt tensioner has more than 50% oil inside
- In case of fan belt noise, check the sysmptom with released ***technical information ISI-07EN012*** before fan belt replace

Water Pump Pulley



Pulley-Water Pump P/No. : 6642050110

Improvement history for Water Pump Pulley
Increase the depth of pulley groove and modified groove layout to improve belt positioning (prevent movement)

TARGET VEHICLE
Vehicles sign-off before Apr. 1st, 2007

Lack of Engine Power (Injector Corrosion)

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
RV ALL	ALL DI ENGINE	

♠ *Symptoms*

- Engine lack of power at vehicle start off
- No engine vibration, hesitation and noise.
- No DTC

♠ *Repair History*

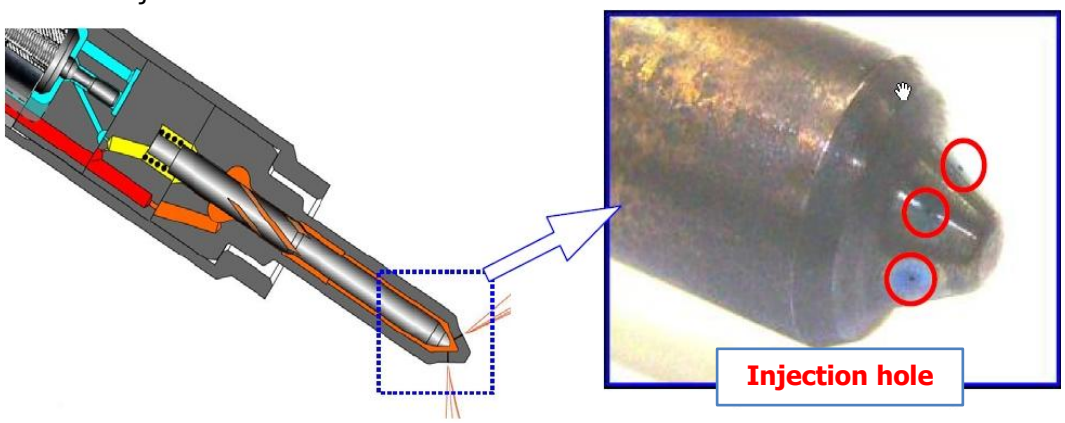
- Injector back leak test : OK
- Some corrosion on cylinder head by vehicle flooded

♠ *Possible Causes*

- Partly clogged Injector nozzle

♠ *Troubleshooting*

- Replace all 5 Injectors



- Injection hole could be blocked in case of water intrusion into cylinder
- Injection hole could be blocked by engine oil in case of vehicle turn over
- No. of Injection hole (D27DT : 5EA, D20DT : 6EA, D27DPT : 7EA)

♠ *Recommendation*

- In case of blocked injection hole, its very difficult to troubleshooting
  ; Can't be detected by Injector back leak test
- In case of flooded vehicle or vehicle turn over, replace all Injector with new one
- In case of flooded vehicle, replace vacuum modulator at the same time.

Turbo Charger Whistle Noise_Case 1

♠ *Vehicle Information*

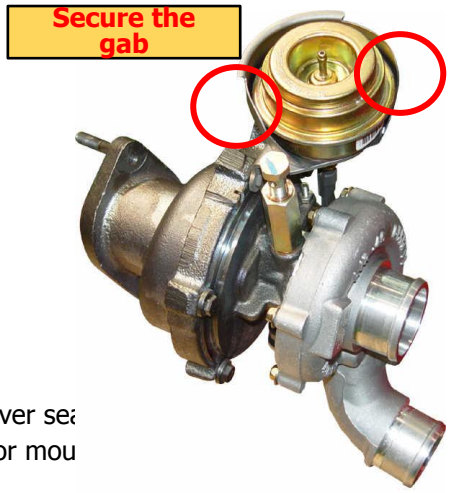
MODEL	SYSTEM	S.G.N
KYRON	D20DT ENGINE	

♠ *Symptoms*

- Wind noise from engine front side (intake manifold) at accelerating at the vehicle speed of 40 ~ 80 km/h (over 1,500 RPM) continuously
- Distinguishable noise tone compare to normal operation sound of D20DT VGT turbo inlet
- This noise seems to come from EGR valve side if you seated at driver seat

♠ *Possible Causes*

- Interference noise between turbo charger vacuum actuator and mounting bracket



♠ *Troubleshooting*

- Fixed the interference of mounting bracket with screw driver

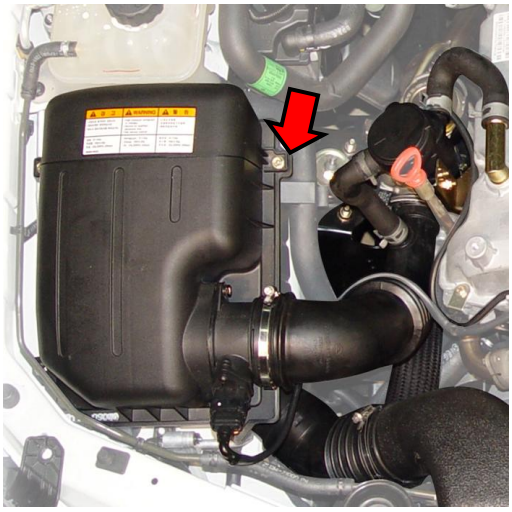
♠ *Remark*

- This noise seems to come from EGR valve side if you seated at driver sea
- In case of poor installation of air clear housing (gab caused by poor mou there could be similar whistle noise

Check Details

▶ Field Case : Whistle noise from air cleaner housing

- **Symptom** : Wind noise from engine front side (intake manifold) at accelerating (over 1,500 RPM) caused by air cleaning housing leak due to poor workmanship while air cleaner replacement
- **Repair History** : No result after replacing Tharger, EGR valve and Vacuum Modulator several times
- **Possible Causes** : Unexpected air input casused by air cleaner housing leak
- **Troubleshooting** : Reinstall air cleaner housing (housing bolt tightening torque : 4.2 ~ 6.2 Nm)



NOTICE

✓ **When air clear housing bolts are over tightened beyond specification, it could damage the nut of housing lower part and air leakage**

✓ **In case of mis-installation or installation of wrong part (ex, Rodius air clear element) ; housing will be get loose due to thickness difference**

