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|--|---------------------------------------|------------------|-------------------------------|
| Subject: Coolant Hoses Replacement | | | |
| Field Change Program: Field Campaign | FCP Number: FCP 486 | Revision: | Date: 10/27/2020 |
| Coach Section: 06 - Cooling | P/N: 06-08-1006, 16-11-1970 | | Type: Safety Recall |

| | |
|--|--|
| Ref. NHTSA Recall No.: 20V-526 | Ref. Transport Canada Recall No.: 2020-501 |
|--|--|

Application:

| Coach Model | Model Year | VIN |
|--|------------|--|
| J4500 | 2017-2020 | 67759 - 68817, 68819 - 68148, 68150 - 68605, 68607 - 68617, 68619 - 68677, 68679 - 68690, 68692 - 68745, 68748 - 68771, 68773 - 68802, 68804 - 68876, 68878 - 68908, 68910 - 68934, 68936 - 68964, 68966 - 69517 |
| This bulletin does not apply to all coaches in the entirety. Please ensure to check the VIN range applicable for each section. | | |
| <i>This field campaign does not necessarily apply to all the above-mentioned coaches. The owners of the coaches affected by this field campaign will be advised by a letter indicating the Vehicle Identification Number (VIN) of each applicable coach.</i> | | |



Read this entire procedure before beginning work.

Use Safe Shop Practices at All Times.

To avoid personal injury:

- Proper Personal Protective Equipment (PPE) must be worn. Safety glasses and protective gloves are required for working with DEF Fluid.***
- Turn the main battery disconnect switch to the OFF position.***
- Ensure that both the front and the rear wheels are chocked.***
- Position the ENGINE RUN and ENGINE START switches on the engine compartment remote control box to the OFF position.***
- Allow enough time for components to cool down prior to working in the engine compartment.***

1.0 Description

Customer complaint:

Motor Coach Industries (MCI) has become aware that on certain J4500 coaches, the coolant hose elbows supplied by Purosil LLC are failing prematurely.

Cause:

The coolant hoses supplied by Purosil LLC have poor build quality.

Corrective action:

MCI recommends owners of the affected coaches have the following procedure performed to replace the coolant hose elbows and clamps supplied by an alternative vendor.

2.0 Coach configuration

| Scenario | Coach Model | VIN Range | Applicable rework section(s) | Applicable material requirement section(s) |
|----------|-----------------|-------------------------------------|------------------------------|--|
| 1 | ISX12 w/o E-Fan | Refer to Section9.0- Appendix | 5.0 and 6.0 | 5.1 and 6.1 |
| 2 | DD13 w/ E-Fan | | 5.0 and 8.0 | 5.1 and 8.1 |
| 3 | DD13 w/o E-Fan | | 5.0 and 7.0 | 5.1 and 7.1 |
| 4 | ISX12 w/ E-Fan | | 6.0 | 6.1 |
| 5 | DD13 w/ E-Fan | | 8.0 | 8.1 |
| 6 | ISX12 W/ E-fan | | 5.0 | 5.1 |

3.0 Material requirements

Refer to Sections 5.1, 6.1, 7.1, and 8.1.

4.0 Special tools

No special tools required.

5.0 HVAC Coolant hose replacement

This section impacts certain coaches equipped with ISX, DD13 engines, and electrical/mechanical fan cooling systems.

5.1 Material requirements

| ITEM | PART NO | QTY | U/M | DESCRIPTION |
|------|------------|-----|-----|--|
| 1 | 16-11-2768 | 1 | EA | Hose-Formed Hot Water Supply |
| 2 | 19-4-205 | 2 | EA | Clamp-Stepless Spring, Constant Torque, 1.56-1.77 DIA. |

5.2 Replacing the coolant hose

Remove and save the evaporator door in the Baggage Bay #3 compartment.



Remove and save the evaporator door

Remove the coolant from the cooling system to drain the coolant from the main heater core petcock.

Locate the evaporator hot water coolant hose, MCI P/N: 16-11-1970.



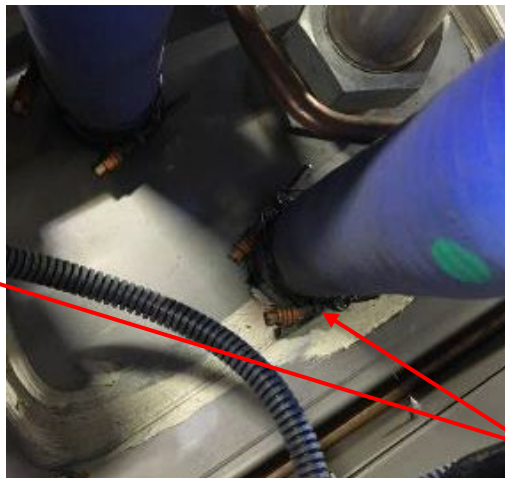
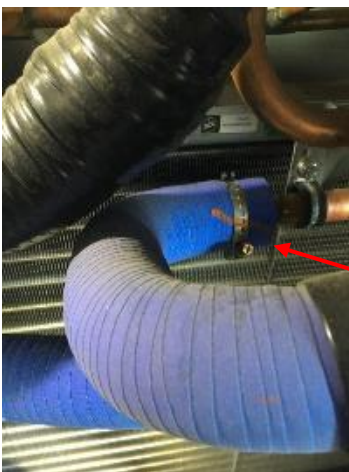
Locate the coolant hose 16-11-1970

Remove and save the nuts and bolts securing clamp on the coolant hose. Save the clamp.



