

Tech Tip L-TT-0254-18

March 26, 2020

Air Conditioning System – Improved Component Inspection

USA

Service Category

Vehicle Interior

Section

Heating/Air Conditioning

Lexus

APPLICABLE VEHICLES

2015	IS250	2019-2021	UX250H
2015-2021	IS350	2018-2021	LS500
2015-2021	RX450H	2018-2021	NX300
2018-2020	GS300	2015-2021	ES300H
2015	IS250C	2016-2020	GS F
2015-2016	LS600H	2015-2021	ES350
2015-2018	CT200H	2015-2018	GS450H
2015-2021	LX570	2015-2017	LS460
2016-2017	GS200T	2021	LC500C
2015-2021	RC350	2018-2021	LC500H
2015-2021	RC F	2015-2017	NX200T
2019-2021	UX200	2016-2017	RC200T
2015	IS350C	2018-2021	LC500
2016-2021	IS300	2015-2020	GS350
2015-2021	GX460	2015-2021	RX350
2018-2021	LS500H	2016-2017	IS200T
2015-2021	NX300H	2016-2021	RC300

CONDITION

In certain cases of leaking air conditioning systems, the root cause of the leak is inadvertently overlooked, causing a repeat repair. To improve customer satisfaction and repair A/C system leaks in one dealer visit, Toyota has developed a set of guidelines for evaluating A/C system components.



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RECOMMENDATIONS

2) Inspect for O-ring Abnormality

- Remove the O-ring from pipe/component for inspection.
- Using a plastic pick tool to remove O-ring and prevent damage to mating part.



Use a non-metallic tool for O-ring removal.



Using a metallic tool could result in damage to other components

OK Part* - Line at middle of O-ring is straight with no deformation. No tears, or crushed areas. *O-rings should be replaced anytime they are removed from a pipe/component to prevent leaks and foreign material.

Twisted O-Ring – **No Good Part** Line at middle of O-ring is not straight.

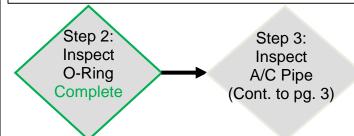


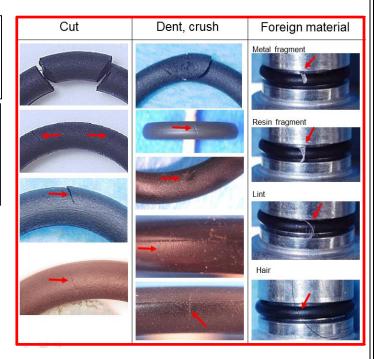


Cut/Dent/Crush – **No Good Part**O-ring damaged by another component.
Replace O-ring, proceed with A/C Pipe Inspection.

Foreign Material No Good Part O-ring contaminated by material outside A/C system.

Replace O-ring, proceed with A/C Pipe inspection.





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3) - Inspect for A/C Pipe Abnormality

OK Part - Light scratching parallel with O-ring groove. This is caused by normal part processing. Pipe is ok to reuse.



Damage - No Good Part

Pipe is damaged due to deep scratching or gouge of base metal. Pipe replacement is recommended to prevent repeat repair.

Foreign Material – OK Part Pipe has foreign material stuck to it. Material can be cleaned off using a non-metallic tool and the pipe is ok to be reused.







Resin fragment



Corrosion - No Good Part Pipe is damaged due to corrosion of base material. Pipe replacement is recommended to prevent repeat repair.

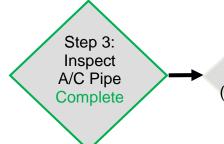






White and yellow materials adhered (Corrosion product)

Damages (scratches) in axial direction and discoloration (black)



Step 4: Inspect Mating Components (Cont. to pg. 4,5,6)

- 4a Compressor Inspection Pg.4
- 4b Expansion Valve Pg. 5
- 4c Condenser Inspection Pg.6



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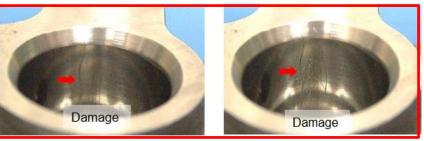
4a) - Inspect for A/C Compressor Abnormality

OK Part - Light scratching parallel with O-ring groove. This is caused by normal part processing. Compressor is ok to reuse.



