

# Service Information

Date: 16 June 1983

Factory: John Deere Horicon Works



### FUEL LINES

318 Lawn and Garden Tractors (S/N	- 231902)
420 Lawn and Garden Tractors (S/N	- 224933)

#### Complaint or Symptom:

Tractor quits shortly after initial start-up.

#### Problem:

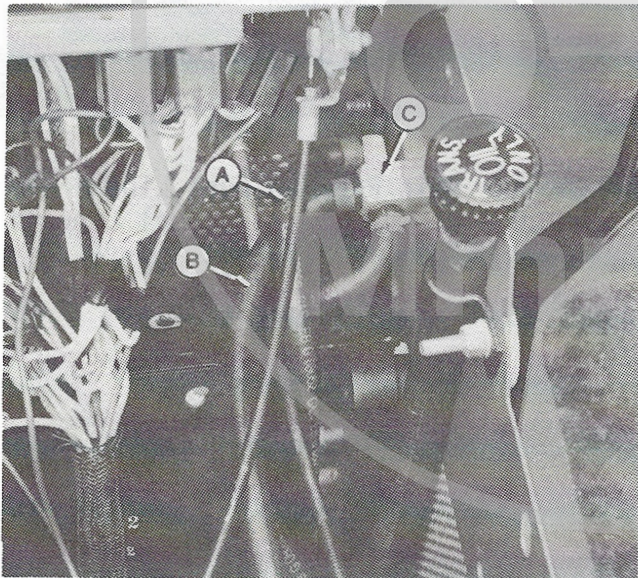
Fuel line kinked. Fuel line may be short and/or routed improperly.

#### Solution:

On 318 Tractors (S/N - 231902) use the following procedure:

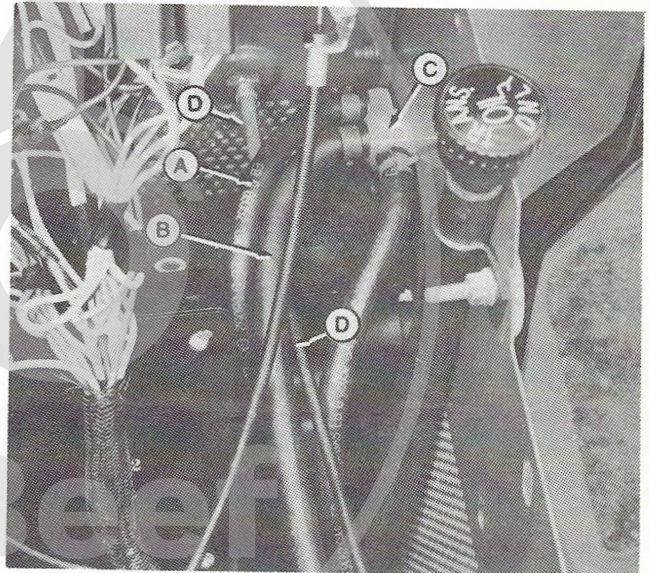
1. Remove the battery, battery base and fender deck.

2. Remove and plug fuel line (A, Figure 1) from fuel reserve valve (C).



A - Fuel Line	C - Fuel Reserve Valve
B - Fuel Line	

Figure 1



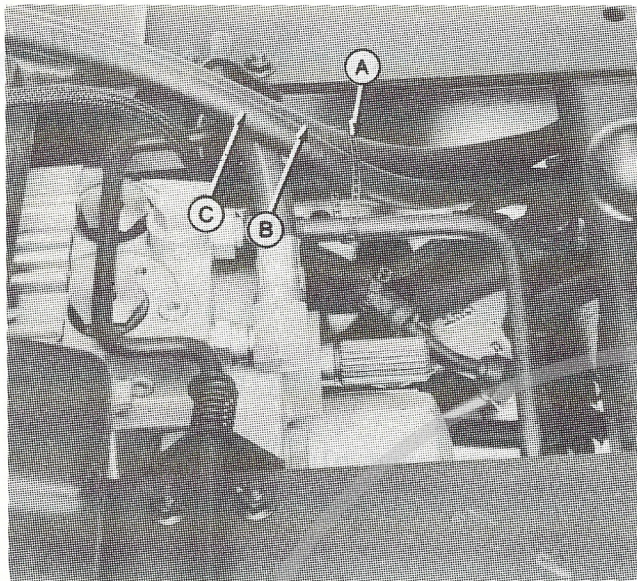
A - Fuel Line	C - Fuel Reserve Valve
B - Fuel Line	D - Choke Cable

