

Shifter Assembly Replacement

Document Number	Model	Serial Number Range	Part Number
12-80011	520Y / 520M	All Units	AT-9056

⚠ WARNING

Before making repairs or adjustments set the parking brake, turn off the engine, and remove the ignition key.

Always disconnect the negative battery cable from the battery when working with electrical components. Always work in a manner that does not put safety at risk!

⚠ WARNING

Safety glasses must be worn during installation. Ear (hearing) protection must be worn when using air or power tools.

Installation Notes: Right and left hand orientation referred to in these instructions is determined as if facing forward from the operator station.

Installation Time (estimated) 1 hour

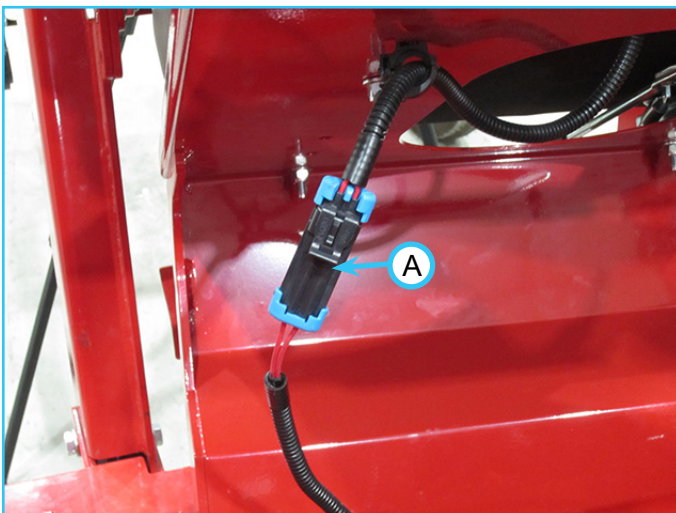
Tools Required: 9/16" wrench, 9/16" socket, 3/8" wrench, 3/8" socket, 1/2" wrench, 1/2" socket, 12mm wrench, 12mm socket, Ratchet, Torque wrench

⚠ WARNING

Always set the parking brake, shut off the tractor's engine, remove the ignition key, and ensure all moving parts have come to a complete stop before inspecting components, or attempting any repair or adjustment.