Turbo Charger Noise_Case 2

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
REXTON II	D27DTP ENGINE	

♠ *Symptoms*

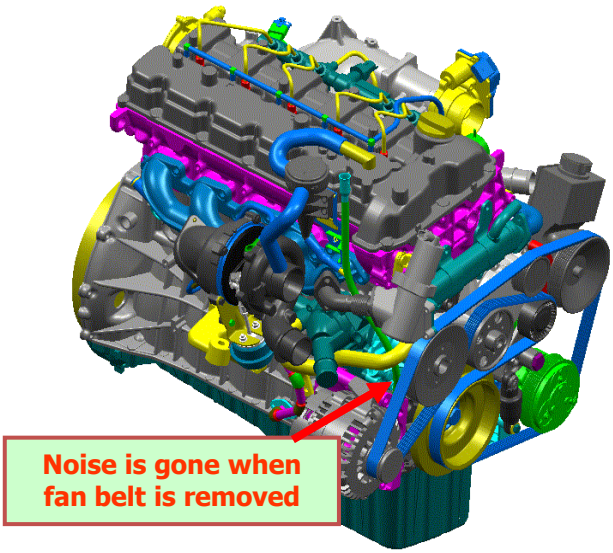
- Whistle noise (beep sound) from engine front side at accelerating at the vehicle speed of 40-50 km/h (between 1,000 ~ 2,000 RPM) like turbo charager noise
- Noise can be heard at engine stall test (around 1,800 RPM)
- Noise is severe at cold engine than hot engine
- Normal (no noise) at engine idle condition
- **Noise is gone when fan belt is removed**

♠ *Possible Causes*

- Noise comes from idle pulley bearing

♠ *Troubleshooting*

- Check whether noise is disapperared after removing engine fan belt, EEGR valve one by one Also should check clamps and bolts of IN/EX hose

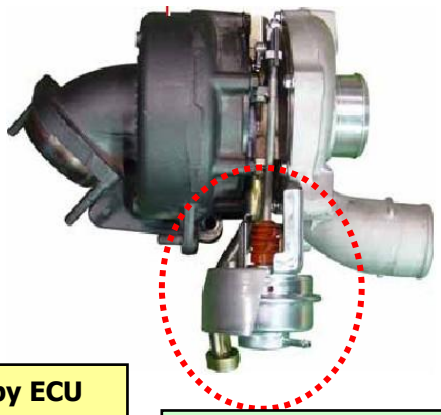


Check Details

▶ Characteristic of Rexton II (D27DPT) Turbo Charger

1) Noise Characteristic

At accelerating over 1,000 RPM, there is whistle sound It means that turbo charger works normally. Also, at releasing accel. Pedal (tip-out) suddenly, there would be exhaust harsh sound such as "shriring ~ " and sould level will be different according to vehicle variation, road condition and engine temp. (Before engine warm-up, sould level could be bigger than hot engine condition)



Point : Turbo Charger on D27DTP engine is controlled by ECU PWM signal according to combustion condition, engine temperature and so on. This lead to a little bit different sound tone at turbo charger operating

2) Operation Principle

Engine Status	Modulator Duty (%)	Vane Control Actuator	Vane Passage
Low load & low rpm	0.75 (Duty Increases)	Pulling (Vacuum Applies)	Narrow
High load & high rpm	0.45 (Duty Decrease)	Return (Vacuum Release)	Wide

Precautions when removing and installing Tire Wheel Nut

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
ALL	CHASSIS	

♠ *Symptoms*

Impossible to remove Tire wheel Nut

♠ *Possible Causes*

Mounting Bolt and Nut damaged due to inflow inside of bolt/nut when removing and installing tire wheel nut

♠ *Troubleshooting*

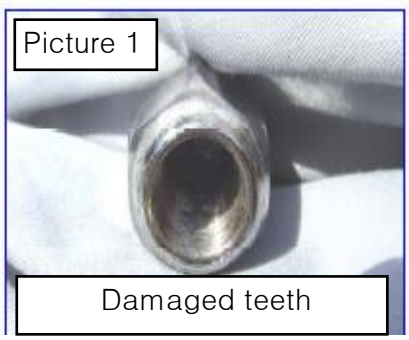
1) Remove metal chip completely before installing Tire wheel Nut
2) Tighten Nut after pre-install wheel nut with hand

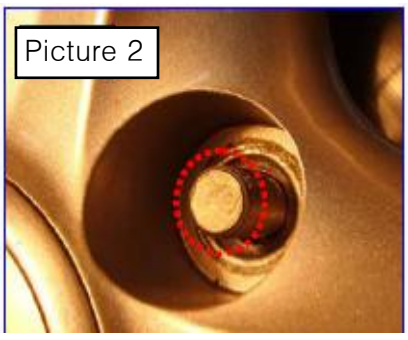
Check Details

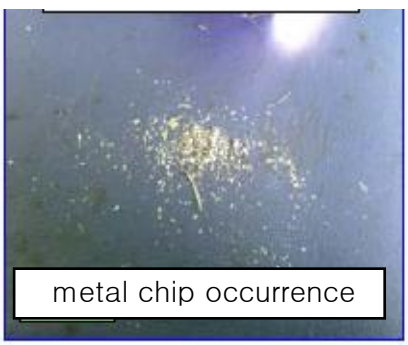
▶ *Precautions*

Remove metal chip completely before installing Tire wheel Nut

▶ Picture







How to check DC5 speed A/T DTC code

♠ ***Vehicle Information***

MODEL	SYSTEM	S.G.N
ALL (DC 5 speed A/T)	TRANSMISSION	

♠ ***Symptoms***

* DC5 speed A/T Inspection or action per the situation of affairs

♠ ***Inspection or action per the situation of affairs***

Vehicle State	DTC	Inspection / Action
Shifting D3 ↔ D4 faulty	P2503 Faulty recognition of currently selected gear	1.Check the related harness for open, short and contact. 2.Check shift pressure solenoid valve 3.Replace Valve body
D4 Shifting at below 50 km after indicating 'D' at D3→D4 or D4→D5 shifting point	P2500 Invalid transmission gear ratio P2502 Poor gear mesh, transmission slip P220A Abnormal speed sensor output signal(N2, N3)	1.same After reset in same condition 2.Check Oil quantity 3.Replace valve body 4.Replace A/T
Not displaying shifting grade at instrument cluster and impossible driving, Emergency mode go into while driving(Holding:D)	P2105 3-4 shift solenoid valve - short	1.Check the related harness for open, short and contact. 2.Adapter Plug Locking not contract
Impossible vehicle forwading,reversing	P2500 Invalid transmission gear ratio P2502 Poor gear mesh, transmission slip	1.T/C internal part burned
Emergency mode while driving(holding:D)	P2200 T/M Oil temperature sensor - short P2203 Faulty speed sensor N3 signal P220A Abnormal speed sensor output signal(N2, N3)	1.Check the related harness for open, short and contact. 2.Electric Kit damage
	P2100 Defective 1-2, 4-5 shift solenoid valve P2106 Defective lockup clutch solenoid valve	1.Check the related harness for open, short and contact. 2.Check solenoid resistance 3.Replace Electric KIT, Solenoid valve
	P2106 Defective lockup clutch solenoid valve	1.Check the related harness for open, short and contact. 2.Check lock up valve resistance 3.Check Electric KIT
	Defective modulator pressure solenoid valve P2221 Abnormal T/M oil temperature sensor signal	1.Check the related harness for open, short and contact. 2.Check module pressure valve resistance 3.Check Electric KIT