Figure 2

3. Route fuel lines (A and B, Figure 2) to the RIGHT of choke cable (D). Pull excess fuel line SLACK UP toward fuel reserve valve (C) and install the lines to the fuel reserve valve (as shown in Figure 2).

Please pass to:	Date
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Applies to:

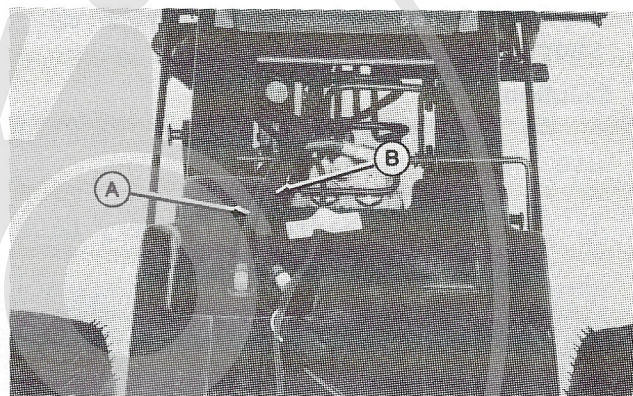


A - Tie Strap                      C - Fuel Line  
B - Fuel Line

Figure 3

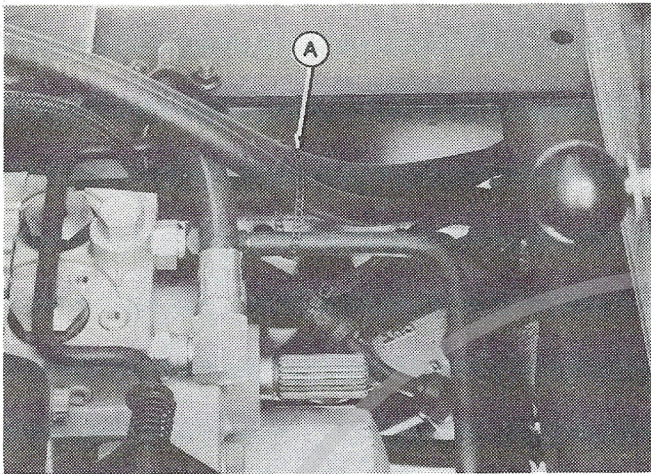
4. Check that tie strap (A, Figure 3) is not too tight. Tie strap (A) should be tightened only to the point of pulling fuel lines (B and C) away from tractor frame.
5. If it appears that the line is still short and will kink, then proceed to Step 7. If the rerouting has solved the kinking problem, reinstall the battery base, battery, and fender deck.
6. Start tractor and check operation.
7. If this did not solve the fuel line kinking problem, proceed as follows:
  - A. Remove belly screen, battery, battery base and fender deck.
  - B. Note the routing of the fuel lines and remove the fuel lines. If there is fuel in the tank, tip the tank up and cap the fittings to prevent leakage. When tipping the tank up, use care to prevent fuel from coming out the fill cap vent.

- C. Measure the fuel lines. The two lines from the tank to the fuel reserve valve should be a minimum of 38.2" (970mm). The fuel line from the fuel reserve valve to the fuel pump should be a minimum of 26.9" (685mm). If any line is short, replace with bulk fuel line (M84197).
- D. Route the fuel lines as noted during removal. See Figures 4 thru 9 for fuel line routing. Reinstall fender deck, battery base, battery and belly screen.