REMOVAL

1. Lift the seat to access the seat's operator presence sensor connector (A).

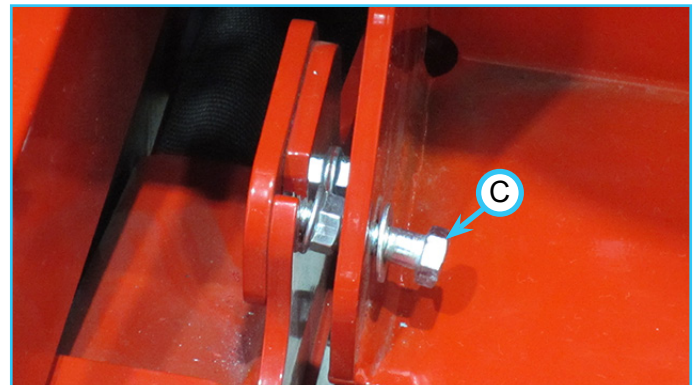


2. Disconnect the operator presence sensor.
3. Return the seat to the operational position.

4. Remove the two 3/8" locking flange nuts (B) from the seat frame pivot bolts located on either side of the seat frame.



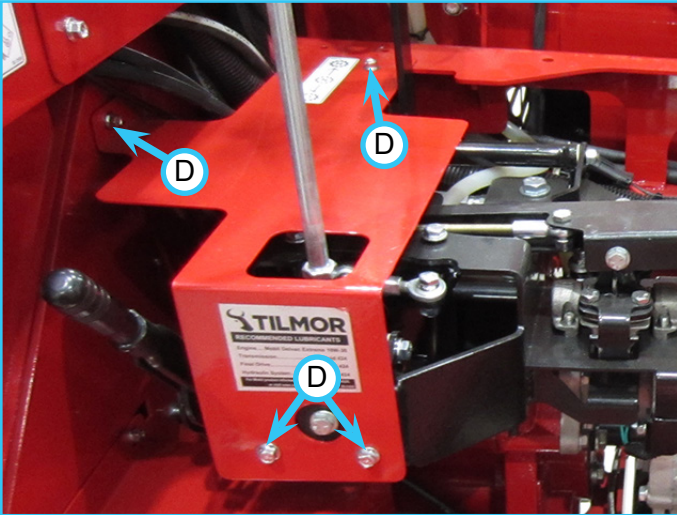
5. Loosen the 3/8" seat frame pivot bolt (C) on both sides of the seat frame.



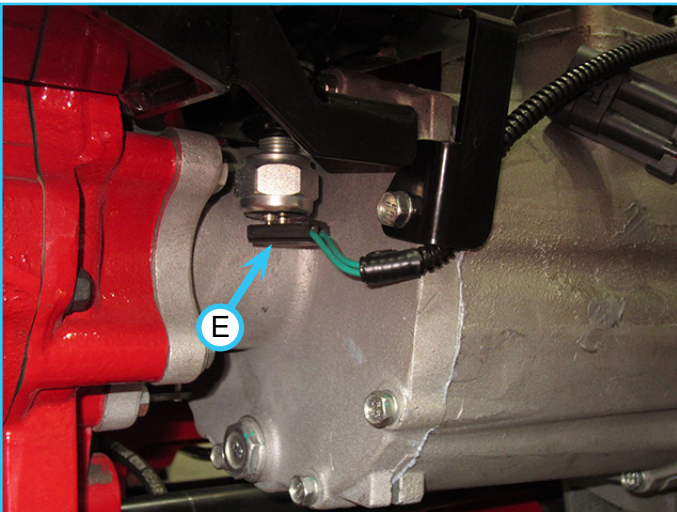
⚠ CAUTION

Two persons or a hoist may be required to remove the seat. Failure to use two persons or a hoist may result in personal injury or damage to equipment.

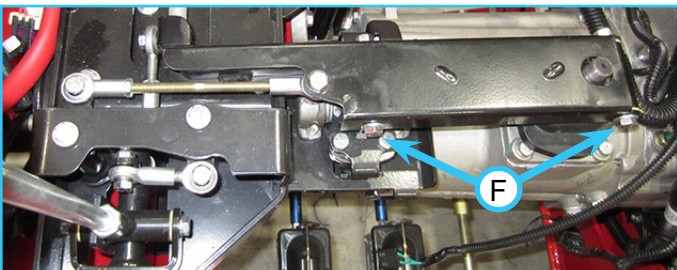
6. The seat and frame can now be removed from the tractor.
7. Remove the shifter box cover by removing the four 1/4" mounting bolts (D).



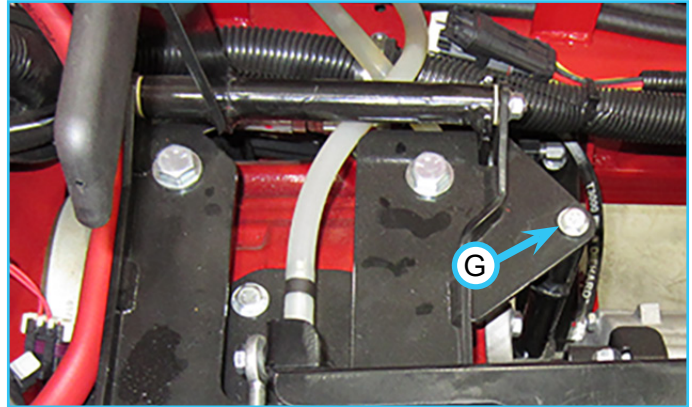
8. The shifter box cover can now be lifted over the shifter handle and removed.
9. Disconnect the neutral safety switch (E).



