

Authorized Field Change



AFC 12928

Date: January 2013

Subject File: Fuel Tanks

Subject: LoneStar®, ProStar®, and TranStar® Fuel Sender Replacement

Model: ProStar® and TranStar®: Springfield Assembly Plant

Start Date: 6 December 2010 End Date: 31 October 2011

Model: LoneStar®, ProStar®, and TranStar®: Garland Assembly Plant

Start Date: 6 December 2010 End Date: 1 November 2011

Model: LoneStar®, ProStar®, and TranStar®: Escobedo Assembly Plant

Start Date: 6 December 2010 End Date: 7 November 2011

DESCRIPTION

The fuel gauges on some LoneStar®, ProStar®, and TranStar® models may operate intermittently, accompanied by audible, lamp, and/or LCD messages. An improved fuel sending unit has been developed to prevent this condition.

PARTS INFORMATION


Table 1. **Parts Information**


Part Number	Description	Quantity
6111572C1	Gauge, Fuel Sender, 26 inch	1

Table 2. **Tool Information**


Part Number	Description	Quantity
Obtain Locally	Ratcheting Strap, Utility Grade	4


SERVICE PROCEDURE

 **WARNING:** Park vehicle on hard flat surface, turn the engine off, set the parking brake, and block the wheels to prevent the vehicle from moving in both directions. Failure to do so may result in property damage, personal injury, and / or death.

 **WARNING:** If the vehicle must be raised, do not work under the vehicle supported only by jacks. Jacks can slip or fall over, potentially resulting in property damage, personal injury, and / or death.

 **WARNING:** Always wear safe eye protection when performing vehicle maintenance. Failure to do so may result in serious eye injury.

 **WARNING:** Keep flames or sparks away from vehicle and do not smoke while servicing the vehicle's batteries. Batteries expel explosive gases. Failure to do so may result in property damage, personal injury, and / or death.

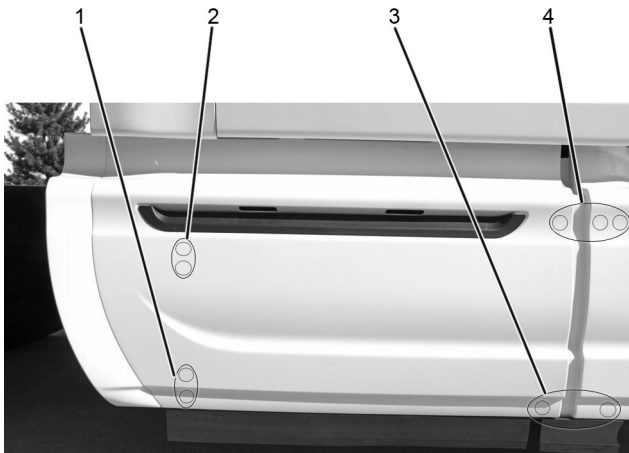
 **WARNING:** Remove the ground cable from the negative terminal of the battery box before disconnecting any electrical components. Always connect the ground cable last. Failure to do so may result in property damage, personal injury, and / or death.

SERVICE PROCEDURE (CONT.)

NOTE: If unit is equipped with optional chassis skirts, proceed to Procedure for LoneStar®, Prostar®, and TranStar® Unit with Optional Chassis Skirts Installed. If unit is not equipped with optional chassis skirts, proceed to Procedure for LoneStar®, ProStar®, and TranStar® Unit without Optional Chassis Skirts Installed.

PROCEDURE FOR LONESTAR®, PROSTAR®, AND TRANSTAR® UNIT WITH OPTIONAL CHASSIS SKIRTS INSTALLED

1. Park vehicle on flat surface.
2. Shift transmission to park or neutral and set parking brake.
3. Install wheel chocks.
4. Unlatch and open hood.
5. Remove right-side rear chassis skirt from chassis. See below for correct configuration:



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Figure 1. Chassis Skirt Without No Idle Solution.