A - Main Pick-Up Fuel Line  
B - Reserve Pick-Up Fuel Line  
Fuel Line Routing at Fuel Tank

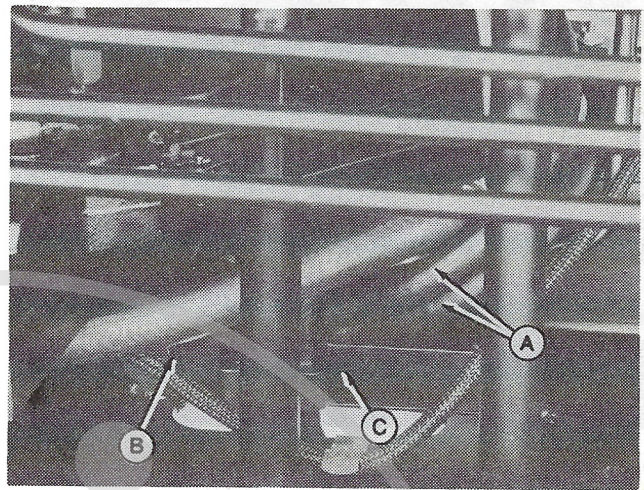
Figure 4



A - Tie Strap  
Figure 5

Fuel lines held at hydraulic tubes.  
See Step 4 of solution.

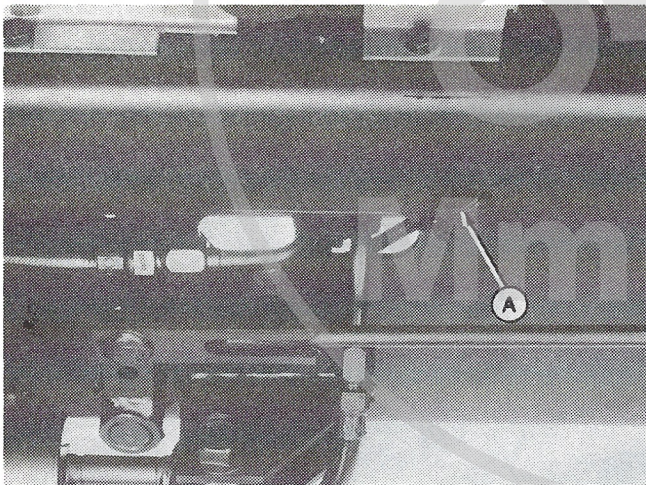
*NOTE: Drive shaft removed for illustration purposes.*



A - Fuel Lines      C - Tube Support  
B - Tie Strap

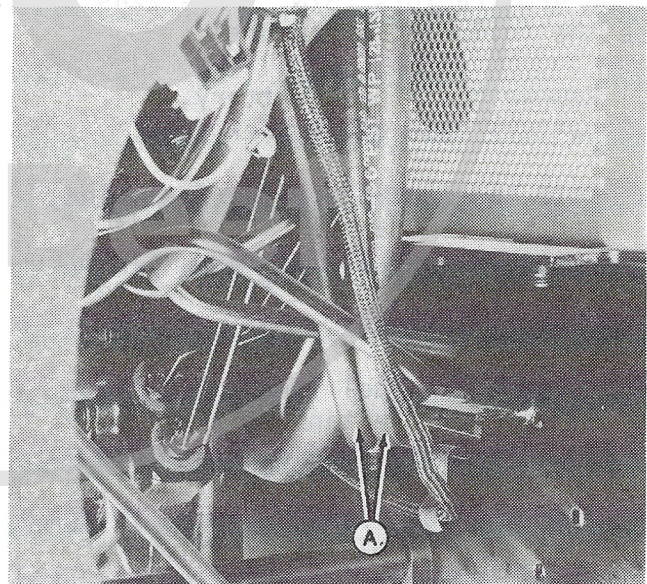
Figure 7

Bottom view of fuel lines through frame mid-section. Note fuel lines are tie strapped to frame above tube support.