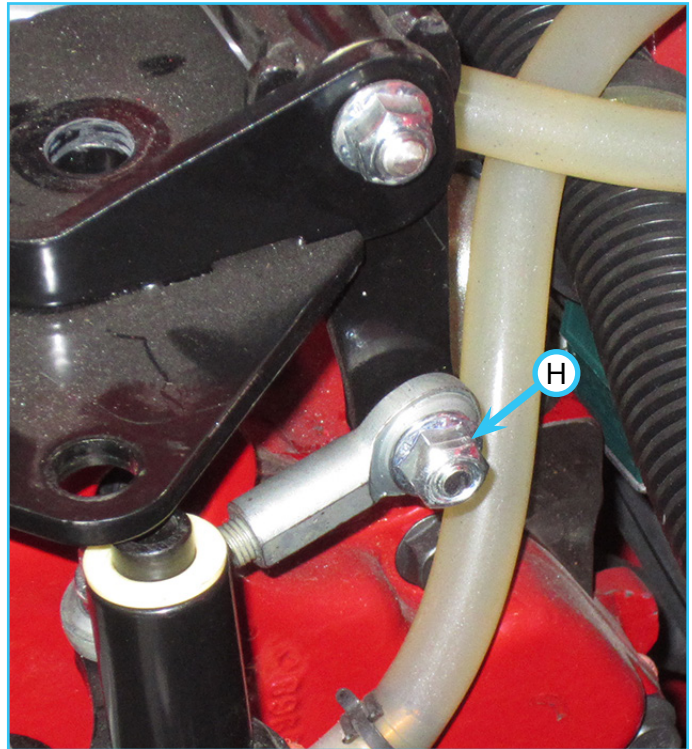
10. Remove the two 5/16" bolts (F) from the shifter arm.



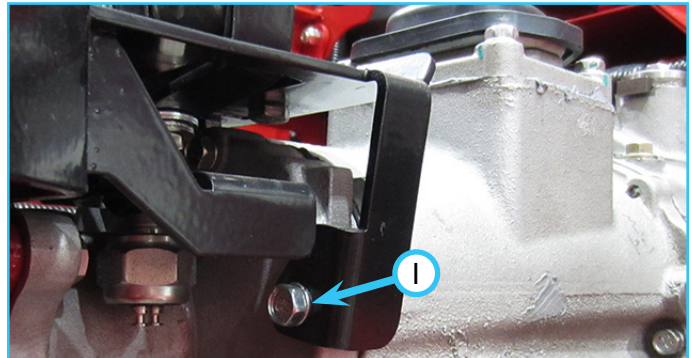
11. Remove the 5/16" bolt (G) and bushing from the high low shifter tube.

