

ATTACHMENTS / PARTS

Date: July 21, 2015

Subject: 5/8-18 Ball Joint Drag Link Kit

Part Numbers 710-0643 5/16-18 x 1.0" Hex Screw.
 712-0240 7/16-20 Jam Nut.
Affected: 723-04089 7/16-20 Drag Link Rod End.
 736-0242 Bell Washer 0.337 x 0.837 x 0.057"

736-0505 Flat Washer 0.340 x 1.500 x 0.150" HD
 738-04538 Steering Segment Shaft.
 747-05424, 747-05424A Left Hand Steering Drag Link.
 747-05425, 747-05425A Right Hand Steering Drag Link.

PURPOSE:

To improve durability of the steering system on the GT2000/2100 and GTX2000/2100, we have developed the Service Kit 759-05095. This 5/8-18 Ball Joint Drag Link kit will provide all the needed items to upgrade the steering system to current XT3 Enduro Series production level.

NOTE: These materials are prepared for use by trained technicians who are experienced in the service and repair of equipment of the kind described in this publication, and are not intended for use by untrained or inexperienced individuals. Such individuals should seek the assistance of an authorized service technician or dealer.

NOTE: Always wear eye protection while servicing equipment. Wear hearing protection when appropriate. Always work in a well ventilated area and follow all safety precautions when dealing with combustible materials.

NOTE: Left (LH) and Right (RH) sides are determined from the operator's position and facing in the forward direction.

NOTE: Save this parts content list. Refer to it when ordering parts.

759-05095 Service Kit Contents

ITEM NO.	PART NUMBER	QTY	DESCRIPTION
1	647-05070	1	ASSY:LINK:DRAG:RH
2	647-05071	1	ASSY:LINK:DRAG:LH
3	738-05142	1	SHFT:STRG:GT
4	738-05136	4	SPCR:SHLDR:0.386 X 0.52 X 0.74 LG
5	736-3050	2	WASH:FLAT:0.406 X 0.912 X 0.051
6	736-0331	1	WASH:BVL: 0.390 X 1.130 X 0.062
7	736-0258	4	WASH:FLAT:0.385 X 1.000 X 0.135

ITEM NO.	PART NUMBER	QTY	DESCRIPTION
8	736-0227	1	WASH:FLAT:0.390 X 1.500 X 0.134
9	723-04050	2	BALL JOINT: 0.625 ID X 5/8-18
10	712-3061	4	NUT:HEXLK:3/8-24:GR2:NYLON
11	712-3056	2	NUT:JAM:5/8-18:GR5
12	710-0591	1	HHCS:3/8-24:1.00:GR5:LOCK
13	710-0331	2	HHCS:3/8-24:2.25:GR5:STD
14	710-0151	2	HHCS:3/8-24:2.00:GR5:STD

Instruction sheet included with kit.