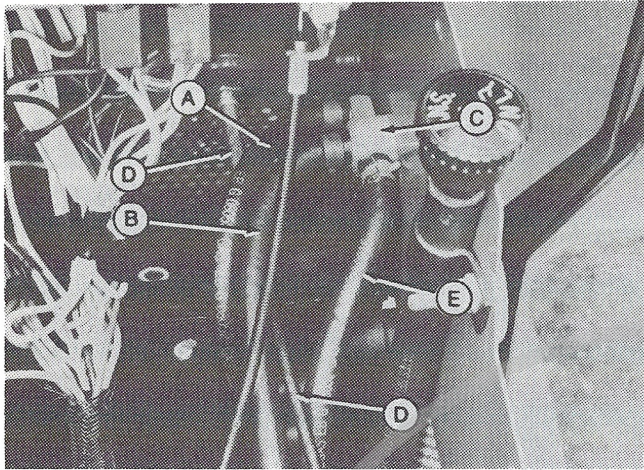
A - Tie Strap  
Figure 6

Outside view of fuel lines through frame mid-section. Note that fuel lines are tie strapped to frame above tube support.



A - Fuel Lines  
Figure 8

Front view of fuel lines through frame mid-section. Engine removed for illustration.



- A - Main Pick-Up Fuel Line
- B - Fuel Line To Fuel Pump
- C - Fuel Reserve Valve
- D - Choke Cable
- E - Reserve Pick-Up Fuel Line

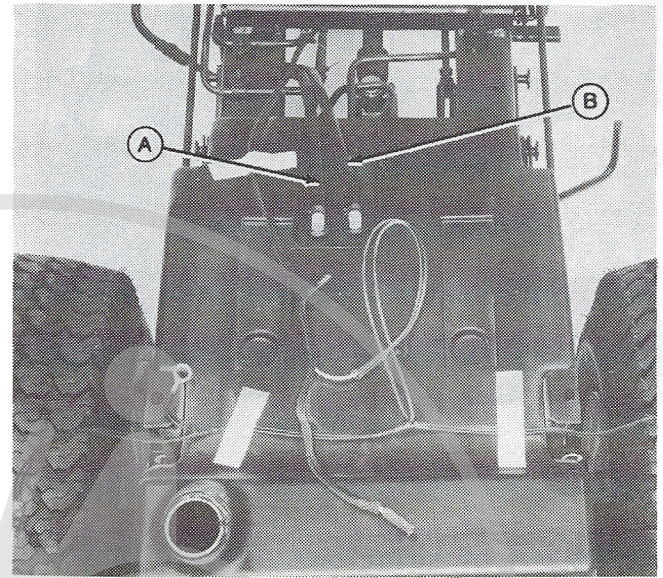
Figure 9

Fuel line routing to fuel reserve valve. See Step 3 of solution.

On 420 Tractors (S/N - 224933), use the following procedure:

1. Remove belly pan, battery, battery base and fender deck.
2. Note the routing of the fuel lines and remove the fuel lines. If there is fuel in the tank, tip the tank up and cap the fittings to prevent leakage.
3. Measure the fuel lines. The two lines from the tank to the fuel reserve valve should be a minimum of 56.7" (1440mm). The fuel line from the fuel reserve valve to the fuel pump should be a minimum of 31.5" (800mm). If any line is short, replace with bulk fuel line (M84197). When tipping the tank up, use care to prevent fuel from coming out the fill cap vent.
4. Route the fuel lines as noted during removal. See Figure 10 thru 15 for fuel line routing.

