

LACMTA 45CLFW: AC Solenoid Valve Relocation



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Property and Top Bus Number: LA 45CLFW-05, 315000



Issue: Periodic hammering noise inside the HVAC unit when the solenoid valve closes.

Reason/ cause: The coolant solenoid valve inside the HVAC unit was the source of the noise.

Solution: Remote mount the HVAC solenoid valve per this work instruction (SOI).

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Number of affected buses: as required

Estimate repair hours/bus: 2 hours

Necessary parts:

Elbow, 45, -12MP -12FP, Brass,	NABI Part #: 416.02.1313.901,	1 / bus,
Hose barb, -16HO, -12MP, Brass,	NABI Part #: 416.00.3804.940,	1 / bus,
Nipple, -16MP, -12MP, Brass,	NABI Part #: 700-1376-006,	1 / bus,
Elbow, 45, -16MP -16FP, STR, Brass,	NABI Part #: 700-1375-014,	1 / bus,
Jumper cable, TK supplied,		
Solenoid valve, TK supplied,		
Slotted bar, 90, 2 slot x 4 slot,	NABI Part #: 700-2307-001,	1 / bus,
P-Clamp, #10 Type F, 1-1/2" Clamp,	NABI Part #: 500-1375-050,	1 / bus,
Stud, 1/4-20 x 1" adhesive backed,	NABI Part #: 5016087,	1 / bus,
Nut, 1/4-20, Hex, Zn, YW, Gr8,	NABI Part #: 200420,	2 / bus,
Washer, Flat, 1/4, Zn, Gr8,	NABI Part #: 2604,	2 / bus,
Washer, lock, 1/4, Zn,	NABI Part #: 2504,	2 / bus,
PC-120 primer,	NABI Part #: 5016117,	as required,
Plexus AO420, adhesive,	NABI Part #: 5016116,	as required,
Wire tie, 14", Aqua, Hi temp,	NABI Part #: 5001036,	6 / bus

Necessary tools:

Regular hand tools (sockets, wrenches, etc.), angle grinder, 60G abrasive disc, Plexus gun, rag

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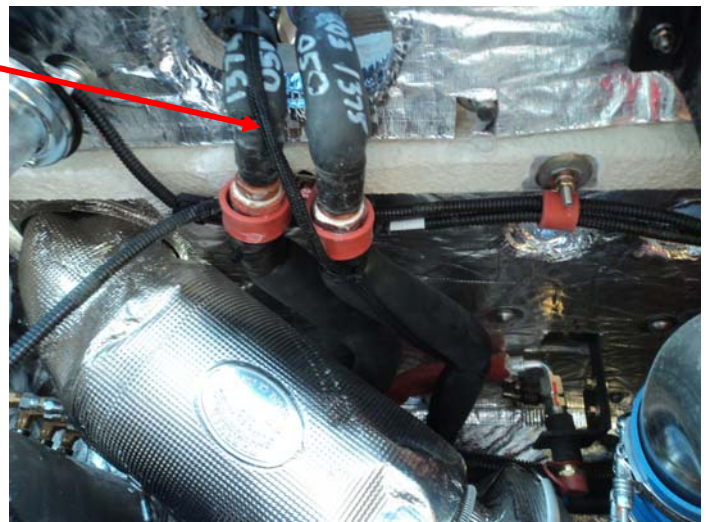
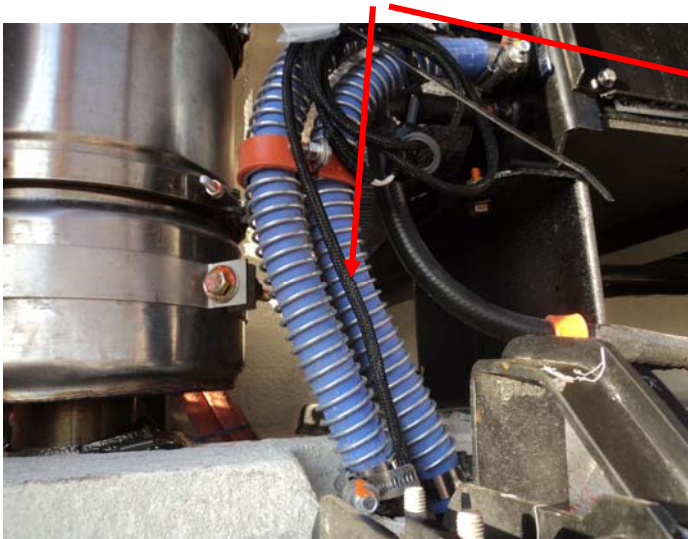