How to check when DC 5 speed A/T go into Emergency mode

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
Rexton, Kyron, Rodius	DC5 A/T	

♠ *Symptoms*

shifting meter of instrument cluster not display normaly(D1~D5), only D display
==> Holding for protection A/T (Emergency mode going into)
when diagnose with scan-100
: P2106 lockup solenoid abnormal / P2101 1-2,4-5 Shifting solenoid valve short

♠ *Possible Causes*

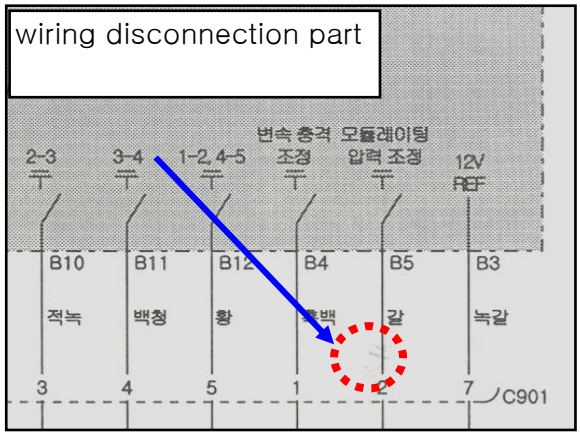
disconnected No7 wiring of C901 connector

♠ *Troubleshooting*

① Check A/T oil quantity -> Normal
② Measure resistance of each solenoid valve after disconnecting C901 connector => normal
③ Measure resisance in TCU connector after connecting C901 connector
※ *when shaking C901 connector, No 7 wiring disconnected*

Check Details

▶ *Maintenance guide*



Firstly measure resistance in TCU side, and then Measure C901 connector
Resistance value of A/T solenoid valve can be changed highly according to A/T inner part temperature

* Check fully beforehand, because You can misjudge "A/T inside defect" above phenomenon

※ Check TCU sensor data value {Scan-100}
- TCU solenoid supply voltage indicate 3.9 volt when go into A/T emergency mode
- 3.5 volt indicated when NO 7 wiring of C901 connector disconnected

MB 5 speed A/T N2, N3 abnormal speed sensor

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
ALL (DC 5 Speed A/T)	CHASSIS	

♠ *Symptoms*

1. Speed indicator of Instrument cluster does not display (Emergency Mode)
2. Intermittently occurrence (1 or 2 time per month) Occurrence interval shorten gradually,
   Recovered normally when Key OFF/ON,
3. TCU Trouble code P0700 TCU signal abnormal
4. Mainly occurrence in car of long driving distance

♠ *Possible Causes*

※ Dust powder: Generation due to inside coating peeling off of mission oil cooler pipe
(Not inner part particular of mission)

♠ *Troubleshooting*

1. Check A/T Oil quantity
2. Check wiring contract condition between TCU and N2, N3 sensor
   (Check C901 connector↔Adaptor, Check Plug↔Electric Kit wiring)
3. Check dust powder on N2,N3 sensor after removing valve body
4. Remove and Clean Foreign particular foreign particular on N2,N3 sensor of Electric KIT, and then install valve body, and then check normal operation

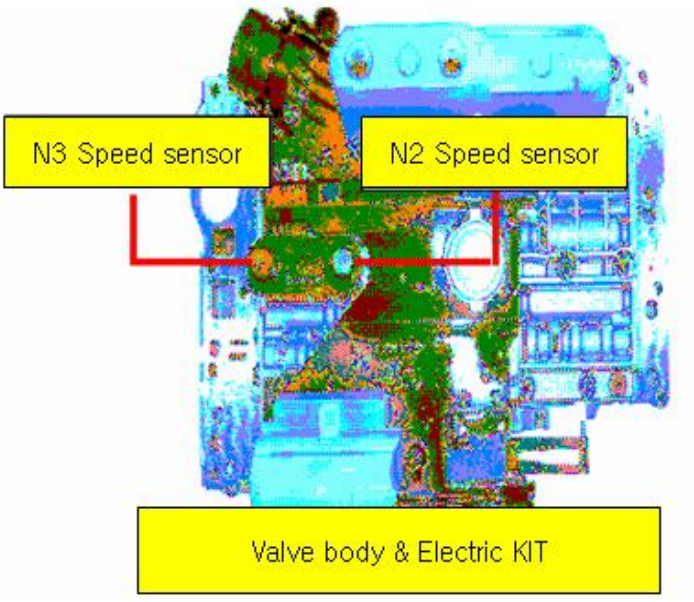
** In that case foreign material attached on N2,N3 sensor is magnetism, It may cause Sensor malfunction
** If necessary, replace mission filter

Check Details

▶ *Refer*

N3,N2 Speed sensor
Speed sensor is located in upper part of electric KIT, Sensor signal part is installed while keeping equality distance with front carrier gear
N3 speed sensor senses sun gear speed of front carrier gear
N2 Speed sensor senses the speed of carrier of front carrier gear

▶ *Picture*



How to distingush T/C motor

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
ALL	CHASSIS	

♠ *Symptoms*

Comes on 4wd check light
Impossible to change 4wd mode

♠ *Possible Causes*

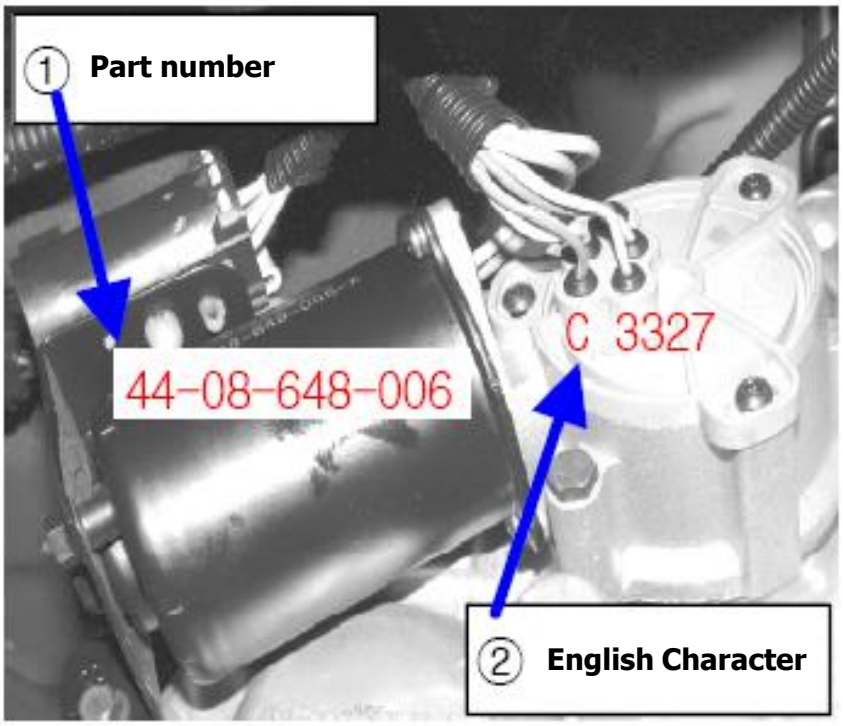
installed different specification T/C motor