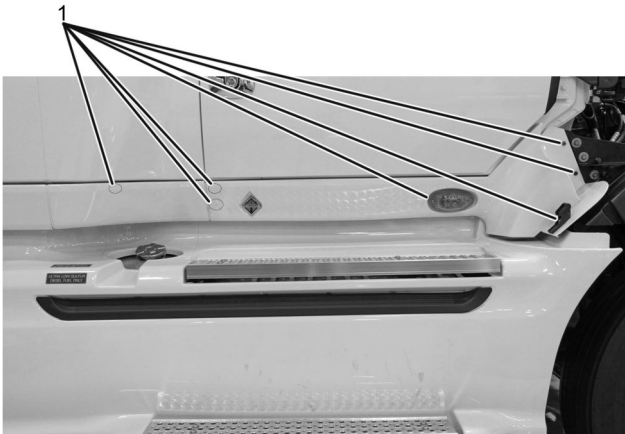
1. Approximate location of chassis skirt mounting bolt (2)
2. Approximate location of chassis skirt mounting bolt (2)
3. Approximate location of chassis skirt mounting bolt (2)
4. Approximate location of chassis skirt mounting bolt (3)

Rear chassis skirt without No Idle Solution:

- A. Remove nine right-side chassis skirt mounting bolts (Figure 1, Items 1, 2, 3, and 4) from chassis and remove rear chassis skirt.

Rear chassis skirt with No Idle Solution:

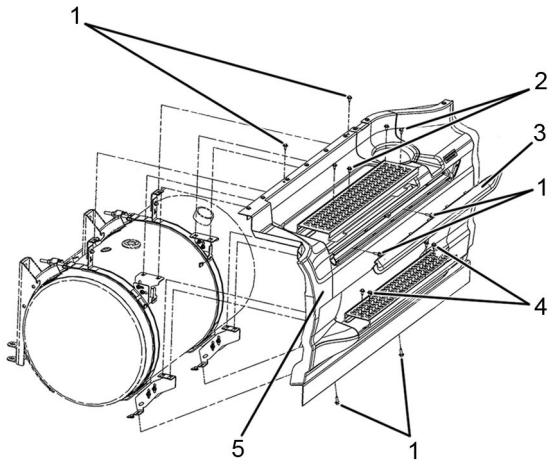
- A. Locate locking handle at rear inside of chassis skirt and release locking handle from keeper bracket.
 - B. Rotate locking handle downward 90 degrees to release chassis skirt.
6. Remove six right-side fender bolts from cab and remove right-side fender.
 7. Remove two right-side turn signal fasteners from right-side cab skirt panel and remove right-side turn signal. Disconnect turn signal harness from turn signal and set aside for reuse.



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Figure 2. Cab Skirt Panel.

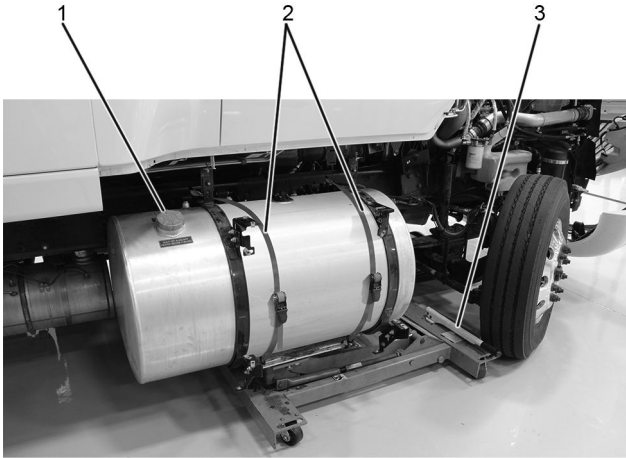
1. Approximate location of cab skirt mounting bolt (7)
8. Remove seven right-side cab skirt panel bolts (Figure 2, Item 1) and remove right-side cab skirt panel.



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Figure 3. Right-Side Front Chassis Skirt.

1. Chassis skirt mounting bolt (6)
 2. Upper step bolt (2)
 3. Chassis skirt trim
 4. Lower step bolt (2)
 5. Chassis skirt
9. Remove two right-side upper step bolts (Figure 3, Item 2) and two lower step bolts (Figure 3, Item 4) from right-side front chassis skirt and remove upper and lower steps.
 10. Remove six right-side front chassis skirt mounting bolts (Figure 3, Item 1) and remove right-side chassis skirt (Figure 3, Item 5).
 11. Place a suitable container under right-side fuel tank and drain tank.
 12. Disconnect fuel sending unit electrical connector from fuel sending unit.
 13. Disconnect fuel supply line from right-side fuel tank.
 14. Disconnect fuel return line from right-side fuel tank.