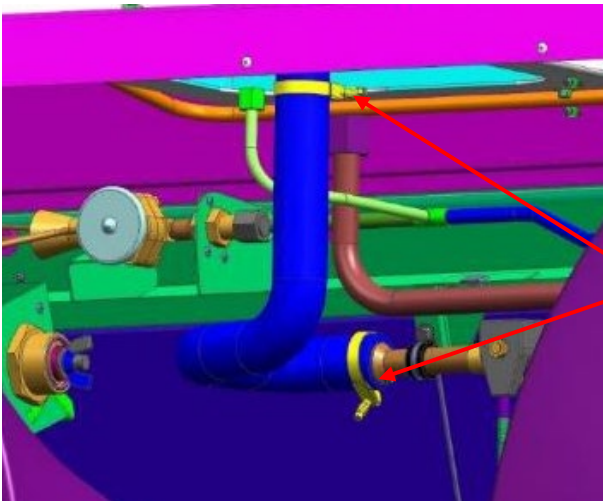
Remove and save
bolt, nut and clamp

Remove and discard the clamps securing the hose. Discard the hose.



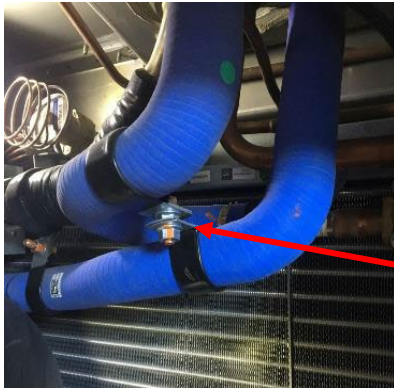
Remove and discard
the clamps and hose

Install the new coolant hose, MCI P/N: 16-11-2768, using two new clamps, MCI P/N: 19-4-205. Torque the clamps to 18 In-Lb.



Install new hose, 16-
11-2768, using
clamps, 19-4-205

Reinstall the clamp using the existing bolt and nuts.



Reinstall the clamp using existing nuts and bolt

Reinstall the evaporator door.

6.0 Elbow hose rework on coaches equipped with ISX12 engine and electrical/ mechanical fan cooling systems

6.1 Material requirements

| ITEM | PART NO | QTY | U/M | DESCRIPTION |
|------|------------|-----|-----|-------------------------------|
| 1 | 06-08-2261 | 1 | EA | Hose-Coolant 90 Below |
| 2 | 19-04-0520 | 2 | EA | Clamp-Hose, 2.48 TO 3.07, SST |

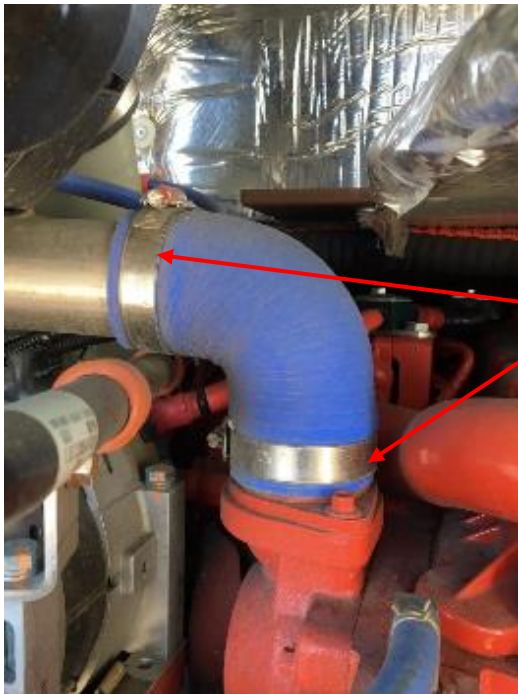
6.2 Elbow hose replacement

Locate the coolant hose elbow in the rear of the engine compartment.



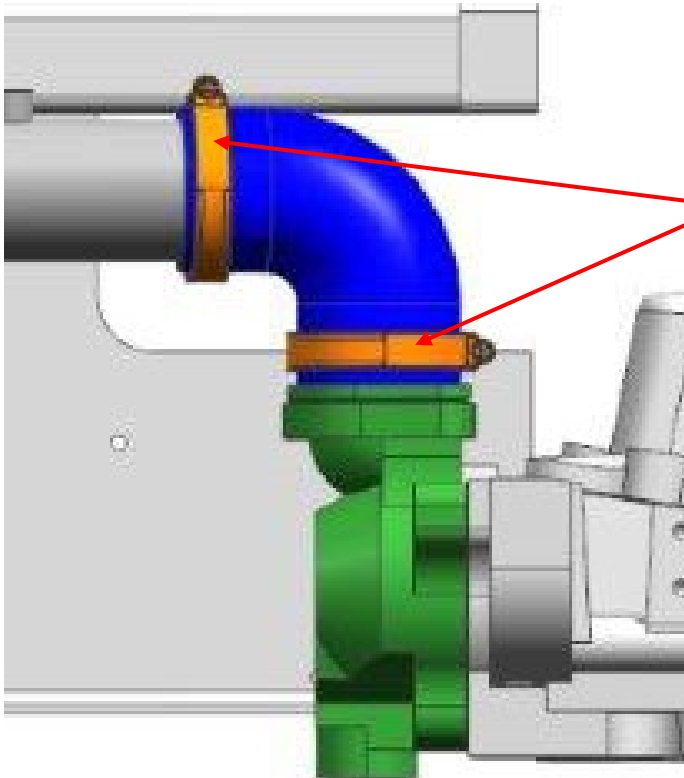
Coolant elbow hose

Remove and discard the two clamps securing the coolant elbow hose. Discard the hose.