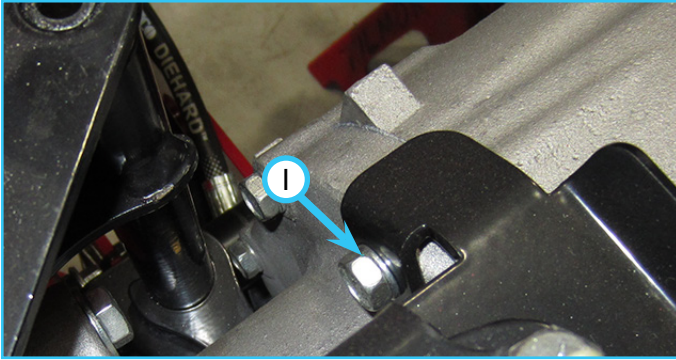


12. Remove the 5/16" bolt (H) from the linkage heim joint.

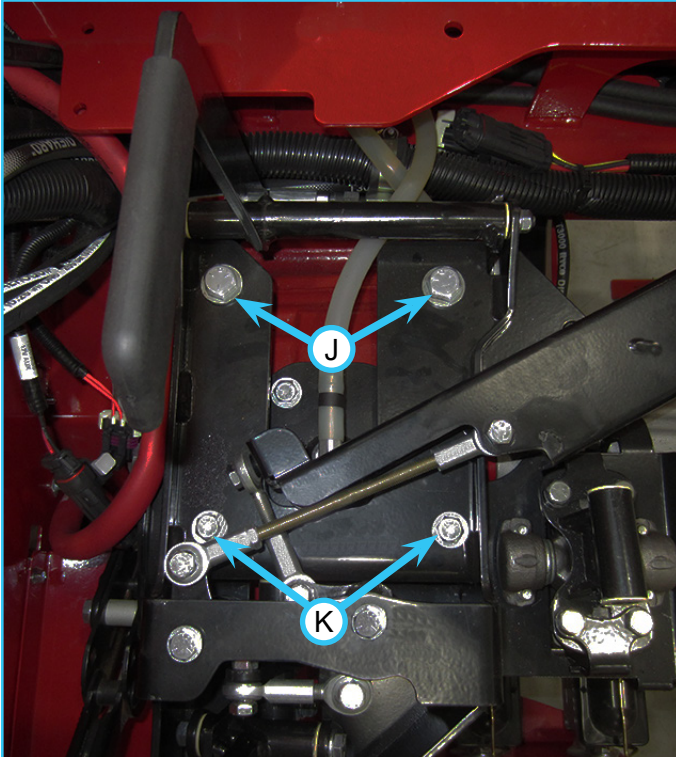


13. Remove the two 8mm bolts (I) located on the front and rear of the transmission from the shifter mounting bracket.



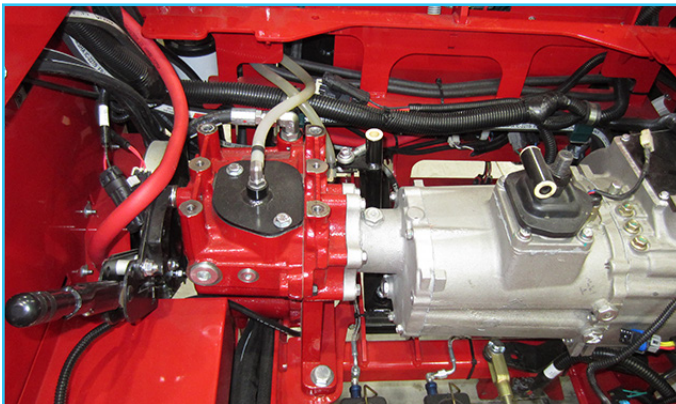


14. Remove the two 1/2" bolts (J) from the shifter mounting bracket.



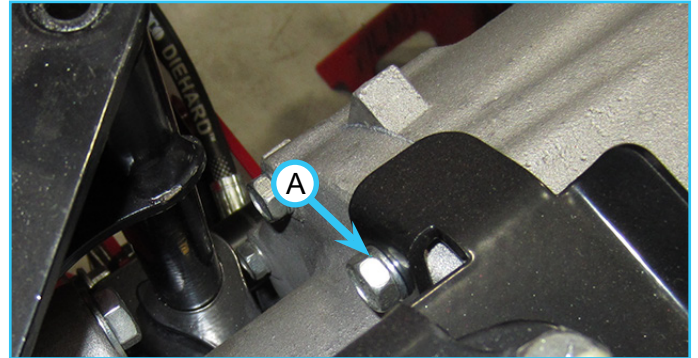
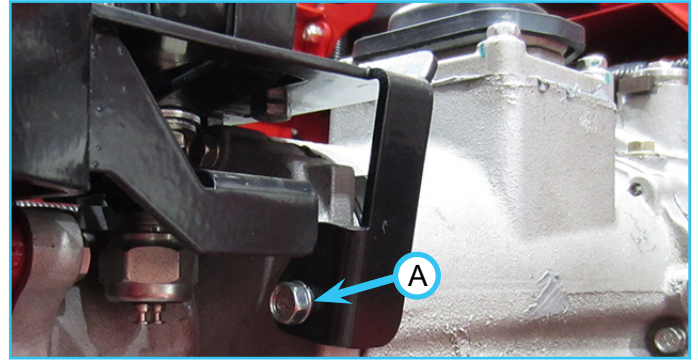
15. Remove the two 3/8" bolts (K) from the shifter mounting bracket.