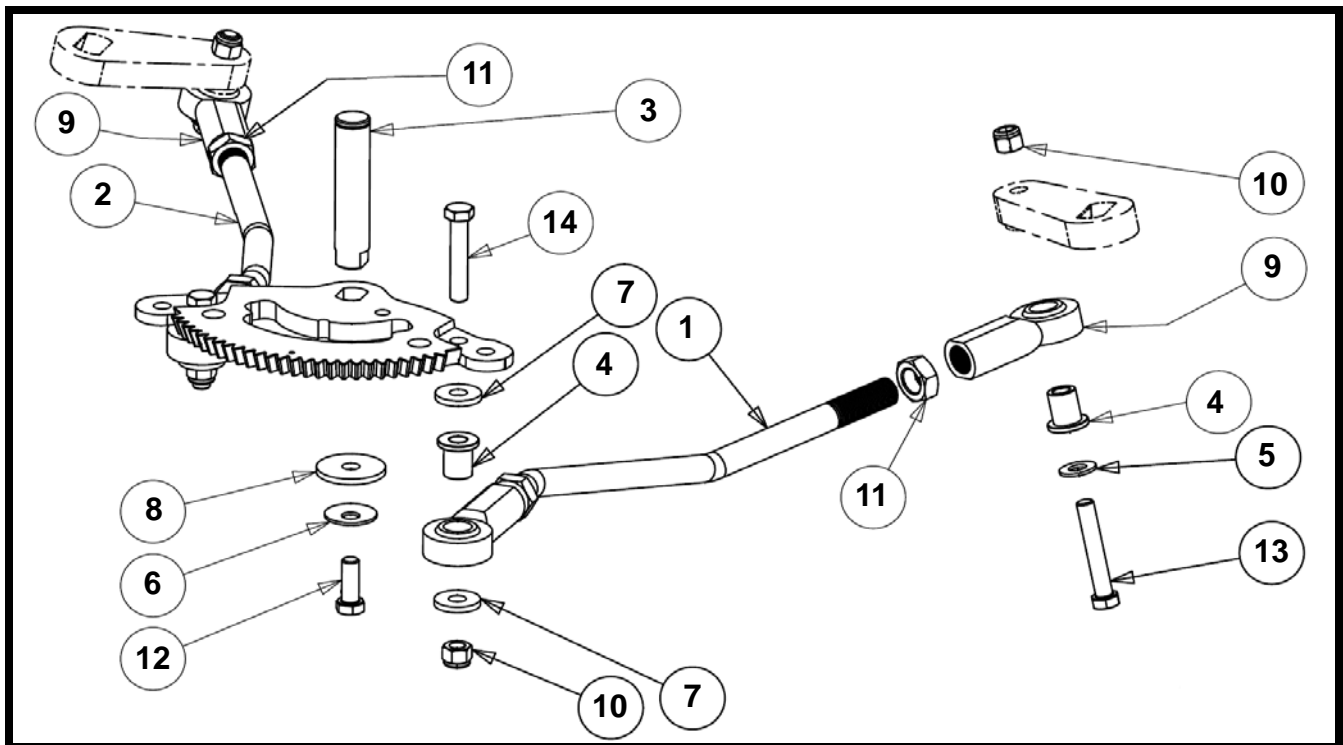


FIGURE 1

Removal Instructions:

1. Park the tractor on a flat level surface. Engage the parking brake.
2. Raise the hood assembly and disconnect the negative battery cable from the negative battery terminal.
3. Allow the unit to cool to ambient air temperature before proceeding.

NOTE: The front of the tractor can be lifted and supported with jack stands if needed for easier access.

4. Remove items **A** and **B** shown in Figure 2 including the hardware. Discard both of the drag link assemblies and hardware.

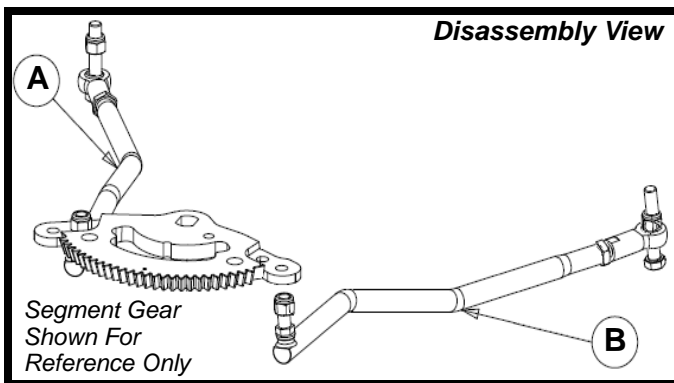


FIGURE 2

5. Remove items **C**, **D** and **E** shown in Figure 3 and discard. Retain the segment gear.
6. Carefully remove the steering shaft, item **F** from the steering housing shown in Figure 3.