♠ *Troubleshooting*

	Part time	TOD
Part number	4408.648.006	4423.648.004
Operate position	2H,4H,4L	4H, 4L
How to Distingush	① distingush marked on the suface of motor ② distingush marked on connector housing (C: Part time, B: TOD)	

Check Details

▶ *Picture*



Impossible to change from 4H to 2H

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
ALL	CHASSIS	

♠ *Symptoms*

Impossible to change 4H --> 2H while driving

♠ *Possible Causes*

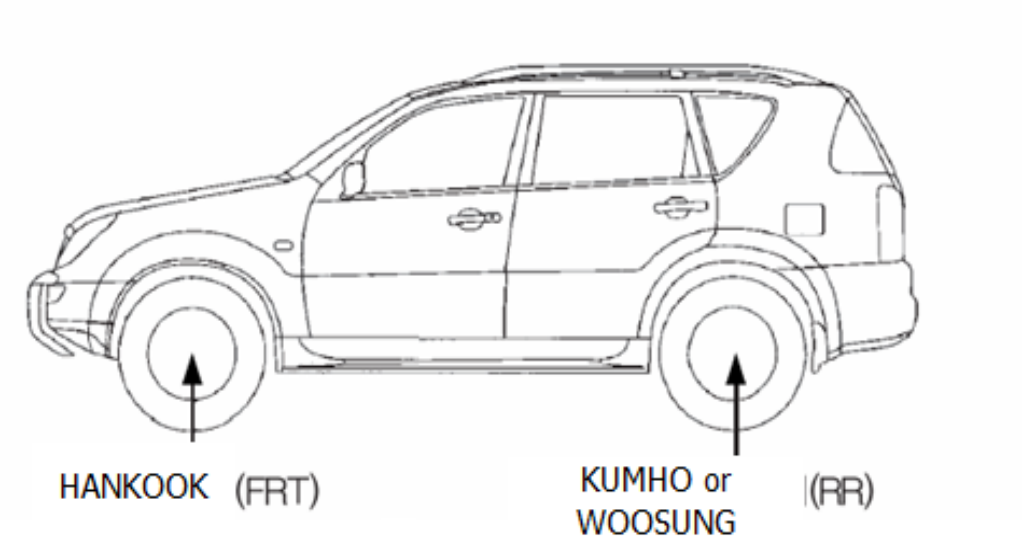
equipped with another specification tire
(front : equipped Hankook, Rear : equipped woosung or Kumho)

♠ *Troubleshooting*

Install Same Tire bland

Check Details

▶ *Picture*



In that case 4WD vehicle,
power train can be damaged while high speed driving because it is impossible to absorb front/rear speed or rotation difference
Conversion is delayed due to occurrence Wind up Phenomenon of power train system of transfer case or auto locking hub when changing to 2wd again

Tire supplier is 3
front : equipped Hankook, Rear : equipped woosung or Kumho
Tire size is same, but tire external diameter is different due to manufacture standard tolerance of manufacture company

Precaution

to protect same defect reoccurrence,
must use same company and same specification tire after checking brand and Tire external diameter

New REXTON under part Noise

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
New REXTON	CHASSIS	199007

♠ *Symptoms*

Noise occurrence at the lower part of body when engine start/off and
① while idling(Parking)
② when engine start/off
③ when driving uneven road

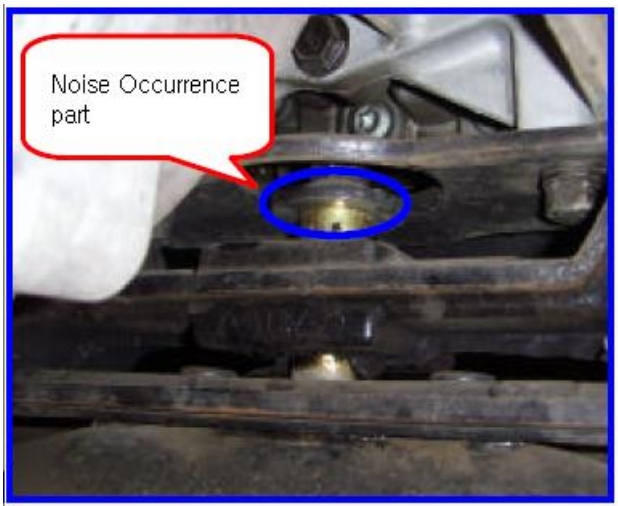
♠ *Possible Causes*

Interference noise between steel tube and washer

♠ *Troubleshooting*

Insert plane washer to separate steel tube mounting nut (14mm) After removing insulator
Washer specification: Φ14.5 Plain washer