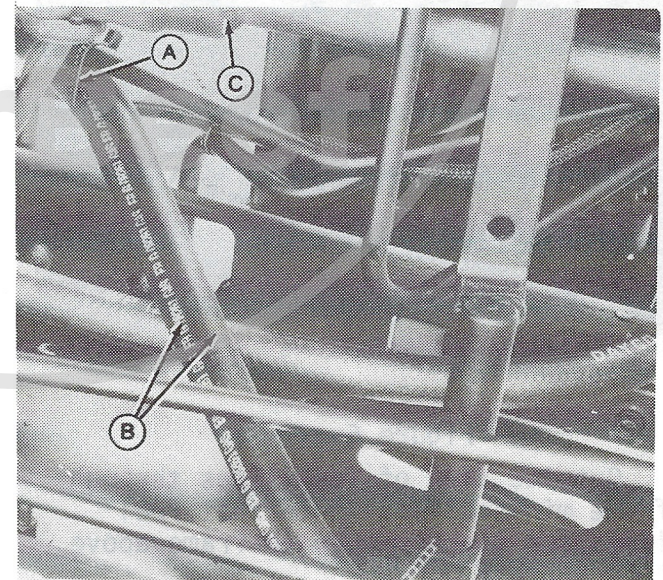
5. Reinstall the belly pan, battery base, battery and fender deck.



- A - Main Pick-Up Fuel Line
- B - Reserve Pick-Up Fuel Line

Figure 10

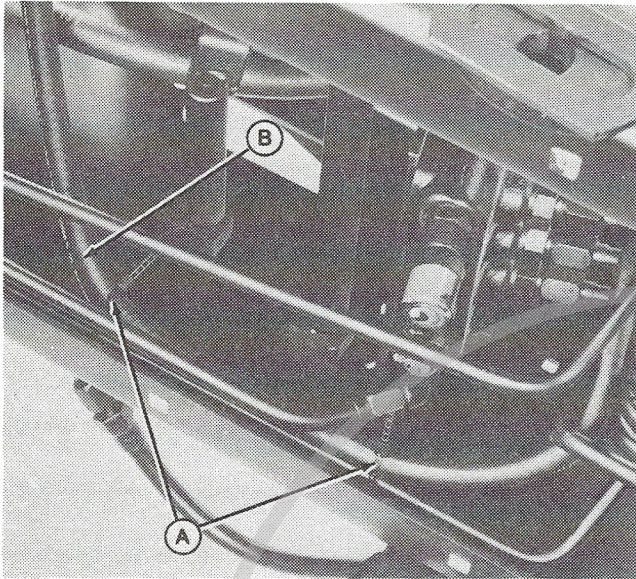
Fuel line routing at fuel tank.



- A - Tie Strap
- B - Fuel Lines
- C - Drive Shaft

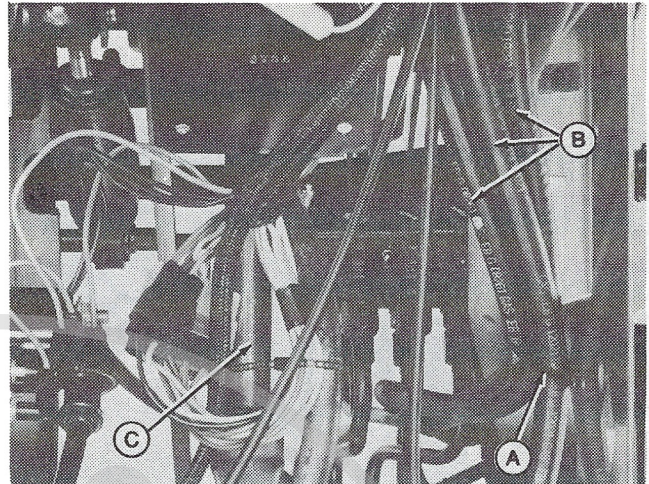
Figure 11

Rear tie strap locations for fuel lines.