Remove and discard
the clamps and hose

Install the new elbow hose, MCI P/N: 06-08-2261, using two new clamps, MCI P/N: 19-04-0520. Torque clamps to 105 In-Lb.



Install new hose, 06-08-
2261, using clamps, 19-
04-0520

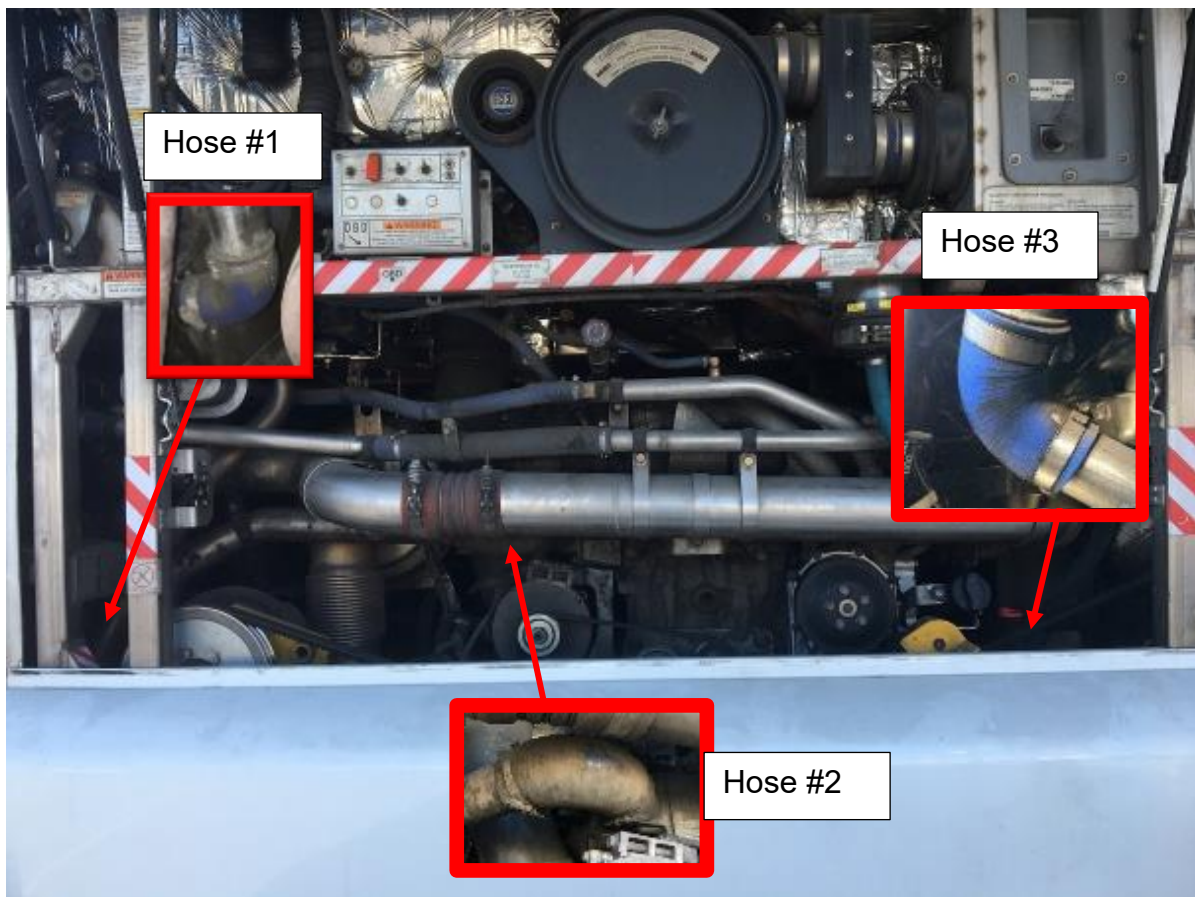
7.0 Elbow hose rework on coaches equipped with DD13 engine and mechanical fan cooling system

7.1 Material requirements

| ITEM | PART NO | QTY | U/M | DESCRIPTION |
|------|------------|-----|-----|---|
| 1 | 06-08-2261 | 3 | EA | Hose-Coolant 90 Below |
| 2 | 19-4-150 | 1 | EA | Clamp-Stepless Spring, Constant Torque, Breeze CI-300 L |
| 3 | 19-04-0520 | 5 | EA | Clamp-Hose, 2.48 TO 3.07, SST |

7.2 Elbow hose replacement

Locate the three coolant elbow hoses in the rear of the engine compartment.

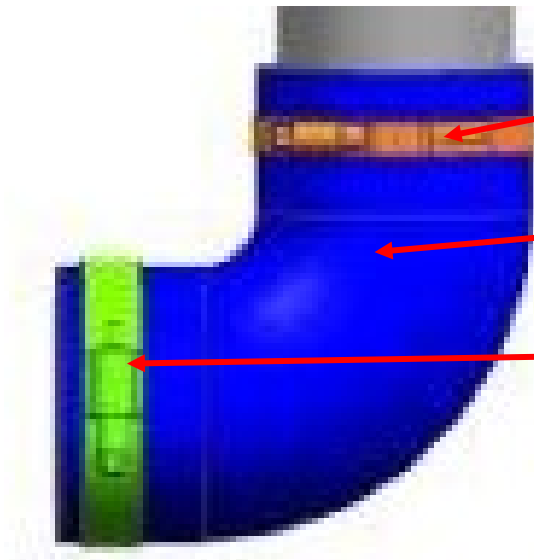


Remove and discard the clamps securing the coolant elbow hose #1. Discard the hose.