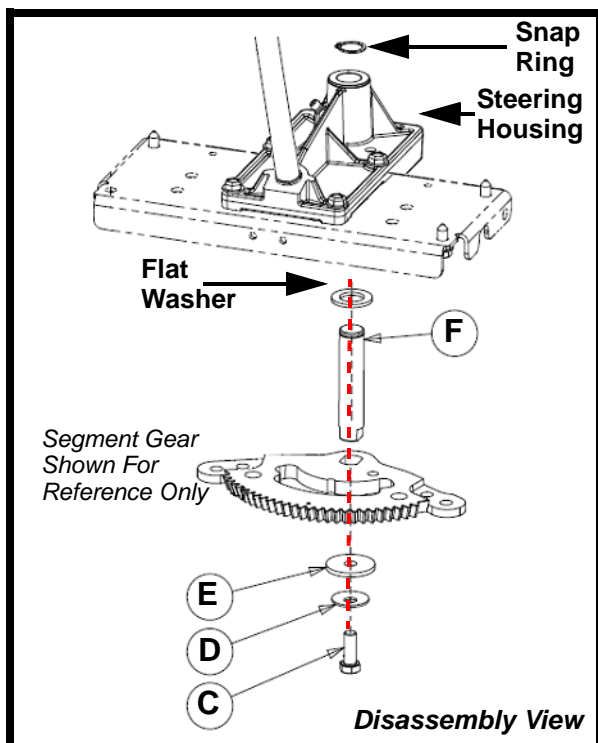


FIGURE 3

7. Remove the snap ring from the steering shaft, item **F** shown in Figure 3. Discard the steering shaft.

8. Retain the snap ring shown in Figure 3.

NOTE: Do not lose the flat washer shown in Figure 3, that is located between the segment gear and bottom of the steering housing.

Installation Instructions:

9. From the Service Kit, locate item #1 (**647-05070**) right hand drag link assembly. **NOTE: The drag link assemblies have the 5/8-18 ball joint and jam nut installed at the factory. Do Not loosen or adjust the assembled drag links. See figure 4.**

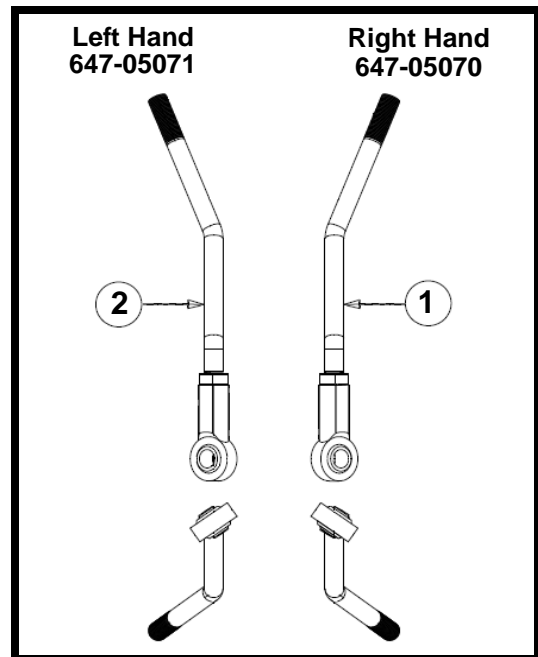


FIGURE 4

10. Install one (1) of item #14 (**710-0151**) 3/8-24 x 2.00" hex head cap screw from the top down through the inside 3/8" hole in the segment gear. See Figure 5.

11. Install one (1) of item #4 (**738-05136**) shoulder spacer into the ball joint. See Figure 5.

12. Place one (1) of item #7 (**736-0258**) 3/8 flat washer on top of the shoulder spacer. See Figure 5.

13. Install the assembled items from Steps 11 and 12 up on to item #14 (**710-0151**) 3/8-24 x 2.00" hex head cap screw and hold in place against the bottom of the segment gear.

14. Install one (1) of item #7 (**736-0258**) 3/8 flat washer over #14 (**710-0151**) 3/8-24 x 2.00" hex head cap screw, then thread one (1) of item #10 (**712-3061**) 3/8-24 nylon lock hex nut onto item #14 (**710-0151**) 3/8-24 x 2.00" hex head cap screw finger tight. See Figure 5.

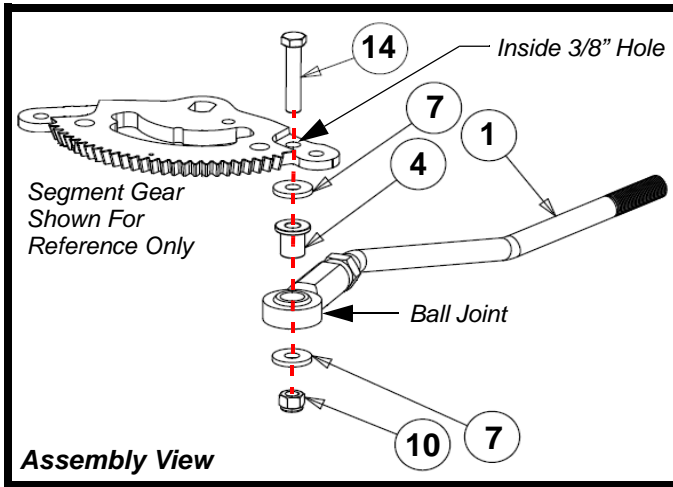


FIGURE 5

15. Repeat Steps 9 through 14 for item #2 (647-05071) left hand drag link assembly, then proceed to Step 16.

16. Torque item #10 (712-3061) 3/8-24 nylon lock hex nut on the left and right hand drag link assemblies to 200-300 in. lbs. See Figure 6.