16. The shifter assembly can now be removed.

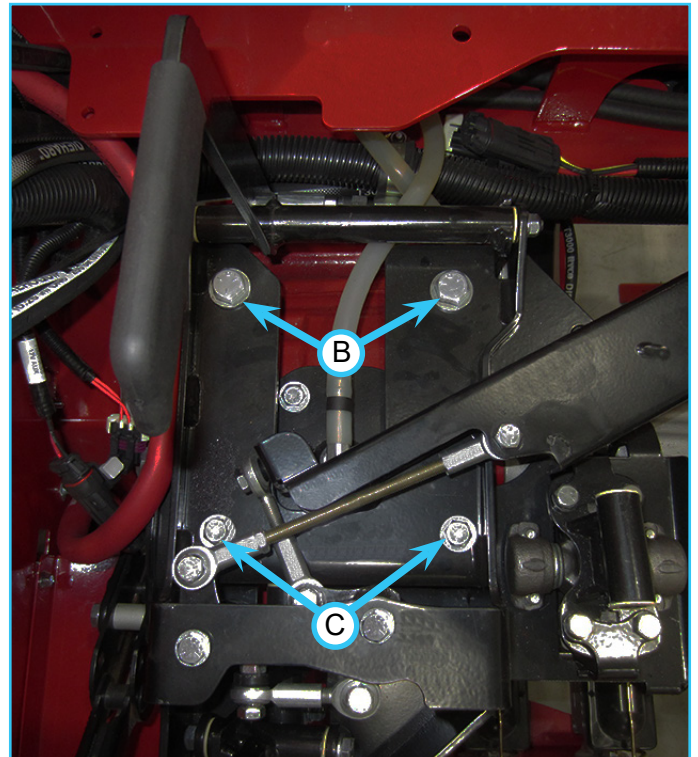


INSTALLATION

1. Position the shifter assembly aligning the mounting holes.
2. Install the two 8mm mounting bolts (A) through the mounting bracket and into the transmission.



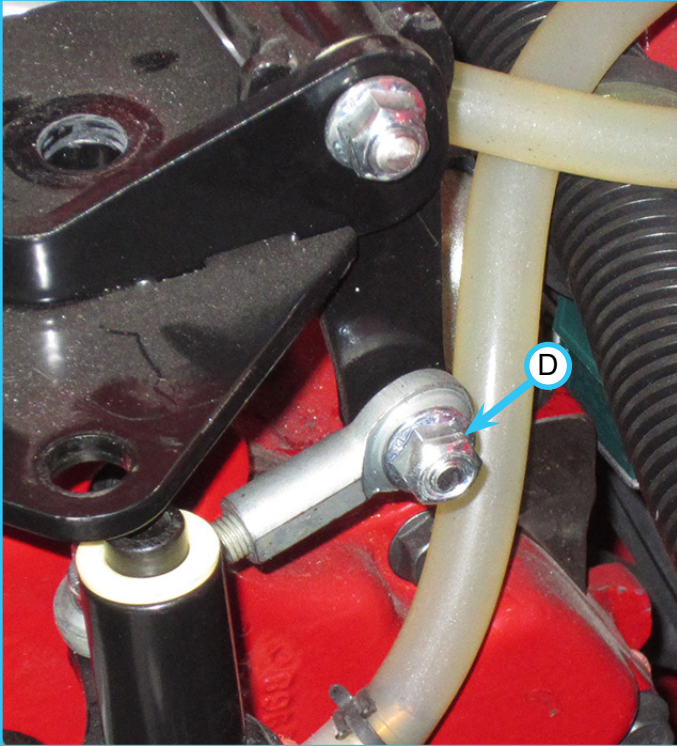
3. Torque the two 8mm bolts to 22 ft-lbs (30 Nm).
4. Install the two 1/2" mounting bolts (B) through the mounting bracket and into the two speed transmission hand tight.