SAFETY PRECAUTIONS MUST BE FOLLOWED ACCORDING TO ACCEPTED INDUSTRY STANDARDS AND LOCAL/PROPERTY REQUIREMENTS.

1. Park the bus and apply the parking brake.
2. Turn off main battery disconnect switch.
3. Drain the coolant at the bottom of the radiator. **Follow the safety and technical recommendations of NABI Maintenance Manual.**
4. Contact local TK service center about reworking the solenoid valve inside the TK unit.



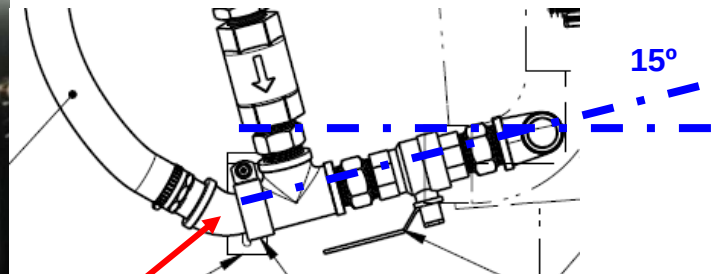
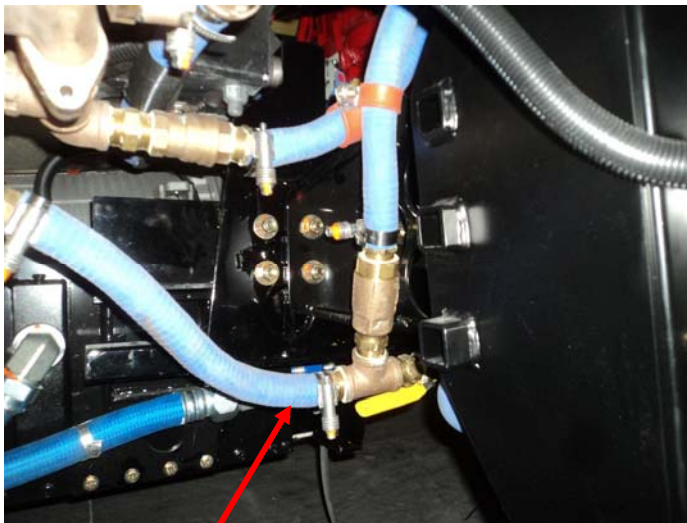
5. The TK representative has to disassemble the valve and remove inner parts (diaphragm, piston, spring, etc.) then reinstall valve housing cap and connect the jumper cable to the bus-side harness.
6. Route the jumper cable from the TK unit to the radiator outlet pipe as pictures show below.



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7. Secure jumper cable to hoses with wire ties.
8. Open the street side access door behind the rear axle and locate the check valve assembly.