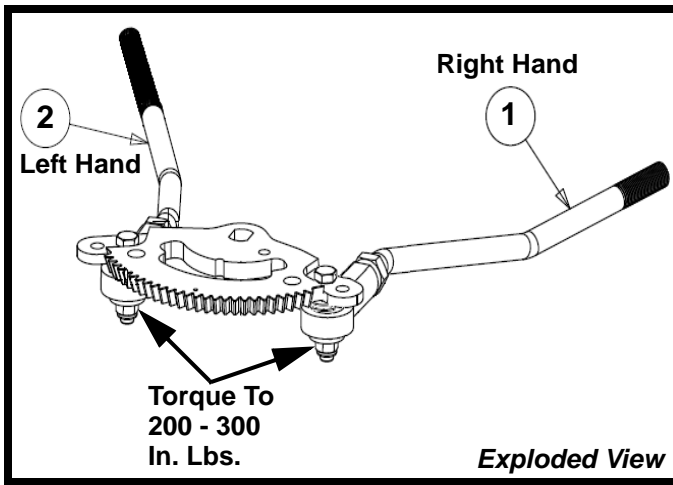


FIGURE 6

17. Install the snap ring retained in Step 8 onto item #3 (738-05142) steering shaft. See Figure 7.

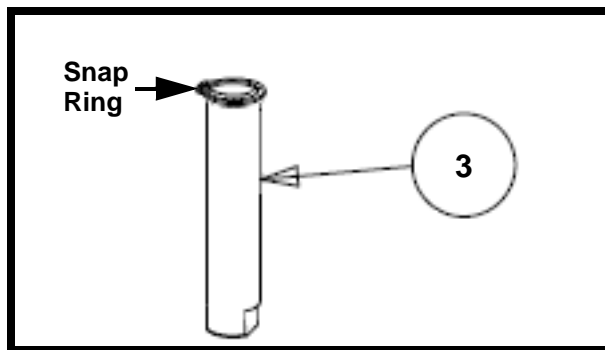


FIGURE 7

18. Install item #3 (738-05142) steering shaft into the front hole of the steering housing. See Figure 8.

19. Place the flat washer on top of the segment gear over the double "D" hole. See Figure 8.

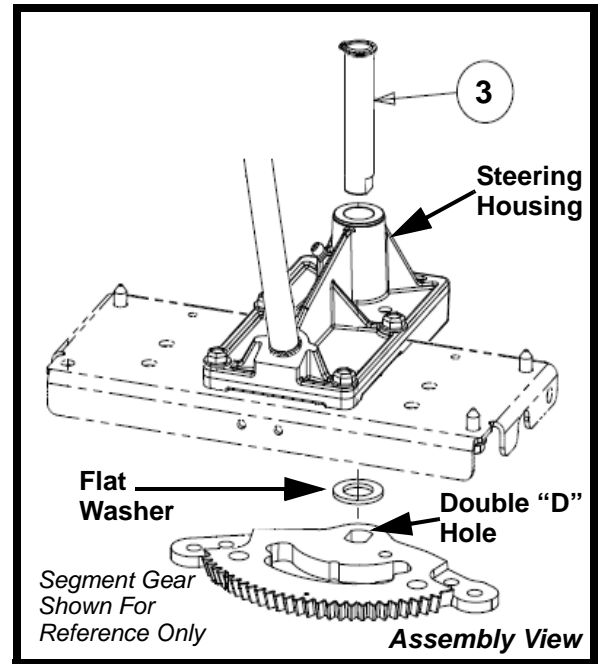


FIGURE 8

20. Raise the segment gear with the left and right drag link assemblies up to the steering shaft. See Figure 9.

NOTE: The drag link assemblies are not shown mounted to the segment gear for clarity reasons.

21. Make sure the flat washer is positioned so that the steering shaft passes through it and then in to the segment gear. Figure 9 is an exploded view to show the steering shaft passing through the flat washer and into the segment gear.