Remove and discard
elbow hose and clamps

Install the new elbow hose, MCI P/N: 06-08-2261, using the wider clamp, MCI P/N: 19-4-150, towards the radiator and the thinner clamp, MCI P/N: 19-04-0520, towards the engine. Torque the wider clamp to 115 In-Lb and thinner clamp to 105 In-Lb.



Thinner clamp, 19-04-0520

Install the new elbow
hose, 06-08-2261

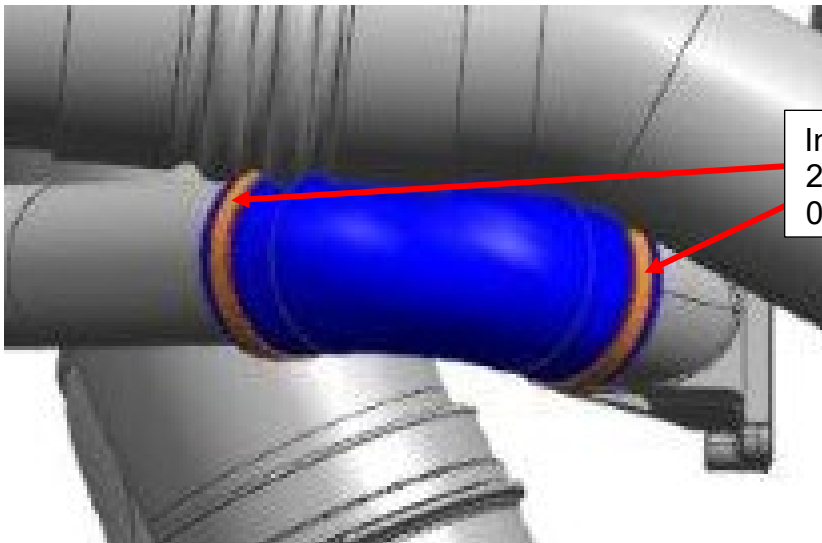
Wider clamp, 19-4-150

Remove and discard the clamps securing the coolant elbow hose #2. Discard the hose.



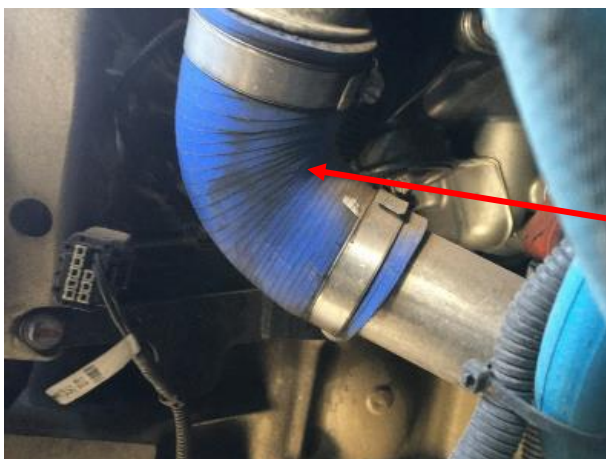
Remove and discard
clamps and hose

Install the new elbow hose, MCI P/N: 06-08-2261, using new clamps, MCI P/N: 19-04-0520. Torque the clamps to 105 In-Lb.



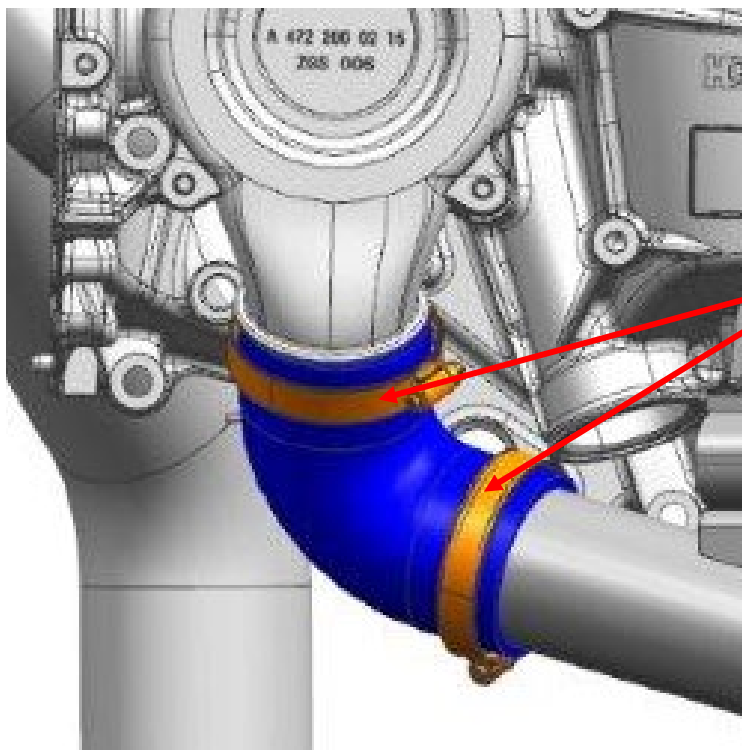
Install new hose 06-08-
2261, using clamps, 19-
04-0520

Remove and discard the clamps securing the coolant elbow hose #3. Discard the hose.



Remove and discard
clamps and hose

Install the new elbow hose, MCI P/N: 06-08-2261, using new clamps, MCI P/N: 19-04-0520. Torque the clamps to 105 In-Lb.