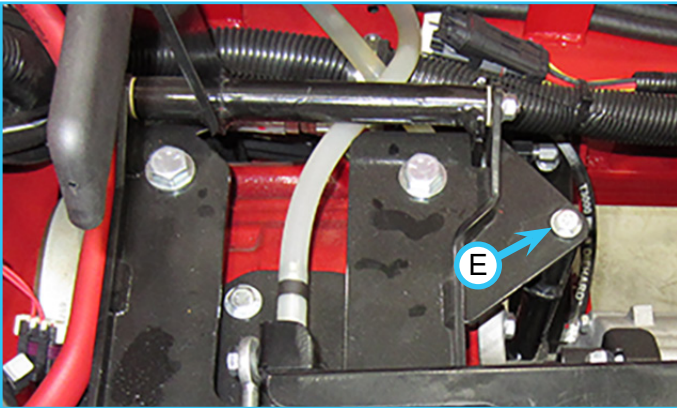
5. Install the two 3/8" mounting bolts (C) through the mounting bracket and into the two speed

transmission hand tight.

6. Torque the two 1/2" mounting bolts to 75 ft-lbs (102 Nm).
7. Torque the two 3/8" mounting bolts to 31 ft-lbs (42 Nm).
8. Install the 5/16" bolt (D) through the heim joint, secured in place with a 5/16" flange nut.
9. Torque the 5/16" bolt to 210 in-lbs (24 Nm).