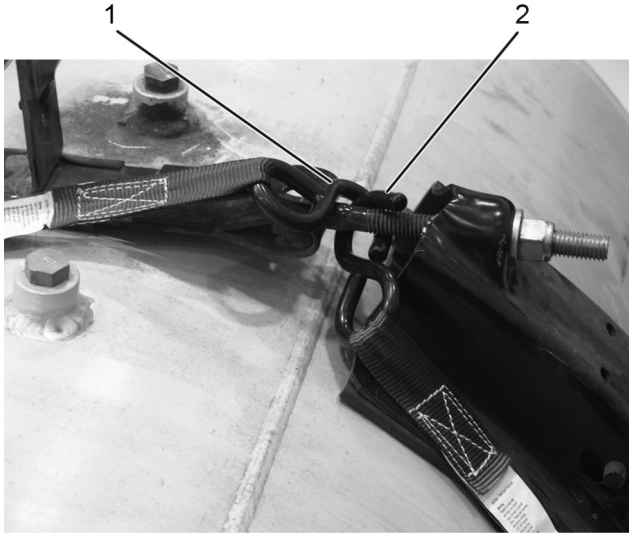


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Figure 4.

1. Fuel tank
2. Utility grade ratcheting strap (4)
3. Transmission jack or equivalent

15. Support right-side fuel tank with a transmission jack or equivalent (Figure 4, Item 3).
16. Secure right-side fuel tank to transmission jack or equivalent with four utility grade ratcheting straps (Figure 4, Item 2) and attach ratcheting straps to tank-side mounting brackets as follows:



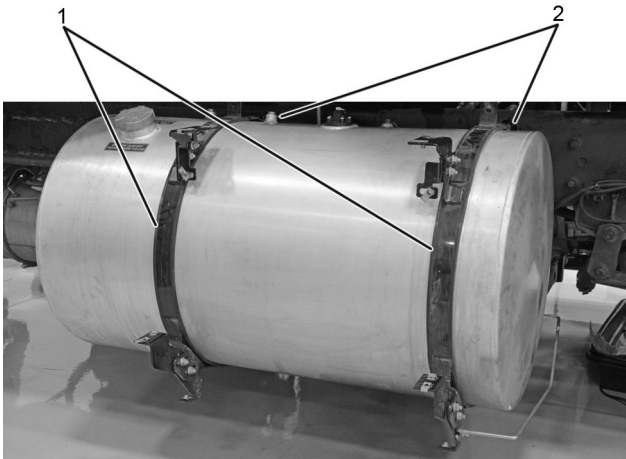
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Figure 5. Ratcheting Straps.

1. Strap secured on inboard side of fuel tank (2)
 2. Strap secured on outboard side of fuel tank (2)
- a. Attach two ratcheting straps on inboard side of fuel tank to tank mounting brackets (Figure 5, Item 1), then attach two ratcheting straps on outboard side of fuel tank to tank mounting brackets (Figure 5, Item 2).

17. Remove fuel tank mounting bracket bolts and nuts from chassis. See below for correct configuration:

Two strap fuel tank:

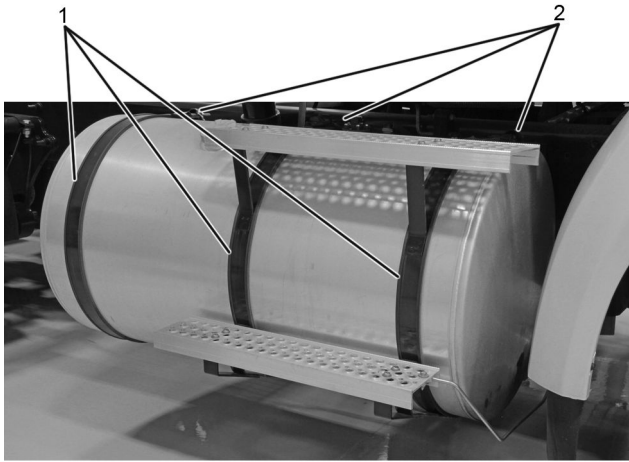


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Figure 6. Two Strap Fuel Tank.