Install new hose 06-08-2261, using clamps, 19-04-0520

8.0 Elbow hose rework on coaches equipped with DD13 engine and electric fan cooling system

8.1 Material requirements

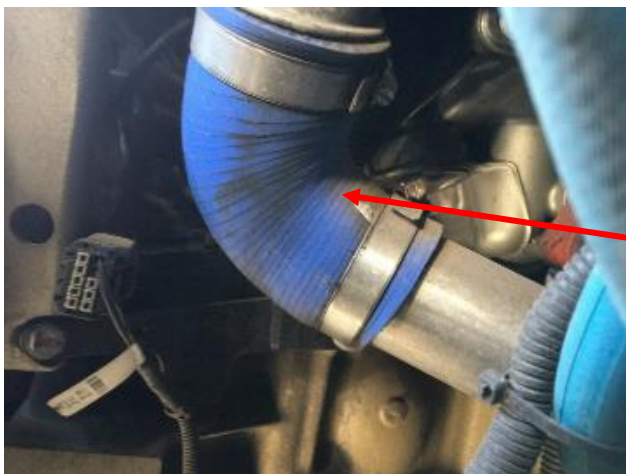
| ITEM | PART NO | QTY | U/M | DESCRIPTION |
|------|------------|-----|-----|---------------------|
| 1 | 06-08-2261 | 2 | EA | Hose-Elbow, Coolant |
| 2 | 19-04-0520 | 4 | EA | Hose Clamp |

8.2 Elbow hose replacement

Locate the coolant hose elbow on the right hand side of the engine.

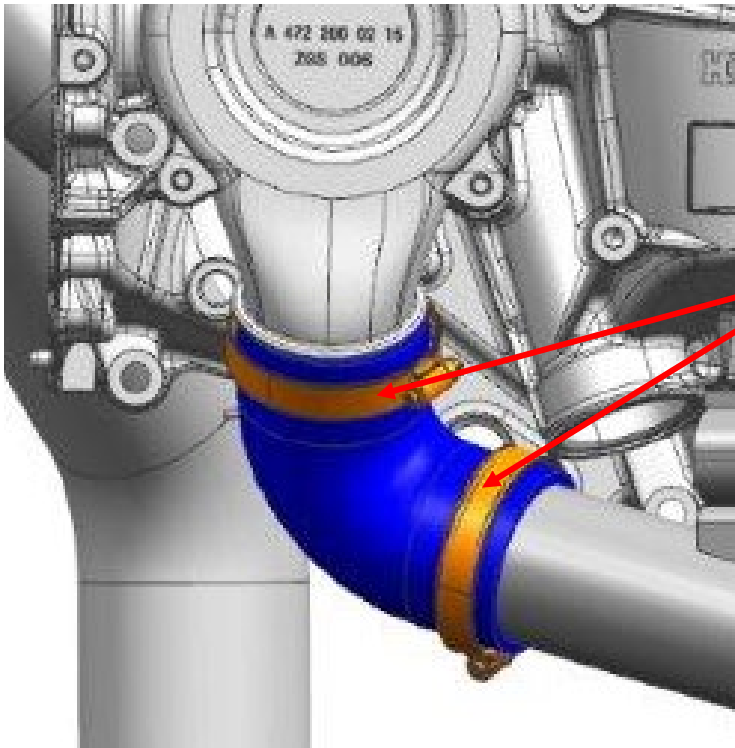


Remove and discard the coolant hose elbow and the two hose clamps.



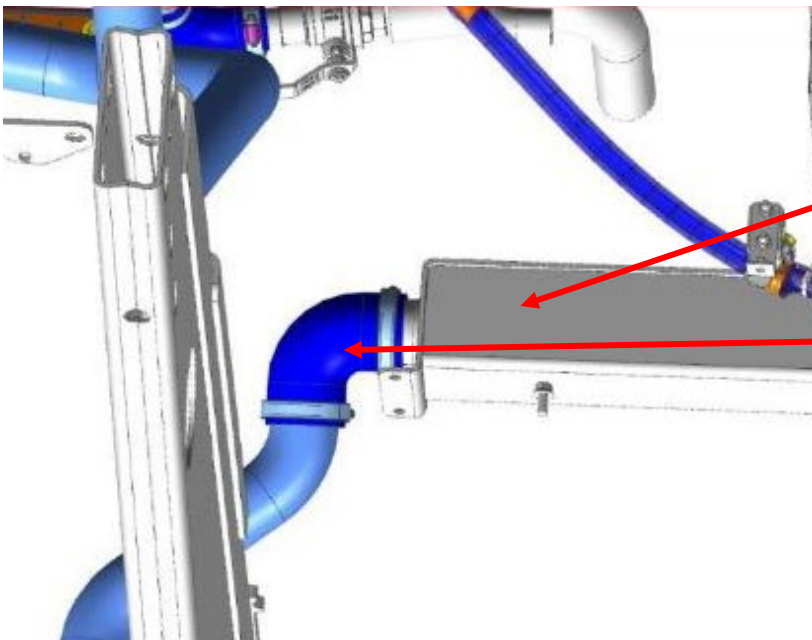
Remove and discard
hose elbow and clamps

Install the new elbow hose, MCI P/N: 06-08-2261, using new clamps, MCI P/N: 19-04-0520. Torque the clamps to 105 In-Lb.



