

New Jersey Transit: Surge Tank Support



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Property and Top Bus Number: New Jersey Transit 416.15



Issue: Surge tank mounting brackets are cracking

Reason/ cause: Design should have included reinforcement of brackets.

Solution: Add support brackets per this work instruction (SOI).

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Number of affected buses: The first 375 buses

Estimate repair hours/bus: 2 hours

Necessary parts:

Bracket, support, forward,	Part #: 10A-6658-035	1 / bus,
Bracket, surge tank, CS,	Part #: 10A-6658-033	1 / bus,
Bracket, surge tank, SS,	Part #: 10A-6658-034	1 / bus,
Bolt, 3/8-16x2, Hex, Zn, Gr8,	Part #: 220616168,	2 / bus,
Bolt, 1/4-20x1, Hex, Zn, Gr8,	Part #: 220420088,	2 / bus,
Bolt, 1/4-20x1-3/4, Hex, Zn, Gr8,	Part #: 220420148,	2 / bus,
Bolt, 1/4-20x2-1/2, Hex, Zn, Gr8,	Part #: 220420208,	4 / bus,
Nut, 1/4-20, Hex, Nylock, Zn, Gr8,	Part #: 210420N,	8 / bus,
Washer, flat, 1/4, Zn, Gr8,	Part #: 2604,	8 / bus
Anti-seize compound,	Part #: NPN,	as required

Necessary tools:

Basic hand tools, 1/4" drill bit, drill, C-clamp

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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(es).
3. Open the rear attic compartment door and locate the surge tank on the street side (SS).



4. Support the surge tank so it stays in place after mounting bolts have been removed.
5. Remove two forward mounting bolts only.
6. Cut existing bracket(s) off only if they cracked and separated from the roof structure.



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- Slide the support assembly (P/N **10A-6658-035**) above the brackets as pictures show below.



- Reinstall the two forward mounting bolts of the surge tank.
- Drill the roof structure through the existing holes of the support assembly with $\frac{1}{4}$ " size drill bits.
- De-burr holes.
- Install $\frac{1}{4}$ -20x1 and $\frac{1}{4}$ -20x1-3/4 size Gr8 bolts with flat washers and lock nuts. Apply anti-seize compound to the bolts.
- Remove CS aft mounting bolt of the surge tank.



- Cut the existing bracket off only if cracked and separated from the roof structure. Straighten bracket if bent so the new support bracket can be slide on it.
- Slide the mounting bracket between the existing mount and the surge tank.

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15. Reinstall surge tank mounting bolt.
16. Place a C-clamp or vice clamp onto the bracket to press it against the roof structure.
17. Drill the roof structure through the existing holes of the support assembly with ¼" size drill bits.
18. Install ¼-20x2-1/2 size Gr8 bolts with flat washers and lock nuts. The head of the bolts must locate towards the attic door to provide clearance when the door is closed. Apply anti-seize compound onto the bolts.
19. Remove clamp.
20. Repeat steps written between paragraph 12 and 19 on the SS bracket.



21. Check for completeness of work.
22. Remove all tools from work area.
23. Turn the main battery disconnect switch(es) on.
24. Record bus number, mileage, date of completing and the name of the technician who performed the repair.