1. Fuel tank strap (2)
 2. Approximate location of fuel tank bracket bolt and nut (2)
- A. Remove four right-side fuel tank bracket bolts and nuts (Figure 6, Item 2) from chassis.

Three strap fuel tank:

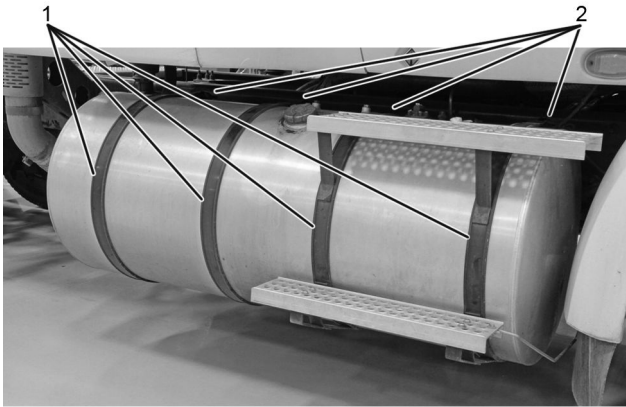


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Figure 7. Three Strap Fuel Tank.

1. Fuel tank strap (3)
 2. Approximate location of fuel tank bracket bolt and nut (6)
- A. Remove six right-side fuel tank bracket bolts and nuts (Figure 7, Item 2) from chassis.

Four strap fuel tank:



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Figure 8. Four Strap Fuel Tank.

1. Fuel tank strap (4)
2. Approximate location of fuel tank bracket bolt and nut (8)

A. Remove eight right-side fuel tank bracket bolts and nuts (Figure 8, Item 2) from chassis.

18. Lift right-side fuel tank high enough to clear fuel tank mounting brackets, then move fuel tank from under cab until fuel sending unit clears cab.



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Figure 9. Fuel Tank Clearance.

1. Fuel sending unit

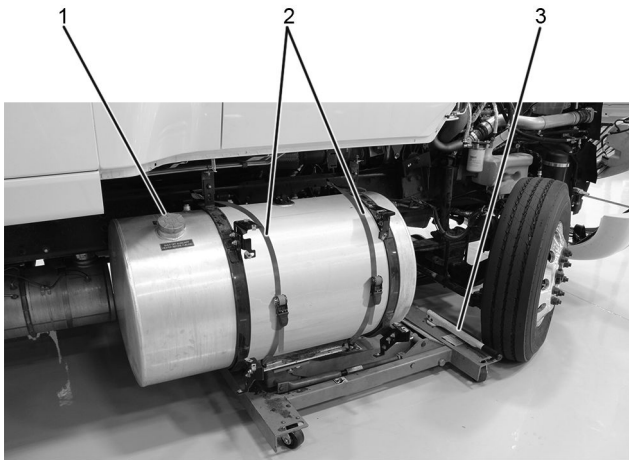
19. Remove five fuel sending unit bolts from right side fuel tank. Remove fuel sending unit (Figure 9, Item 1) and gasket from fuel tank and discard.
20. Install new sending unit, gasket, and five fuel sending unit bolts onto fuel tank. Torque bolts to 24 lb-in (2.7 N·m).
21. Reinstall fuel tank onto fuel tank mounts and install fuel tank mounting bolts onto chassis See below for correct configuration:
 - Two strap fuel tank:
 - A. Install four right-side fuel tank bracket bolts and nuts onto chassis. Torque bolts to 127 lb-ft (172 N·m).
 - Three strap fuel tank:
 - A. Install six right-side fuel tank bracket bolts and nuts onto chassis. Torque bolts to 127 lb-ft (172 N·m).
 - Four strap fuel tank:
 - A. Install eight right-side fuel tank bracket bolts and nuts onto chassis. Torque bolts to 127 lb-ft (172 N·m).
22. Once fuel tank is secured to chassis, remove ratcheting straps and transmission jack.
23. Connect fuel return line to fuel tank.
24. Connect fuel supply line to fuel tank.