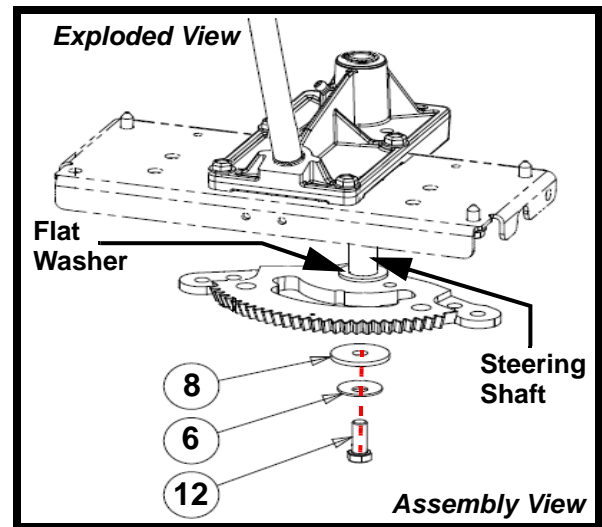


FIGURE 9

22. Install item #6 (736-0331) bevel washer (cup side away from screw head) over item #12 (710-0591) 3/8-24 x 1.00" hex head cap screw with patch lock. See Figure 9.

23. Install item #8 over item #12 (710-0591) 3/8-24 x 1.00" hex head cap screw above item #6 (736-0331) bevel washer. See Figure 9.

24. Thread item #12 (710-0591) 3/8-24 x 1.00" hex head cap screw into the steering shaft.

25. Hold the segment gear from turning and torque item #12 (710-0591) 3/8-24 x 1.00" hex head cap screw to 35-40 ft. lbs. See Figure 10

NOTE: The drag link assemblies are not shown mounted to the segment gear for clarity reasons.

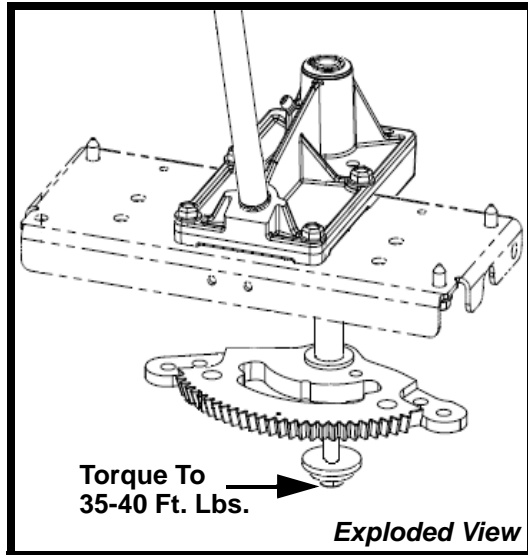


FIGURE 10

26. Thread one (1) of item #11 (712-3056) 5/8-18 jam nut onto the steering knuckle end of the right hand drag link assembly. See Figure 11. Thread the jam nut almost down to the end of the threads.

27. Thread one (1) of item #9 (723-04050) 5/8-18 ball joint onto the right hand drag link assembly about half the distance to the jam nut. See Figure 11.

28. Repeat Steps 26 and 27 for the left hand drag link assembly, then proceed to Step 29.

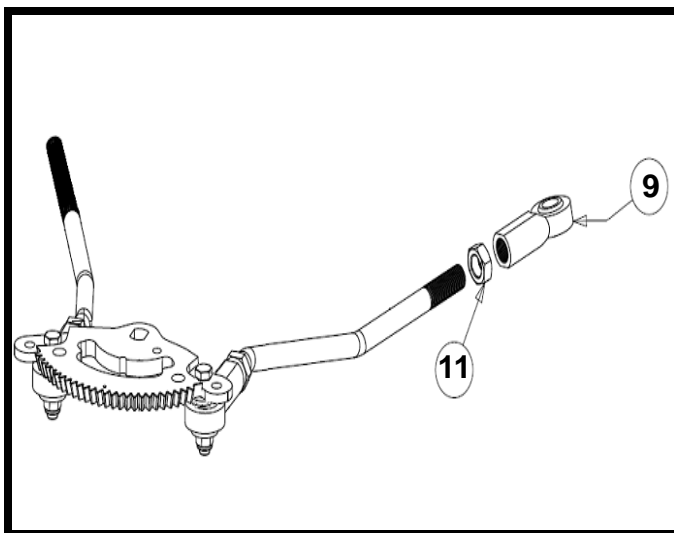


FIGURE 11

NOTE: Figure 12 is a general diagram used for toe-in adjustments. Some items appear differently from those actual items being used in this Service Kit.