Check Details



Interference noise between steel tube and washer

Insert plain washer after disassembling insulator

4WD Abnormal

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
ALL	CHASSIS	

♠ *Symptoms*

Impossible to change 2H --> 4H

♠ *Possible Causes*

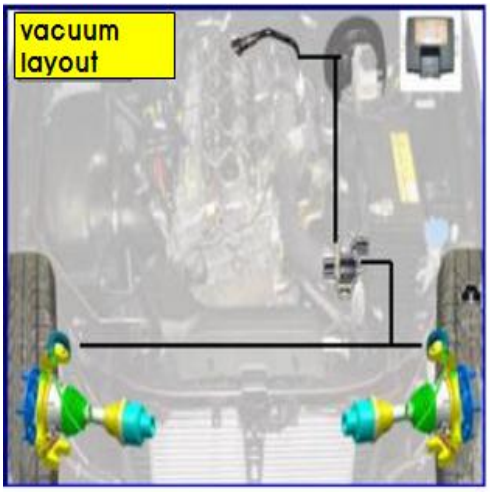
Vacuum leakage

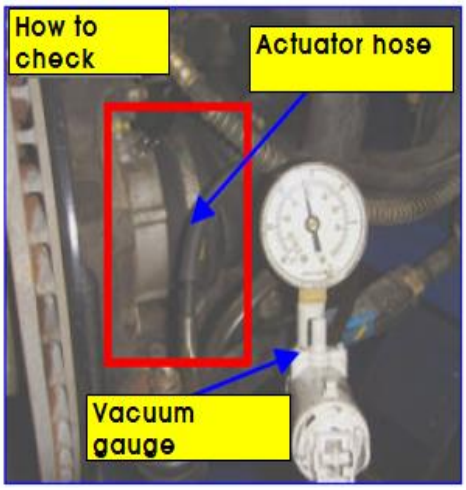
♠ *Troubleshooting*

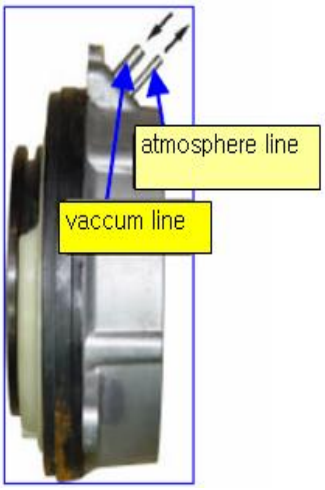
Refer to the below instruction

Check Details

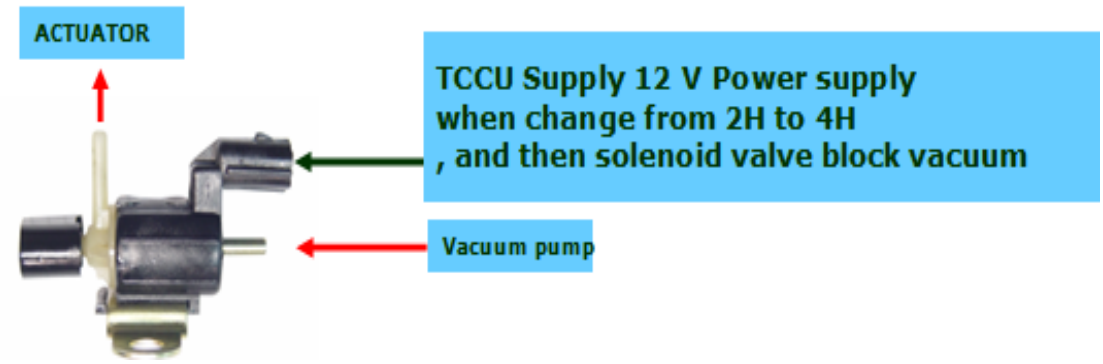
▶ *Picture*







1)stop the engine While 2wd mode, and then remove front left and right tire
Remove hose connected in locking hub actuator
2)Check if vacuum is made with vacuum gauge
(Normal if vacuum keep up approx 30 second)
3)Check also if vacuum is maintained in locking hub actuator with vacuum gauge
※If minute leakage occurred, it may cause clink noise due to poor 4WD engage



TGS LEVER bearing bushing part supply

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
ALL	CHASSIS	

♠ *Symptoms*

Noise occurrence while driving due to TGS lever bearing wear
Especially occurrence at that time Mileage 50,000 ~ 60,000 km

♠ *Possible Causes*

TGS lever bearing wear

♠ *Troubleshooting*

Part number : 2029920010
Part Name: Bushing
No relation DURA lever and BTRA TGS LEVER

Check Details

▶ *Picture*

< TGS LEVER ASS'Y >

< TGS LEVER Bearing Bushing >

REXTON II Poor shifting

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
REXTON II	CHASSIS	372101

♠ *Symptoms*

① Poor shifting from 2 speed to 3 speed while driving
② When shifting from 2 speed to 3 speed, Impossible to shift after rasing 3000RPM~4000RPM

♠ *Possible Causes*

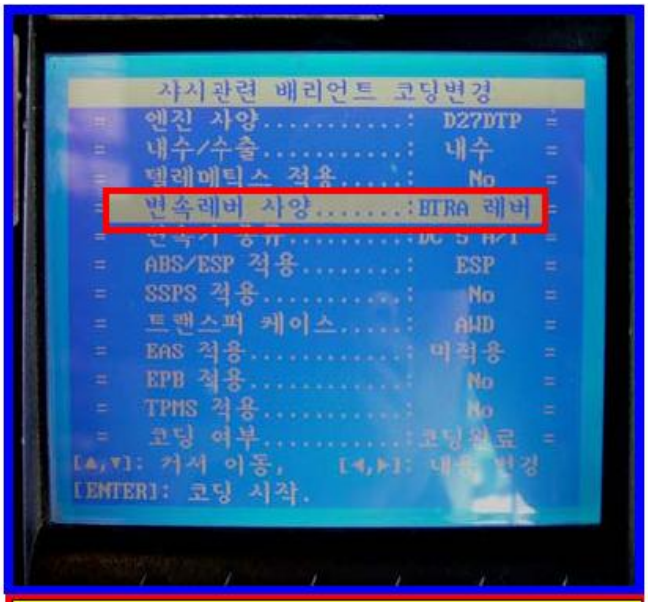
Chassis variant coding error : Shift lever coding "BTRA"

♠ *Troubleshooting*

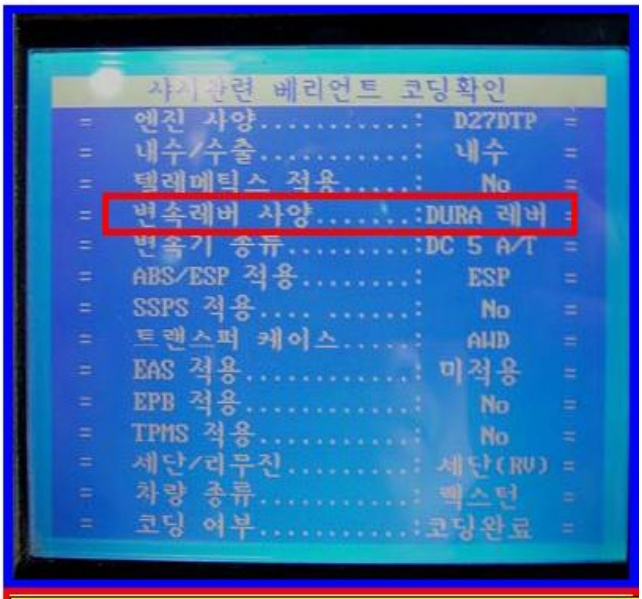
① No DTC code
② A/T Oil quantity check : Normal
③ Change ECU chassis variant coding : "BTRA" ----> "DURA"

Check Details

▶ *Picture*



Shift leve coding error



Shift leve coding change

Limp Home Mode by abnormal vehicle speed sensor

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
ACTYON	CHASSIS	364001

♠ *Symptoms*

Car derived only D1(Limp Home Mode), Speed gauge of Instrument cluster not operating (0 km standstill)