Install new hose 06-08-2261, using clamps, 19-04-0520

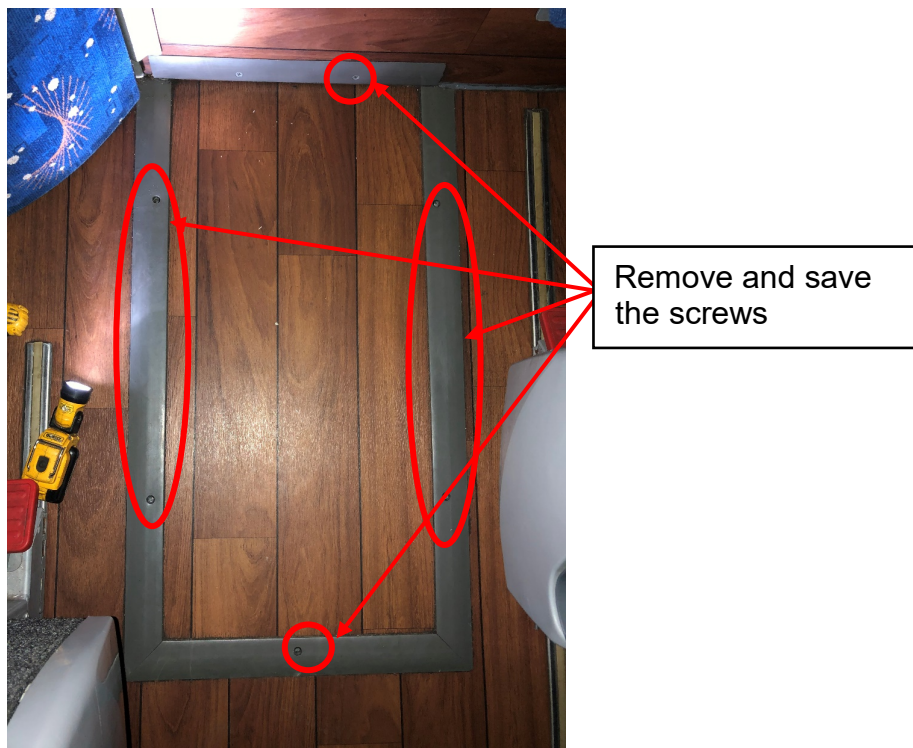
Locate the coolant elbow hose connected to the transmission cooler.



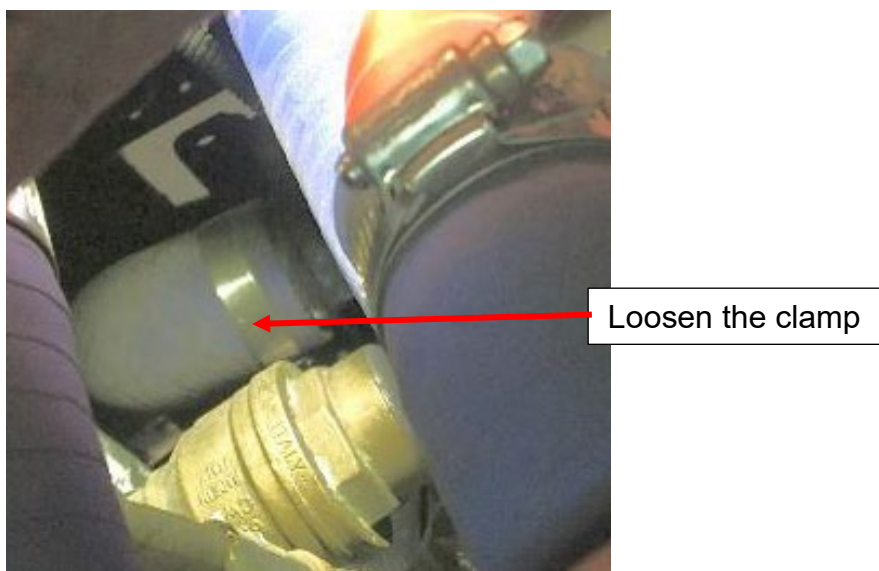
Transmission cooler

Coolant elbow hose,
06-08-2261

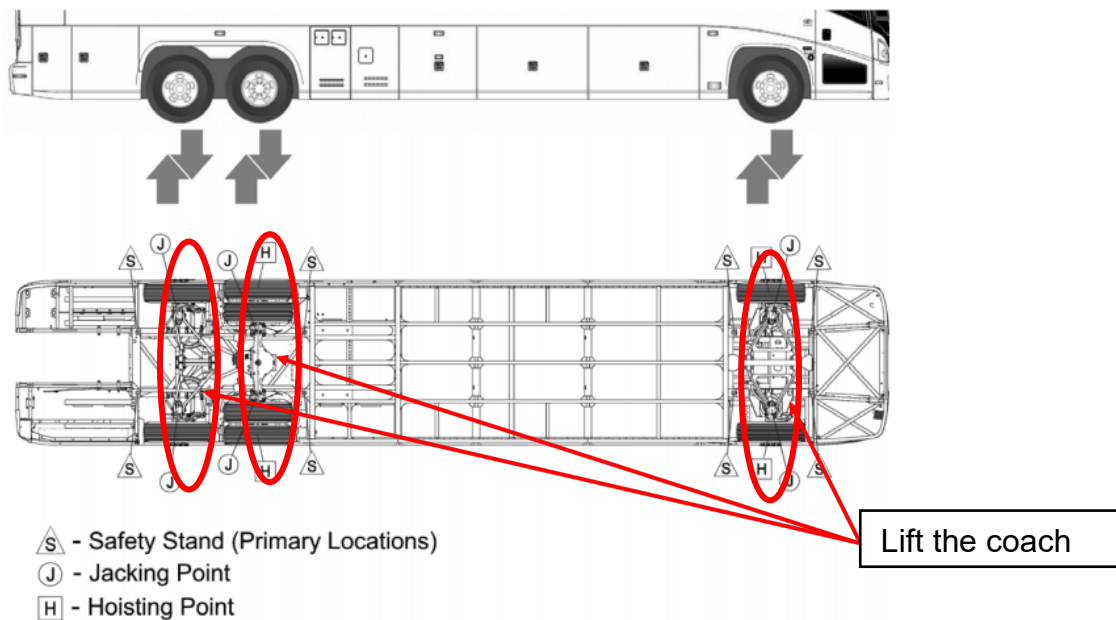
Remove and save the six screws securing the engine compartment access panel inside the coach.