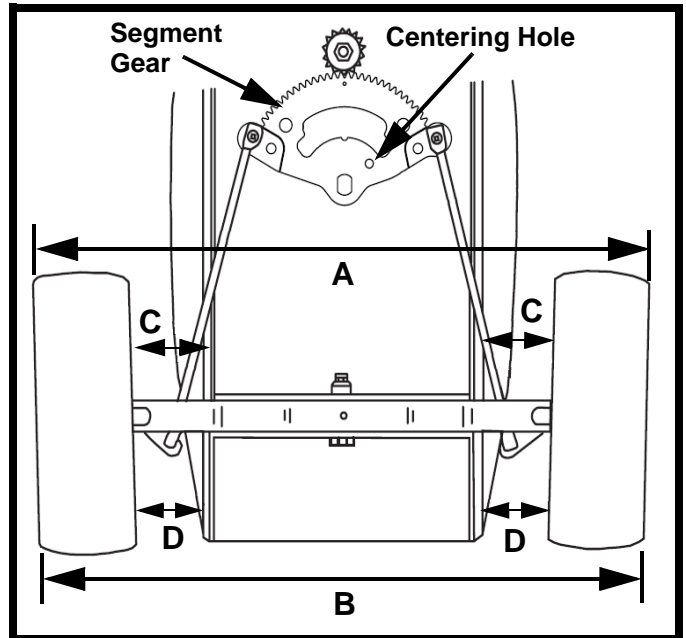


FIGURE 12

29. Check that the segment gear is in the center position. The hole in the segment gear (Figure 12) should be aligned with the hole in the steering housing. A 5/16 straight punch can be used to assure the segment gear is centered.

30. Mark the front horizontal diameter of both front wheels at the same spot on each wheel-preferably the inner bead flange of the wheel rims. Mark the rear horizontal diameter of both front wheels in the same manner.

31. Measure the distance between the bottom edges of the tractor frame channels and the marks on the front of each wheel (See measurement D in Figure 12). These two measurements should be equal.

32. Measure the distance between the frame and the marks on the rear of each front wheel (See measurement C in Figure 11). Measurement D should be approximately 1/16" - to 1/8" less than measurement C on each side of the tractor.

33. Manually move each wheel to achieve the required toe-in and equal D measurements in Figure 12.

34. Making sure not to move the segment gear or either wheel, turn the right hand drag link 5/8-18 ball joint in or out as necessary to align with the hole in the steering arm. See Figure 13.

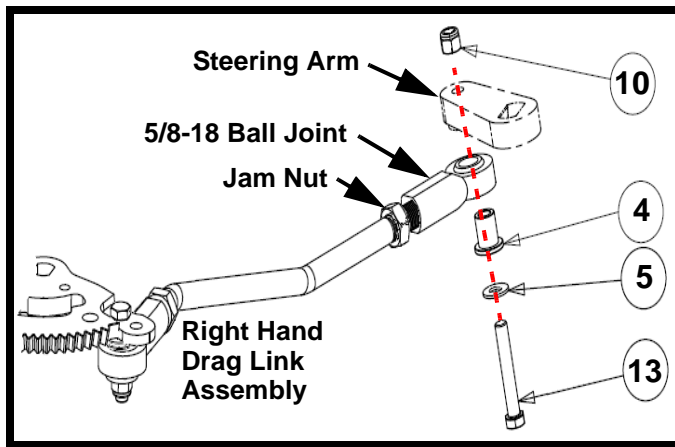


FIGURE 13

35. Place one (1) of item #5 (736-3050) flat washer over one (1) of item #13 (710-0331) 3/8-24 x 2.25" hex head cap screw. See Figure 13.

36. Install one (1) of item #4 (738-05136) Shoulder spacer over item #13 (710-0331) 3/8-24 x 2.25" hex head cap screw with the flange side towards the flat washer. See Figure 13.

37. Install the assembled items from Steps 35 and 36, from the bottom up through the 5/8-18 ball joint and the 3/8" hole in the steering arm and hold in place. See Figure 13.

NOTE: If needed, adjust the 5/8-18 ball joint by turning in or out to align with the hole in the steering arm.