♠ *Possible Causes*

Wheel speed sensor connector poor contact

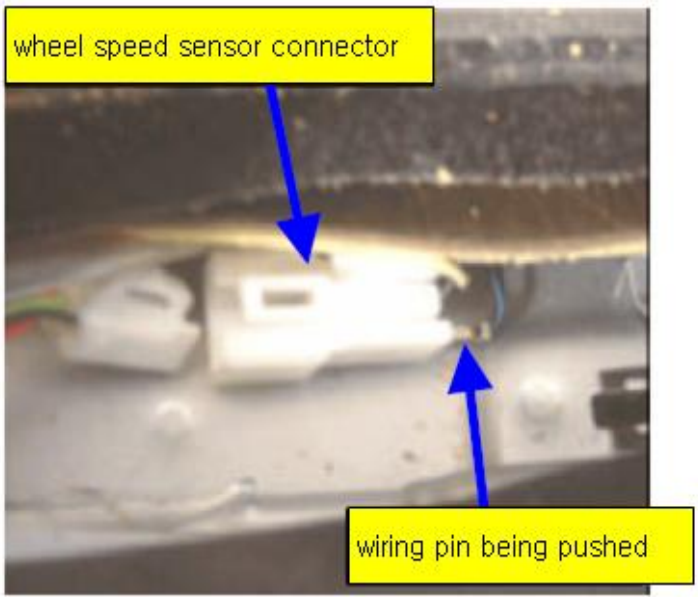
♠ *Troubleshooting*

① When test driving, above phenomenon not reoccur (customer complain that occurred intermittently)
② When ECU diagnosis, TCU signal abnormal (history code) / No TCU trouble code
③ RR RH wheel equipped wheel speed sensor : connector verified poor contact

Check Details

▶ *Occurrence cause*

- If Wheel speed sensor equipped at RR RH wheel occurred vehicle speed error,
"speed meter of Instrument cluster not operating and Limp Home Mode go into
(Refer : Vehicle not equipped with ABS can not possible to diagnose with scan-100)



Tightening torque of vehicle lower part

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
ALL	CHASSIS	-

♠ *Symptoms*

Noise occurrence while driving

♠ *Possible Causes*

Loosen Tightening Torque

♠ *Troubleshooting*

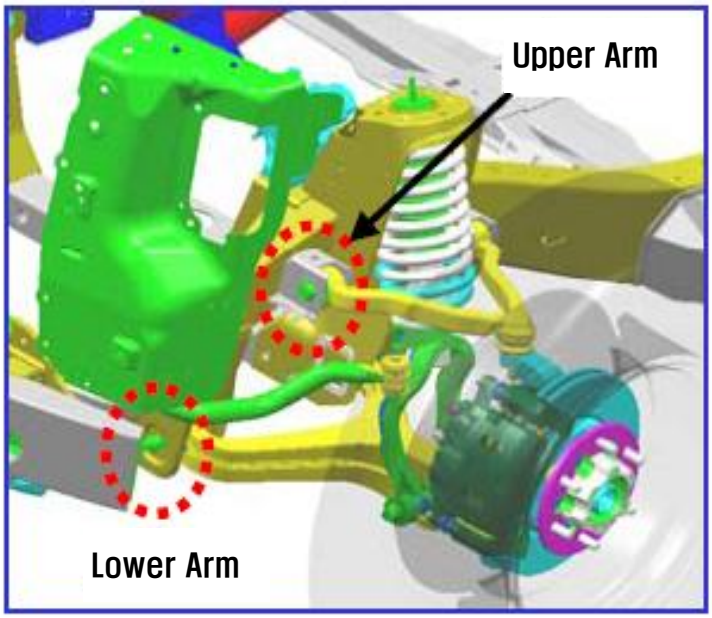
Specified tightening spec (REXTON II, New KYRON, Actyon, Actyon Sports)

classification	Lower Arm (22mm * 4ea)	Upper Arm (19mm * 2ea)	Steering Lingkage (19mm * 7ea)	others
spec	22 kgf.m	11 kgf.m	10~13 kgf.m	Refer : Service manual

Check Details

▶ *precautions*

When tightening chassis part mounting bolt & nut, Tighten with specified torque with torque wrench surely



REXTON II Air con Gas leakage

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
Rexton II	CHASSIS	6862

♠ *Symptoms*

Cold wind not come when using Air conditioner

♠ *Possible Causes*

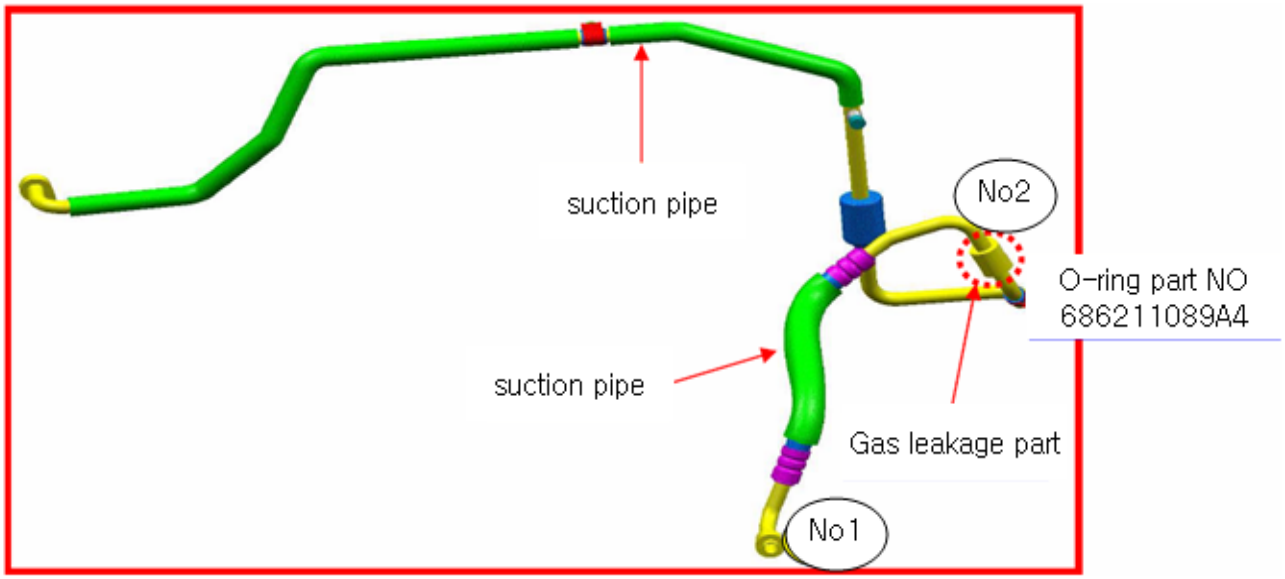
Air con Gas leakage at Air con suction hose & suction pipe