25. Connect electrical connector to fuel sending unit.
26. Fill fuel tank with fuel drained in Step 11.
27. Install right-side front chassis skirt onto chassis and secure with six mounting bolts. Torque bolts to 6–7 lb-ft (8–10 N·m).
28. Install right-side upper step onto chassis skirt and secure with two mounting bolts. Torque bolts to 6–7 lb-ft (8–10 N·m).
29. Install right-side lower step onto chassis skirt and secure with two mounting bolts. Torque bolts 6–7 lb-ft (8–10 N·m).
30. Install right-side cab skirt panel onto cab and secure with seven mounting bolts. Torque bolts to 6–7 lb-ft (8–10 N·m).
31. Connect right-side turn signal harness onto turn signal. Install turn signal onto cab skirt panel and install two fasteners. Torque fasteners to 24 lb-in (2.7 N·m).
32. Install right-side fender onto cab and secure with six mounting bolts. Torque bolts to 6–7 lb-ft (8–10 N·m).
33. Install right-side rear chassis skirt onto chassis. See below for correct configuration:
 - Fender skirt without No Idle Solution:
 - A. Install nine chassis skirt mounting bolts onto chassis. Torque bolts to 6–7 lb-ft (7–8 N·m).
 - Fender skirt with No Idle Solution:
 - A. Lower bottom of rear chassis skirt onto mounting bar and align rear chassis skirt with front chassis skirt.
 - B. Rotate locking handle 90 degrees upward to lock left rear chassis skirt in position.
 - C. Secure locking handle in keeper bracket.
34. Close and latch hood.
35. Start engine and let idle.
36. Check for proper fuel gauge reading.
37. With engine idling, inspect for fuel leaks around fuel tank.
38. Shut off engine.
39. Remove wheel chocks.

END OF TASK

PROCEDURE FOR LONESTAR®, PROSTAR®, AND TRANSTAR® UNIT WITHOUT OPTIONAL CHASSIS SKIRTS INSTALLED

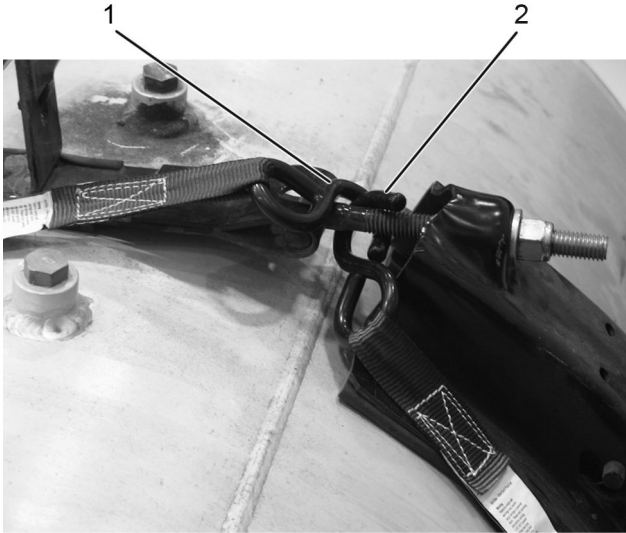
1. Park vehicle on flat surface.
2. Shift transmission to park or neutral and set parking brake.
3. Install wheel chocks.
4. Unlatch and open hood.
5. Place a suitable container under right-side fuel tank and drain tank.
6. Disconnect fuel sending unit electrical connector from fuel sending unit.
7. Disconnect fuel supply line from right-side fuel tank.
8. Disconnect fuel return line from right-side fuel tank.



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Figure 10. Fuel Tank Supported by Transmission Jack.