Loosen the clamp on the top of the coolant hose.



Lift the coach at the jacking points following the instruction in Section 3F in the MCI J4500 maintenance manual.



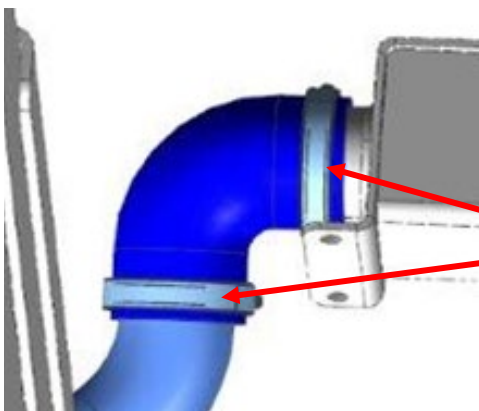
11768

From under the coach, remove the clamp securing the coolant hose. Discard the hose



Remove and discard
elbow hose and clamps

Install the new elbow hose, MCI P/N: 06-08-2261, using new clamps, MCI P/N: 19-04-0520. Torque the clamps to 105 In-Lb.



Install new hose 06-08-2261, using clamps, 19-04-0520

9.0 Appendix

| Scenario | Coach Model | VIN Range | Applicable rework section(s) | Applicable material requirement section(s) | Labor Allowance |
|----------|-----------------|--|------------------------------|--|-----------------|
| 1 | ISX12 w/o E-Fan | 68221, 68281, 68300, 68315, 68355, 68378, 68380, 68382 - 68390, 68398, 68399, 68401 - 68449, 68451 - 68456, 68461 - 68478, 68483 - 68492, 68494 - 68501, 68503, 68504, 68508 - 68519, 68524 - 68529, 68536, 68542 - 68559, 68563 - 68576, 68587 - 68595, 58604, 68605, 68607 - 68610, 68612 - 68617, 68619 - 68633, 68649 - 68658, 68663 - 68677, 68679, 68683 - 68690, 68697 - 68710, 68713, 68715, 68716, 68718 - 68740, 68761, 68762, 68771, 68773 - 68802, 68804 - 68810, 68813, 68814, 68816, 68817, 68819 - 68821, 68826 - 68844, 68849, 68851 - 68854, 68856 - 68865, 68870 - 68875, 68885, 68887 - 68904, 68911 - 68915, 68921 - 68934, 68951 - 68954, 68956 - 68964, 68966 - 68973, 68980 - 68983, 68985 - 69007, 69010, 69013, 69030 - 69036, 69045 - 69051, 69059 - 69064, 69067 - 69076, 69082 - 69113, 69120 - 69127, 69133 - 69138, 69149, 69150 | 5.0 and 6.0 | 5.1 and 6.1 | 2.3 hr |
| 2 | DD13 w/ E-Fan | 68855, 68955, 68984, 69008, 69037 - 69044, 69052 - 69058, 69065, 69077 - 69081, 69114 9 69119, 69128 - 69132, 69139 - 69148 | 5.0 and 8.0 | 5.1 and 8.1 | 3.2 hr |
| 3 | DD13 w/o E-Fan | 67759, 67778 - 67810, 67823, 67829, 67830, 67833 - 67844, 67852 - 67859, 67870, 67874, 67876, 67882, 67883, 67889 - 67895, 67897 - 67905, 67916, 67924 - 67926, 67934 - 67937, 67945, 67957 - 67961, 67968 - 67970, 67976, 67977, 67986 - 67990, 68011 - 68023, 68029 - 68032, 68037 - 68039, 68046, 68051 - 68058, 68061 - 68066, 68080 - 68084, 68102 - 68113, 68125, 68128 - 68136, 68153, 68154, 68156, 68160 - 68162, 68168, 68169, 68175, 68180, 68181, 68187 - 68208, 68210 - 68213, 68216 - 68220, 6822 - 68231, 68240 - 68243, 68247 - 68267, 68275, 68277, 68278, 68286 - 68293, 68299, 68301 - 68306, 68311 - 68314, 68316, 68317, 68325 - 68331, 68335 - 68344, 68351 - 68354, 68356, 68357, 68363, 68364, 68367 - 68377, 68379, 68391, 68391 - 68397, 68400, 68450, 68457 - 68460, 68479 - 68483, 68502, 68505 - 68507, 68520 - 68523, 68530 - 68535, 68537 - 68541, 68560 - 68562, 68577 - 68586, 68596 - 68603, 68611, 68634 - 68648, 68659 - 68662, 68680 - 68682, 68692 - 68696, 68711, 68712, 68714, 68741 - 68745, 68747 - 68760, 68763 - 68770, 68811, 68812, 68815, 68818, 68822 - 68825, 68845 - 68848, 68850, 68866 - 68869, 68876, 68878 - 68884, 68886, 68905 - 68908, 68910, 68916 - 68920, 68936 - 68938, 68974 - 68979, 69009, 69011, 69012, 69014 - 69029 | 5.0 and 7.0 | 5.1 and 7.1 | 3.6 hr |