♠ *Troubleshooting*

1) Chek if O-ring damaged after loosening No 2 Nut (10mm), If damaged, Replace O ring
2) Loosen No 1
3) Assemble No 1 After assembling No 2 Nut(10mm)

Check Details

▶ *picture*



Noise occurrence when depressing brake pedal fully

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
Rexton II	CHASSIS	

♠ *Symptoms*

Noise occurrence when depress brake pedal fully

♠ *Possible Causes*

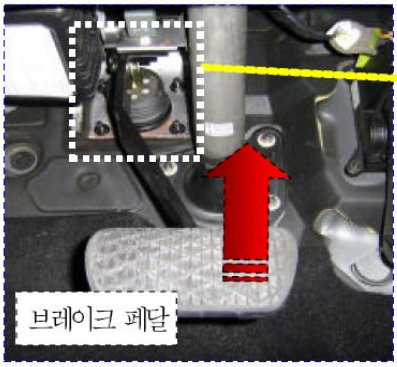
Being push occurrence between brake pedal return spring and brake pedal bracket when depressing brake pedal fully

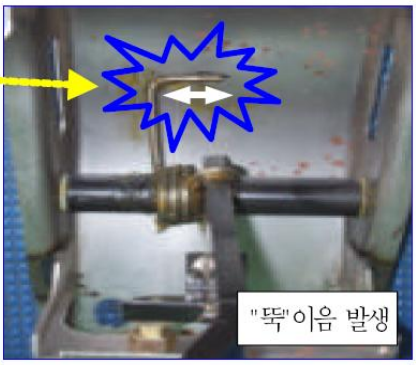
♠ *Troubleshooting*

Attach pad after applying grease between brake pedal return spring and brake pedal bracket

Check Details

▶ *Picture*





Rework case due to diagnosis error regarding brake system

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
REXTON II	CHASSIS	

♠ *Symptoms*

Same phenomenon occurrence after repairing regarding Intermittently brake problem (brake pedal hardness)

♠ *Possible Causes*

Brake badness occurrence by vacuum generation impossible due to boost vacuum hose connecting state bad

♠ *Troubleshooting*

- Check Vacuum pump and Vacuum line

- Brake boost check

1. stop the engine after idling for 1 ~ 2 minutes, at this time depress with normally power,
   1st time distance is big, 2nd time pedal distance become shooter better than 1st time,
   3rd time pedal distance become shorter better than 2nd time, at that case is normal
2. At this time, depress brake pedal several times in engine stop state,
   after that, start engine in brake pedal depressing state, at that time if brake pedal down, it is normal
3. Depress brake pedal While idling, at this state, stop the engine,
   if pedal height does not variable for 30 seconds, it is normal

Check Details

▶ *Picture*

DC A/T electric fault

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
RODIUS/STAVIC	CHASSIS	

♠ *Symptoms*

Indicated "D" on instrument cluster while driving or start engine again after engine off

♠ *Possible Causes*

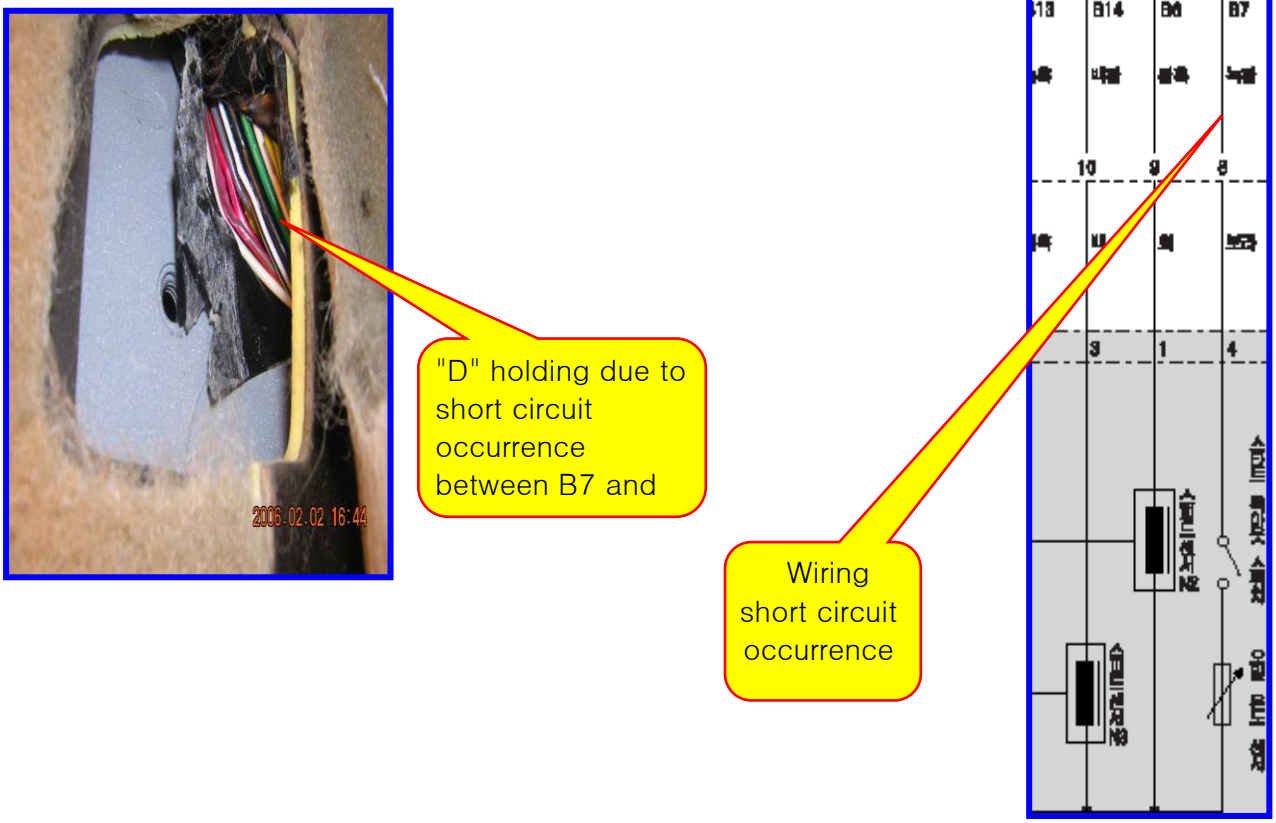
Interference occurrence between wiring and center console lower part

♠ *Troubleshooting*

① When diagnose TCU, P2220 (T/M oil temperature sensor short) appeared
② Check A/T OIL => Normal
③ Check adaptor plug installing state and connector pin => Normal
④ Check voltage B7 wiring of TCU side (oil temperature sensor) =>0.04mV(wiring short)
※ B7 wiring basic voltage (when KEY ON) : P,N=5V, R=1.364V, D=1.363V