38. Thread one (1) of item #10 (712-3061) 3/8-24 nylon lock hex nut onto item #13 (710-0331) 3/8-24 x 2.25" hex head cap screw finger tight. See Figure 13.

39. Repeat Steps 35 through 38 for the left hand drag link assembly, then proceed to Step 40.

40. Confirm that the measurement is still equal at the **D** measurements in Figure 11 on page 4. Then measure across dimensions **A** and **B** shown in Figure 12 on Page 4. The **B** dimension should be approximately 1/8" to 1/4" less than the measurement dimension of **A**. Adjust as needed to set the correct toe-in.

41. Torque item #10 (712-3061) 3/8-24 nylon lock hex nut located on the left and right hand steering arms to 200-300 in. lbs. See Figure 14.

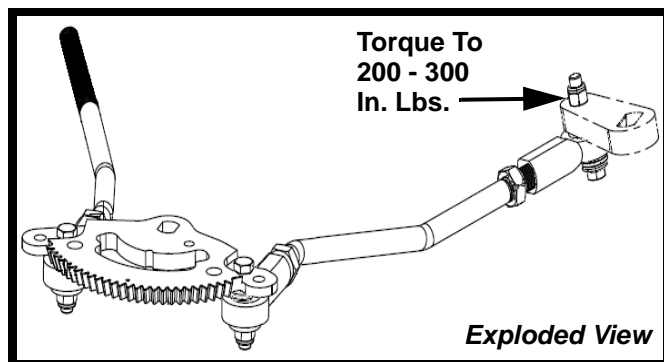


FIGURE 14

42. Torque the jam nuts at each 5/8-18 ball joint on the steering arm end of the drag link assembly to 38 to 45 ft. lbs. See Figure 15.

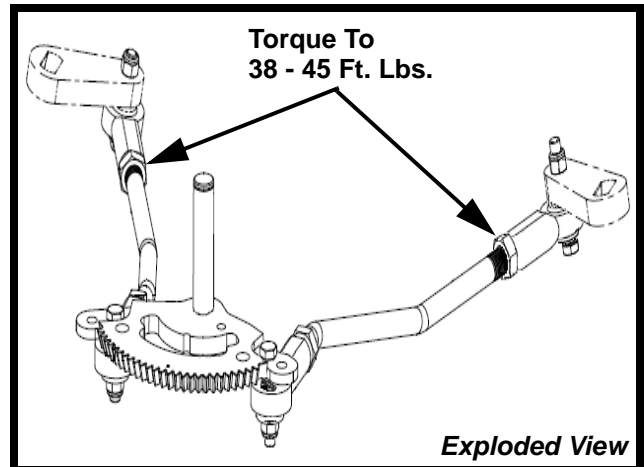


FIGURE 15

43. If the front of the tractor was lifted and supported by jack stands, lift and remove the jack stands, then lower the rider to the ground.

44. Raise the hood assembly if closed.

45. Locate the grease fittings on the steering housing for the steering shafts. See Figure 16. Apply grease to the fittings using a grease gun containing 251HEP grease (737-3034), or an equivalent No. 2 multipurpose lithium grease. **Do Not** over grease.

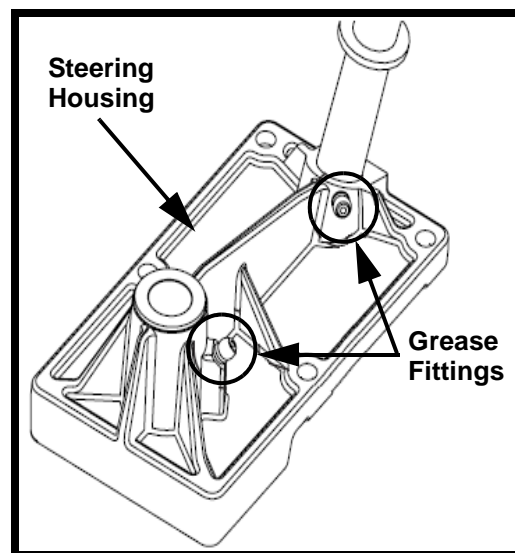


FIGURE 16

46. Connect the negative battery cable to the negative battery terminal.

47. Close the hood assembly.

48. Start and confirm all operating features are functioning correctly.

49. In a safe, open area, test drive the tractor before returning to service.