| Scenario | Coach Model | VIN Range | Applicable rework section(s) | Applicable material requirement section(s) | Labor Allowance |
|----------|----------------|---|------------------------------|--|-----------------|
| 4 | ISX12 w/ E-Fan | 69151 - 69174, 69176 - 69194, 69196 - 69199, 69204, 69205, 69207 - 69211, 69231, 69215, 69216, 69223 - 69258, 69262, 69263, 69265 - 69316, 69318 - 69322, 69328 - 69339, 69342 - 69361, 69363 - 69366, 69374, 69375, 69379 - 69381, 69392, 69396 - 69430, 69432 - 69435, 69441 - 69468, 68471 - 68476, 68480 - 68482, 69484 - 69517 | 6.0 | 6.1 | 1.3 hr |
| 5 | DD13 w/ E-Fan | 69175, 68200 - 69203, 69206, 69212, 69214, 69217 - 69222, 69259 - 69261, 69264, 69317, 69323 - 69327, 69340, 69341, 69362, 69368 - 69370, 69373, 69477 - 69479, 69483 | 8.0 | 8.1 | 2.9 hr |
| 6 | ISX12 W/ E-fan | 67760 - 67777, 68711 - 67822, 67824 - 67828, 67831, 67832, 67845 - 67851, 67860 - 67868, 67871 - 67873, 67875, 67877 - 67881, 67884 - 67888, 67896, 67906 - 67915, 67917 - 67923, 67927 - 67933, 67938 - 67944, 67946 - 67956, 67962 - 67967, 67971 - 67975, 67978 - 67985, 67991 - 68010, 68024 - 68028, 68033 - 68036, 68040 - 68045, 68047 - 68050, 68059, 68060, 68067 - 68079, 68085 - 68101, 68114 - 68117, 68119 - 68124, 68126, 68127, 68137 - 68148, 68150 - 68152, 68155, 68157 - 68159, 68163 - 68167, 68170 - 68174, 68176 - 68179, 68182 - 68186, 68209, 68214, 68215, 69232 - 68239, 68244 - 68246, 68268 - 68274, 68276, 68279, 68280, 68282 - 68285, 68295 - 68298, 69307 - 69310, 68318 - 68324, 69332 - 68334, 68345 - 68350, 68358 - 68362, 68365, 68366, 69195, 69367, 69371, 69372, 69376 - 69378, 69382 - 69395, 69431, 69436 - 69440, 69469, 69470 | 5.0 | 5.1 | 1.9 hr |

10.0 Field Change Program Conditions:

The parts required for this change will be supplied without charge.

A labor allowance will be granted to the rework according to the values specified in Section 9.0-Appendix.

This labor allowance will be credited to your MCI Fleet Support Parts Account on receipt of the attached “MCI Field Change Program Verification Form” and a “Warranty Claim Form” as detailed in your Owner Warranty manual to MCI’s Warranty department. A “MCI Field Change Program Verification Form” needs to be submitted for each VIN affected. Photocopy the attached “MCI Field Change Program Verification Form” as required for the number of affected coaches in your fleet.

Motor Coach apologizes for any inconvenience resulting from this campaign but urges you to implement this change as soon as possible.

Sincerely,

Motor Coach Industries

10.1 MCI FIELD CHANGE PROGRAM (FCP) VERIFICATION

| CONTACT INFORMATION | |
|--|---|
| CUSTOMER NAME: <div style="border-bottom: 1px solid black; height: 1.2em; margin-top: 5px;"></div> (PLEASE PRINT) | |
| FCP INFORMATION – ONE FORM PER UNIT | |
| FCP#: <div style="border-bottom: 1px solid black; width: 100px; display: inline-block;"></div> Coach Model <div style="border-bottom: 1px solid black; width: 100px; display: inline-block;"></div> Model Year <div style="border-bottom: 1px solid black; width: 100px; display: inline-block;"></div> | |
| COACH SERIAL #: (At least the last 5 digits) | DATE COMPLETED <div style="border-bottom: 1px solid black; width: 50px; display: inline-block;"></div> / <div style="border-bottom: 1px solid black; width: 50px; display: inline-block;"></div> / <div style="border-bottom: 1px solid black; width: 50px; display: inline-block;"></div> |
| MILEAGE: | |
| <p><u>IMPORTANT:</u> TO RECEIVE CREDIT FOR ANY ALLOWABLE LABOR CHARGES, THIS VERIFICATION FORM MUST BE RETURNED TO MCI UPON COMPLETION OF THE FCP.</p> <p>SUBMITTED BY: (Please Print)</p> <div style="border-bottom: 1px solid black; height: 1.2em; margin-top: 10px;"></div> <div style="text-align: right; margin-top: 5px;"> DATE <div style="border-bottom: 1px solid black; width: 50px; display: inline-block;"></div> / <div style="border-bottom: 1px solid black; width: 50px; display: inline-block;"></div> / <div style="border-bottom: 1px solid black; width: 50px; display: inline-block;"></div> </div> <p>TITLE: (Please Print) <div style="border-bottom: 1px solid black; width: 400px; display: inline-block;"></div></p> <p>SIGNATURE:</p> <div style="border-bottom: 1px solid black; height: 1.2em; margin-top: 10px;"></div> <p>COMMENTS:</p> <div style="border-bottom: 1px solid black; height: 1.2em; margin-top: 10px;"></div> | |



FAX TO: 800-360-8886

Mail or fax the completed limited warranty claim form and verification form to MCI's warranty department, or photocopy and mail to:

MCI Fleet Support

Attn: Warranty Department

7001 Universal Coach Drive Louisville, KY 40258

Fax Number 1-800-360-8886

To receive credit for the hours used to complete this task. Contact the MCI Fleet Support Technical Center at 1-800-241-2947 for any further information.