Check Details

▶ *picture*



Trouble shooting for front hub noise occurrence

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
REXTON Ⅱ,KYRON, ACTYON/SPORTS(2WD Vehicle)	CHASSIS	

♠ *Symptoms*

When full turning while low speed driving, Noise occurrence at Front Huber

♠ *Possible Causes*

♠ *Troubleshooting*

- When checking, Off A/Con (Don't confuse Air con compressor operation noise)
- Retighten Front upper arm, Lower arm, etc
- Check Noise after removing and installing Tire

⇒ *If same phenomenon occurred, Replace retainer ring*

Check Details

▶ *picture*

Troubleshooting for front shock absorber

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
Actyon sports	CHASSIS	

♠ *Symptoms*

Noise come from in right front shock absorber while driving uneven road or depressing brake pedal

♠ *Possible Causes*

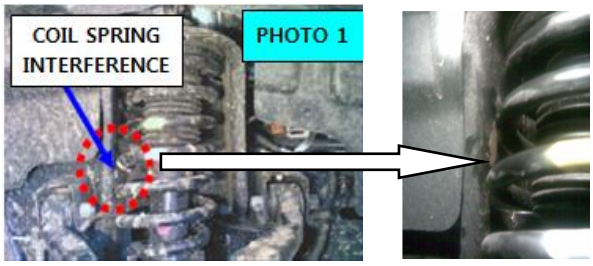
Interference between front coil spring and bracket when vehicle is bounced

♠ *Troubleshooting*

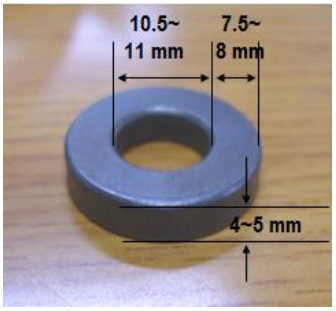
1. Check whether coil spring is interfered or not
2. Remove front shock absorber assembly
3. Insert plain washer at upper mounting of shack absorber (Interference upper part) : see the photo
4. Install front shock absorber

Check Details

▶ Picture



[Plain washer install location]



[Plain washer

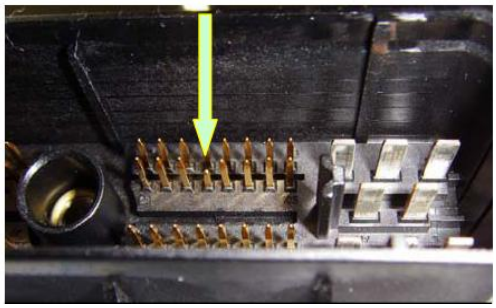
Coolant temperature rises while driving

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
ACTYON	D20DT	

♠ *Symptoms*

1) Coolant temperature gauge rises in sudden while driving
2) DTC (on ECU)
   H-P0644 - CAN Cluster error
   H-P0613 - TCU CAN data error
   H-P1115 - Coolant temperature sensor error



♠ *Repair History*

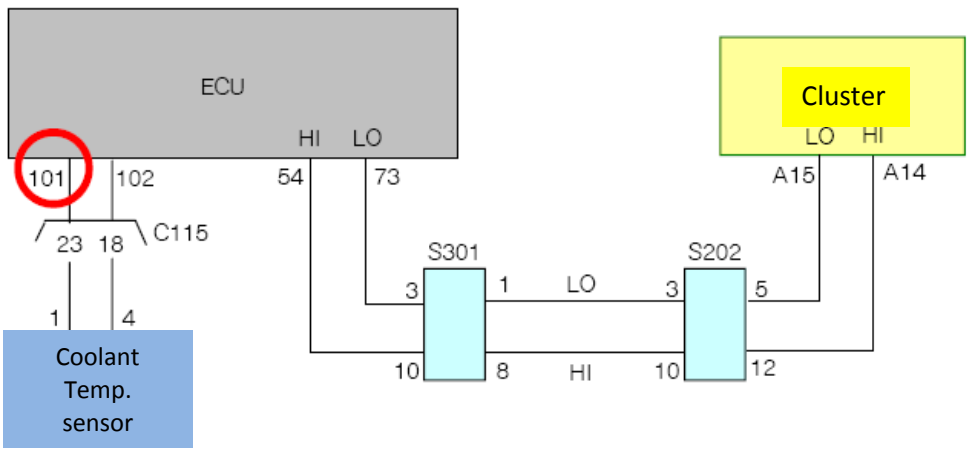
Engine room wiring replaced
Coolant temperature sensor replaced
Cluster ground retightened
Trouble symtoms remain same

♠ *Troubleshooting*

Coolant temp. sensor check by registance
Wring connection between coolant temp. sensor and ECU
Connector check by eyes : C115, ECU connector terminals
ECU Pin #101 was defectively connected : Intermittent connection failure

Check Details

▶ EWD for Actyon D20DT



Cooling Fan Noise at Cold Start

♠ *Vehicle Information*

MODEL	SYSTEM	S.G.N
RV ALL	D20DT	

♠ *Symptoms*

- Airbag warning lamp on
- DTC : Driver & Passenger seat pretensioner low/high resistance

♠ *Possible Causes*

- Vehicle static electricity by occasion caused seat belt pretentioner resistance error

♠ *Troubleshooting*

Airbag warning lamp on (Dri/Pas seat belt pretensioner)

→ Clear SCAN 100 fault code → Battery disconnection

30 seconds ↓

Connect seat belt pretensioner → Connect the battery → Check the airbag warning lamp

No Warning lamp ↓ Trouble cleared

Warning lamp on ↘ Replace the seat belt assy

Electric wiring connection failure - DC5 A/T Electric Kit

♠ *Vehicle Information*

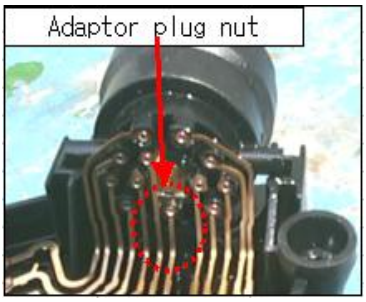
MODEL	SYSTEM	S.G.N
REXTON, RODIUS, KYRON	DC5 A/T	

♠ *Symptoms*

- Electrical Limp Home Mode
- Solenoid valve resistance are normal
- Electrical wiring short(open)
- Intermittent driving impossible
- Shifting shock

♠ *Possible Cause*

- Connection damaged by exterior vibration
- 7mm nut was stuck by high temperature



♠ *Troubleshooting*

- Check the electric circuit (Solenoid, Wiring from TCU to plug connector)
- Replace the electric kit

<P/No : 20327 00089>