1. Fuel tank
 2. Utility grade ratcheting strap (4)
 3. Transmission jack (or equivalent)
9. Support right-side fuel tank with a transmission jack or equivalent (Figure 10, Item 2).
 10. Secure right-side fuel tank to transmission jack or equivalent with four utility grade ratcheting straps (Figure 10, Item 2) and attach ratcheting straps to tank-side mounting brackets as follows:



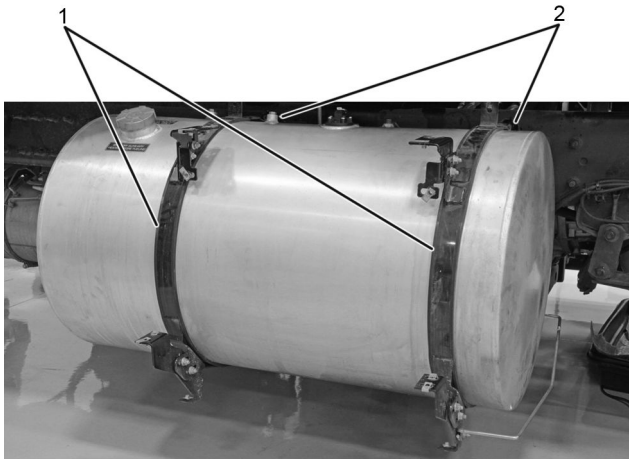
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Figure 11. Ratcheting Straps.

1. Strap secured on inboard side of fuel tank (2)
 2. Strap secured on outboard side of fuel tank (2)
- a. Attach two ratcheting straps on inboard side of fuel tank to tank mounting brackets (Figure 11, Item 1), then attach two ratcheting straps on outboard side of fuel tank to tank mounting brackets (Figure 11, Item 2).

11. Remove fuel tank mounting bracket bolts and nuts from chassis. See below for correct configuration:

Two strap fuel tank:

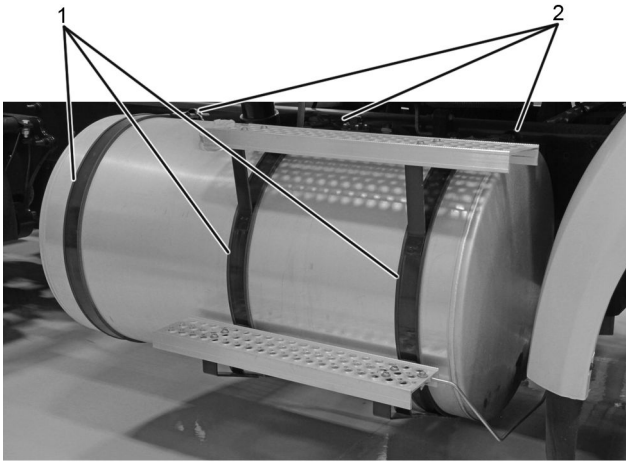


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Figure 12. Two Strap Fuel Tank.

1. Fuel tank strap (2)
 2. Approximate location of fuel tank bracket bolt and nut (2)
- A. Remove four right-side fuel tank bracket bolts and nuts from chassis (Figure 12, Item 2).

Three strap fuel tank:

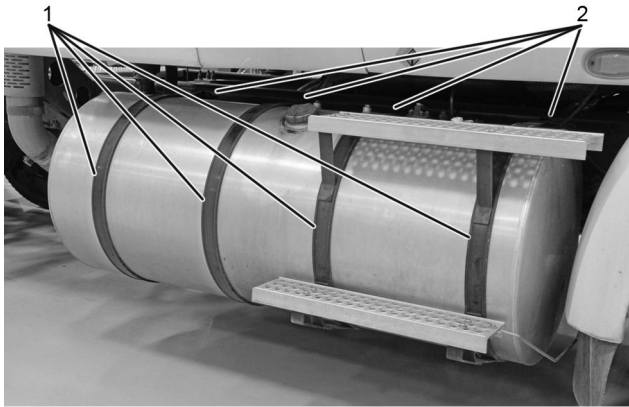


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Figure 13. Three Strap Fuel Tank.

1. Fuel tank strap (3)
 2. Approximate location of fuel tank bracket bolt and nut (6)
- A. Remove six right-side fuel tank bracket bolts and nuts from chassis (Figure 13, Item 2).