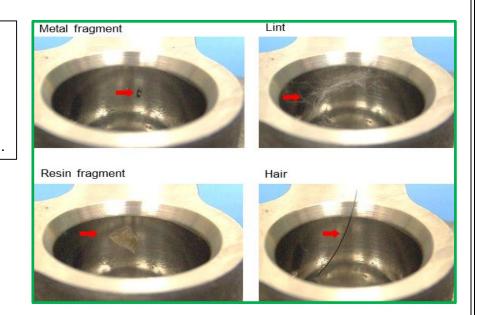
Damage – No Good Part
Compressor seal bore is damaged
due to deep scratching
perpendicular to O-ring groove.

Compressor replacement is recommended to prevent repeat repair.



Foreign Material – **OK Part** Compressor has foreign material stuck to seal bore.

Material can be **carefully** cleaned off using a non-metallic tool and the compressor is ok to be reused.





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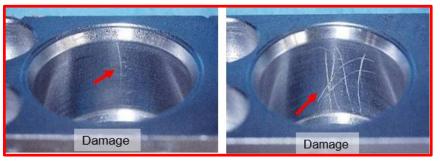
4b) - Inspect for Expansion Valve Abnormality

OK Part - Light scratching parallel with O-ring groove. This is caused by normal part processing. Expansion valve is ok to reuse.



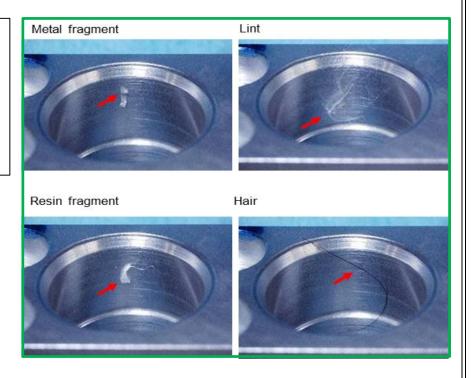
Damage – **No Good Part**Expansion valve seal bore is damaged due to deep scratching perpendicular to O-ring groove.

Expansion valve replacement is recommended to prevent repeat repair.



Foreign Material – **OK Part** Expansion Valve has foreign material stuck to seal bore.

Material can be **carefully** cleaned off using a non-metallic tool and the expansion valve is ok to be reused.





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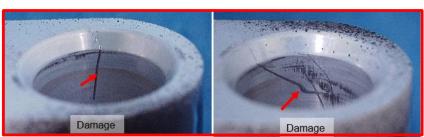
4c) - Inspect for Condenser Abnormality

OK Part - Light scratching parallel with O-ring groove. This is caused by normal part processing. Condenser is ok to reuse.



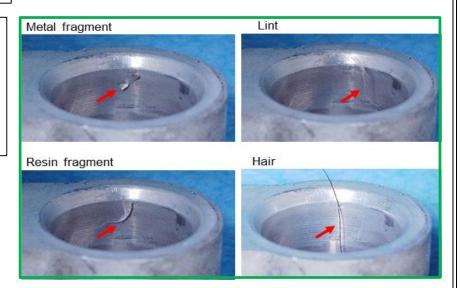
Damage – **No Good Part**Condenser seal bore is damaged
due to deep scratching perpendicular
to O-ring groove.

Condenser replacement is recommended to prevent repeat repair.



Foreign Material – **OK Part** Condenser has foreign material stuck to seal bore.

Material can be **carefully** cleaned off using a non-metallic tool and the condenser is ok to be reused.



Corrosion – **No Good Part** Seal bore is damaged due to corrosion of base material.

Condenser replacement is recommended to prevent repeat repair.



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