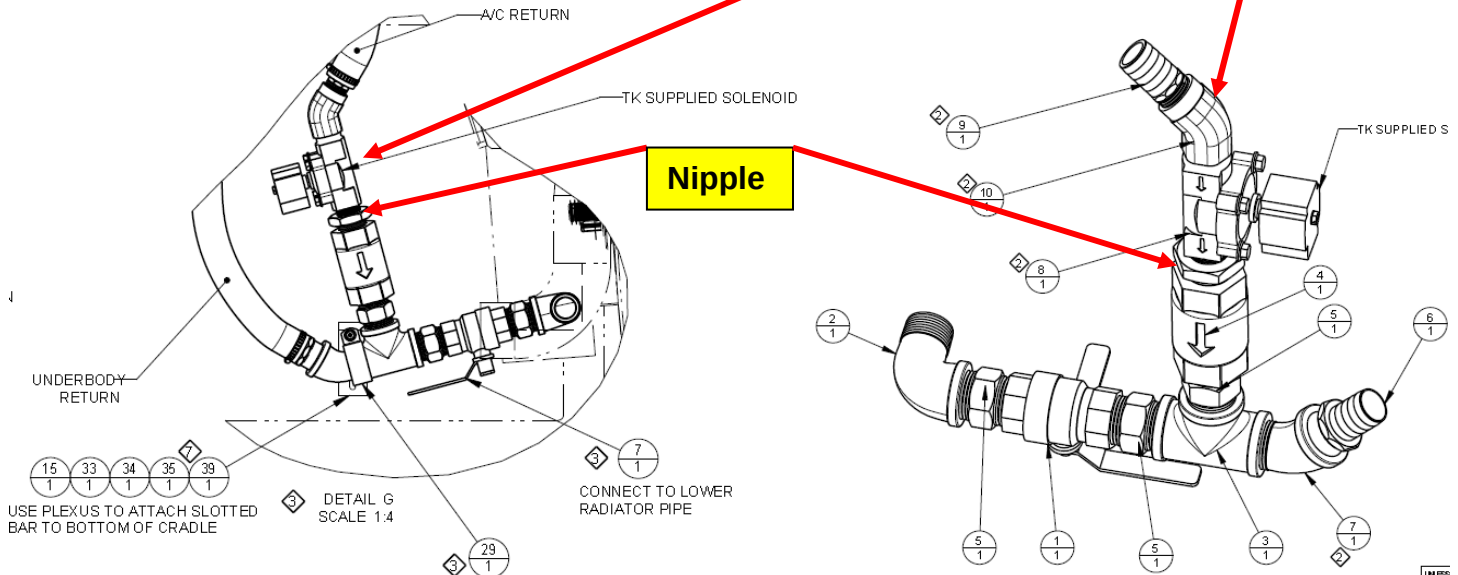


9. Remove hose from the front of the valve assembly.
10. Remove hose barb and install elbow 45, 16MP -16FP then reinstall hose barb into the elbow.
11. Rotate valve assembly down by 15 degree (see above). This is required to provide clearance to install the solenoid valve.
12. Reconnect forward hose to the valve assembly.
13. Remove hose from the top of the valve assembly.

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14. Remove hose barb and install a 16MP-12MP nipple, a new solenoid valve, a 12MP-12FP 45 elbow and a 16HO-12MP hose barb to the valve assembly.
15. Reconnect hose to the top of the valve assembly.



16. Install P-clamp and slotted bar bracket to the valve assemble as picture shows below.



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17. Mark the hole location of the slotted bar bracket on the bottom of engine cradle.
18. Install ¼-20 stud to the bottom of the engine cradle according to the followings:
 - Remove paint with 60G abrasive disc.
 - Degrease surface with denatured alcohol.
 - Apply PC-120 primer to the steel surface. Follow instructions on the can.
 - Apply Plexus-AO420 onto the stud and install it to the exact marked location. Ensure that the two components of the plexus adhesive are mixed correctly.
 - Let it dry for 20 minutes.
19. Install bracket to the stud with ¼ flat washer, lock washer and nut.
20. Remove all the tools from work area.
21. Check for completeness of work.
22. Refill and de-aerate cooling system per **NABI L3-FSV-026** work instruction.
23. Record bus number, date of repair and name of technician who completed the work.