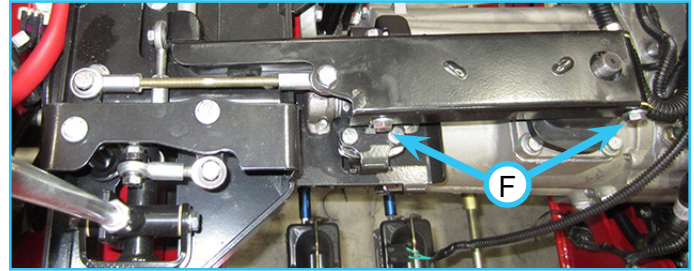


10. Install the bushing and 5/16" bolt (E) through the high low shifter tube, secured in place with a 5/16" flange nut.

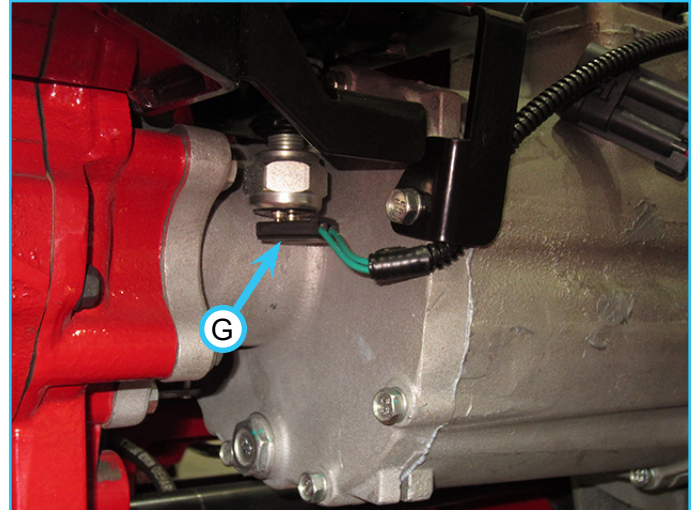


11. Torque the 5/16" bolt to 210 in-lbs (24 Nm).

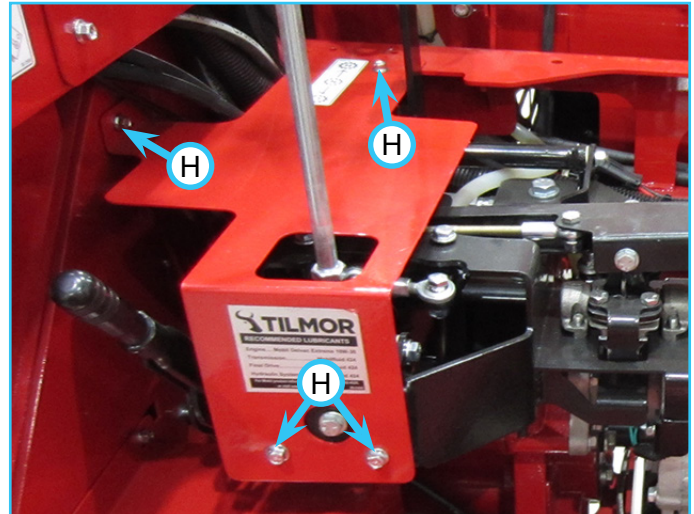
12. Position the shifter arm over the rocker gusset. Install the two 5/16" bolts (F) through the arm and rocker gussets, secured in place with two 5/16" flange nuts.



13. Torque the 5/16" bolts to 210 in-lbs (24 Nm).
14. Connect the neutral safety switch (G).



15. Position the shifter box cover (H) over the shifter box aligning the mounting holes.

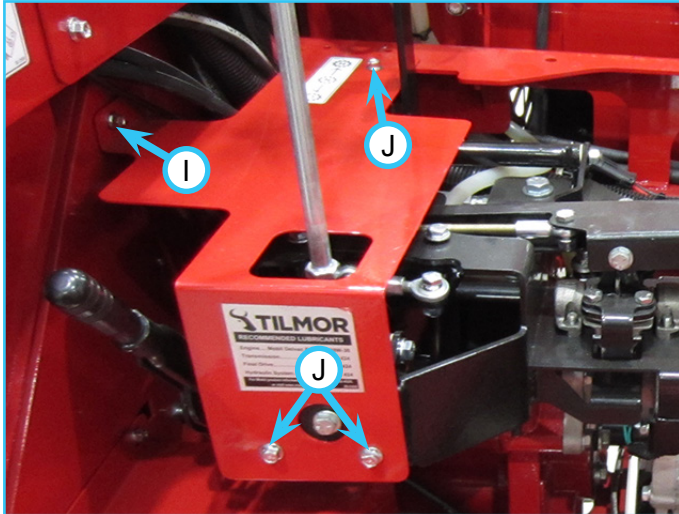




Attention

NOTE: Three of the 1/4" bolts (J) are held in place with 1/4" flange nuts.

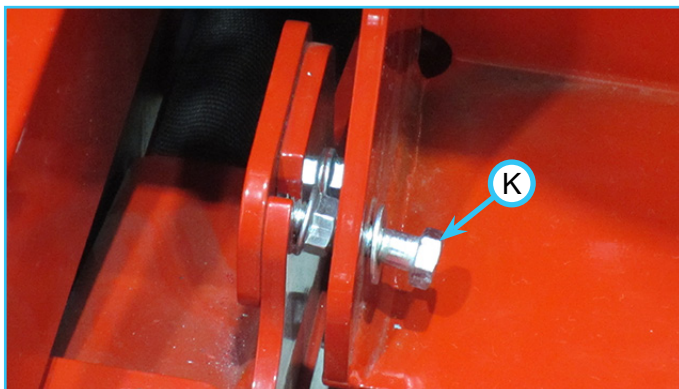
16. Install the four 1/4" mounting bolts (I, J) and 1/4" nuts. Torque the mounting bolts to 100 in-lbs (11 Nm).



CAUTION

Two persons or a hoist may be required to install the seat. Failure to use two persons or a hoist may result in personal injury or damage to equipment.

17. Position the tractor seat and frame aligning the mounting holes.
18. Tighten the 3/8" mounting bolts (K) through the frame.



19. With the mounting bolts through the frame install the 3/8" flange nuts (L) to secure the seat in place, Torque the flange nuts to 31 ft-lbs (42 Nm).



20. Connect the operator presence sensor cable to the main tractor wiring harness.