A - Tie Straps    B - Fuel Lines  
Figure 12

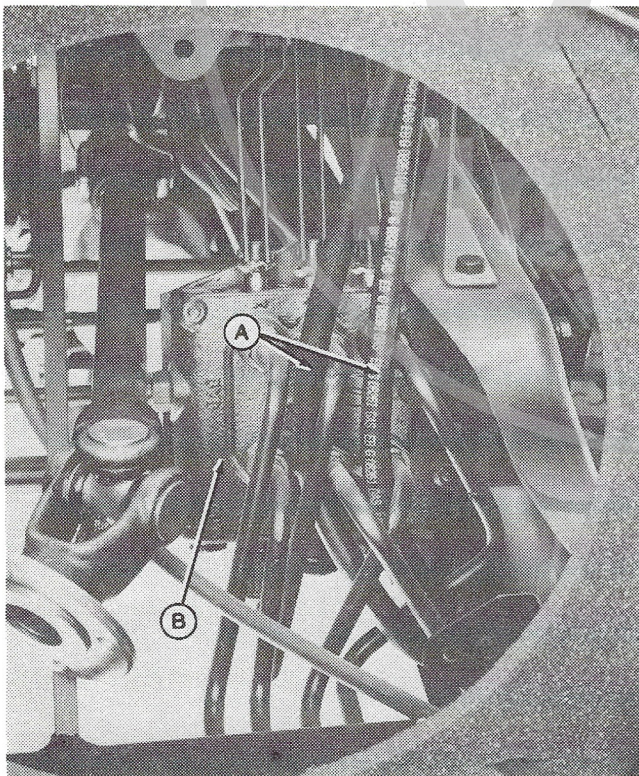
Fuel lines tie strapped to the top of hydraulic tube in two places.



A - Tie Strap    B - Fuel Lines  
C - Drive Shaft

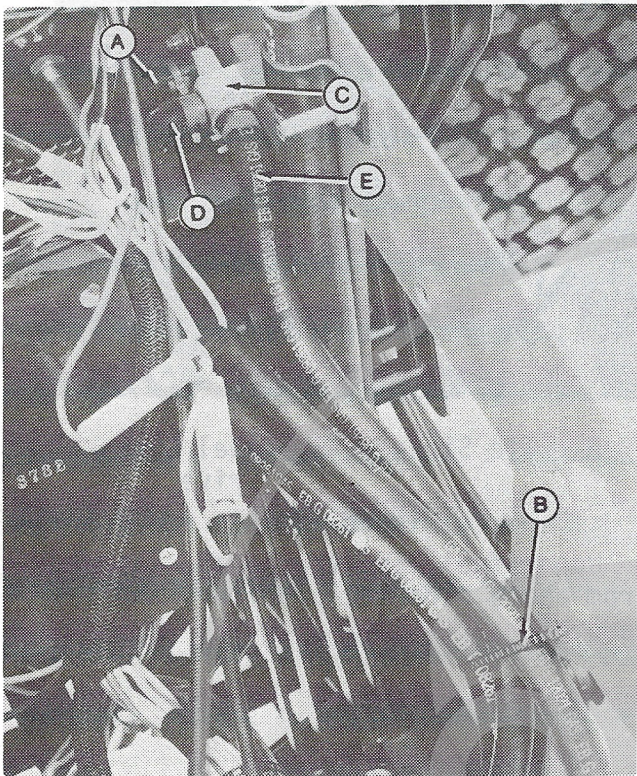
Figure 14

Upper fuel line tie strap. Viewed from above pedestal. Battery and base removed.



A - Fuel Lines    B - Control Valve  
Figure 13

Fuel line routing through hydraulic tubes. Engine removed for illustration.



- |                            |                               |
|----------------------------|-------------------------------|
| A - Main Pick-Up Fuel Line | C - Fuel Reserve Valve        |
| B - Tie Strap              | D - Fuel Line to Fuel Pump    |
|                            | E - Reserve Pick-Up Fuel Line |

Figure 15

Fuel line attachment to fuel reserve valve and lines tie strapped to left pedestal side.

**Parts:**

- M84197 - Fuel Line (10 ft. length)
- M66044 - Tie Strap (2 used on 318)  
(4 used on 420)