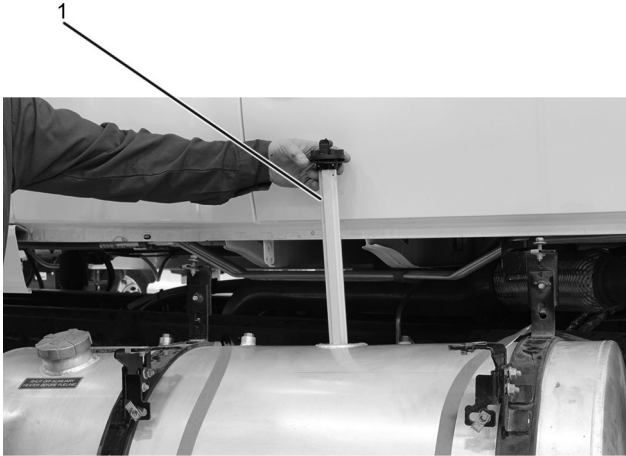
Four strap fuel tank:



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Figure 14. Four Strap Fuel Tank.

1. Fuel tank strap (4)
2. Approximate location of fuel tank bracket bolt and nut (8)
 - A. Remove eight right-side fuel tank bracket bolts and nuts from chassis (Figure 14, Item 2).
12. Lift right side fuel tank high enough to clear fuel tank mounting brackets, then move fuel tank from under cab until fuel sending unit clears cab.



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Figure 15. Fuel Tank Clearance.

1. Fuel sending unit
13. Remove five fuel sending unit bolts from right-side fuel tank. Remove fuel sending unit (Figure 15, Item 1) and gasket from fuel tank and discard.
14. Install new sending unit, gasket, and give fuel sending unit bolts onto fuel tank. Torque bolts to 24 lb-in (2.7 N·m).
15. Install fuel tank onto fuel tank mounting brackets and lower fuel tank.
16. Install fuel tank mounting bolts and nuts onto chassis. See below for correct configuration:
 - Two strap fuel tank:
 - A. Install four right-side fuel tank bracket bolts and nuts onto chassis. Torque bolts to 127 lb-ft (172 N·m).
 - Three strap fuel tank:
 - A. Install six right-side fuel tank bracket bolts and nuts onto chassis. Torque bolts to 127 lb-ft (172 N·m).
 - Four strap fuel tank:
 - A. Install eight right-side fuel tank bracket bolts and nuts onto chassis. Torque bolts to 127 lb-ft (172 N·m).
17. Once fuel tank is secured to chassis, remove ratcheting straps and transmission jack.
18. Connect fuel return line to fuel tank.

19. Connect fuel supply line to fuel tank.
20. Connect electrical connector to fuel sending unit.
21. Fill fuel tank with fuel drained in Step 5.
22. Close and latch hood.
23. Start engine and let idle.
24. Check for proper fuel gauge reading.
25. With engine idling, inspect for fuel leaks around fuel tank.
26. Shut off engine.
27. Remove wheel chocks.

END OF TASK

LABOR INFORMATION

Operation number must appear on all claims.

Table 3. Labor Information

Operation No.	Description	Time
A40-12928-1	Replace fuel sender (Daycab)	0.8 hr
A40-12928-2	Replace fuel sender (Sleeper Cab)	0.8 hr
A40-12928-3	Drain fuel tank	0.5 hr
A40-12928-4	Add-on for models with three strap fuel tank	0.1 hr
A40-12928-5	Add-on for models with four strap fuel tank	0.2 hr
A40-12928-6	Add-on for models with aerodynamic skirting (quick-release rear skirt)	0.4 hr
A40-12928-7	Add-on for models with aerodynamic skirting (bolted rear skirt)	0.7 hr

ADMINISTRATIVE PROCEDURE

Expense is to be charged to Warranty. Claims are to be submitted in the normal manner, making reference to Authorized Field Change Number G-12928.

It is important that the coding be completed properly to assist in processing the warranty claim. Complete instructions will be found in the Warranty Policy Manual, Section 7.1.8.

As with all claim submissions, items acquired locally must be submitted in the “Other Charges” tab. The cost of any bulk items (such as a bag of cable tie straps, roll of wire, barrel of oil, or tube of silicone) should be prorated for the cost of the individual pieces / amount used during each repair.

To ensure this important improvement is made in a timely manner, all claims for G-12928 activity must be submitted by 8 January 2014 or within the normal warranty period for the vehicle, if after 8 January 2014.

