



Power Ox 220A Assembly

Go to www.tilmor.com/resources for complete parts list, additional resources and replacement part ordering.

Release Date: 12/11/2019
Document Number: 12-50003
Revision Number: 06



Attention

Review safety information
before operation.

Installation Time (estimated)

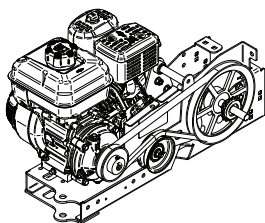
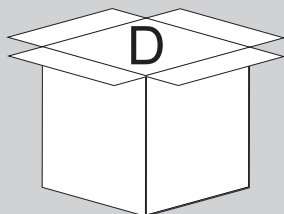
4 hours

REQUIRED PARTS

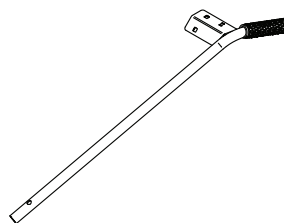
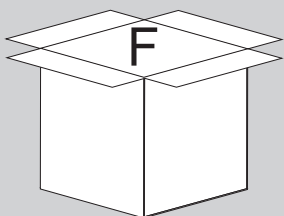


Tools

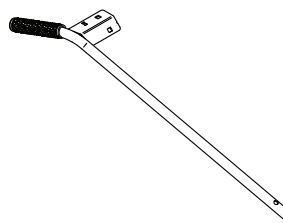
1/4" Wrench
9/16" Wrench
7/16" Wrench
9/16" Socket
1/2" Wrench
9mm Wrench
Torque Wrench
Torque Screw-
driver
1/8" Hex Key
3mm Hex Key



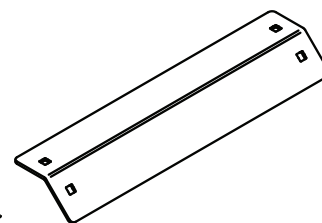
1x
Kit, Front Frame
AU-9010



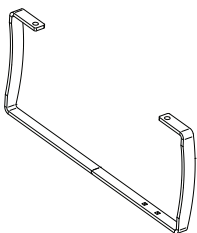
1x
Frame, Handle Mount
LH
AU-6004



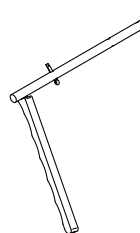
1x
Frame, Handle Mount
RH
AU-6011



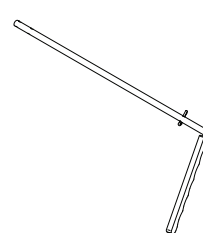
1x
Bracket Handle Connector
AU-6013



1x
Bracket, Handle Guard
AU-1093

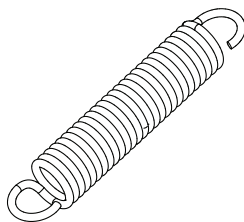
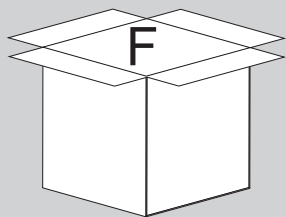


1x
Bracket, Idler Pivot LH
AU-6009

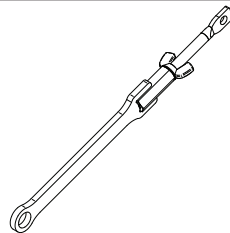


1x
Bracket, Idler Pivot RH
AU-6010

REQUIRED PARTS CONTINUED



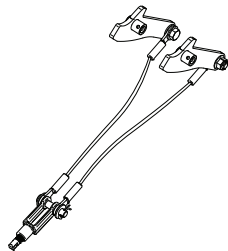
1x
Spring, Ext.844"
OD x 4"
41-0131



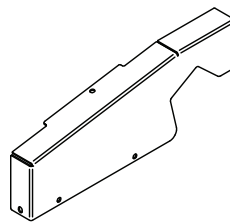
1x
Idler Pivot Linkage,
Upper



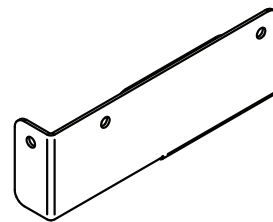
1x
Idler Pivot Linkage,
Lower
AU-1034



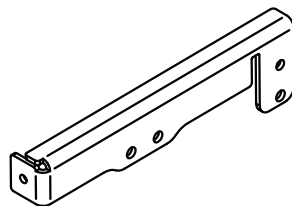
1x
Cable and Turnbuckle
Assembly



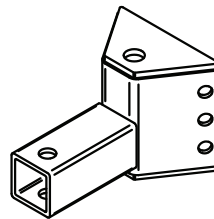
1x
Cover, Belt & Pulley
AU-1050



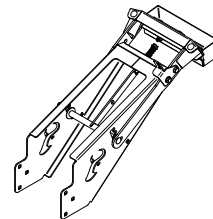
1x
Cover, Mount Lower
AU-1052



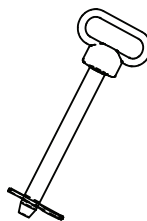
1x
Kick Stand Front
AU-1061



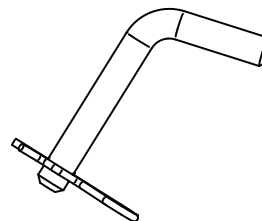
1x
Bracket, Receiver Hitch
AU-6003



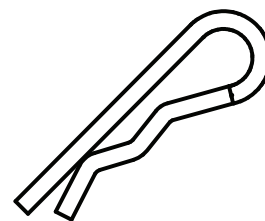
1x
Rear Frame & Lower
Handle Mount Assembly



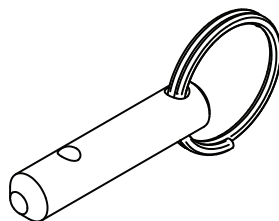
1x
Pin, Hitch 3/4" x 6 1/2"
03-0034



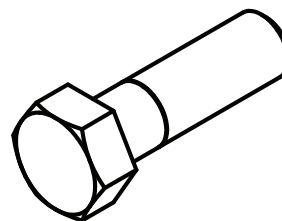
1x
Pin, Hitch 5/8" x 3"
03-0014



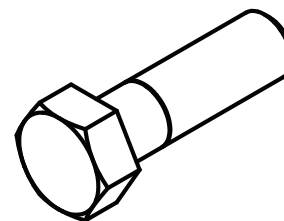
2x
Hair Pin 1/8" x 2"
02-HP0416



1x
Pin, Ball 3/8" x 1"
03-0006

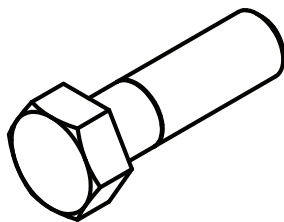
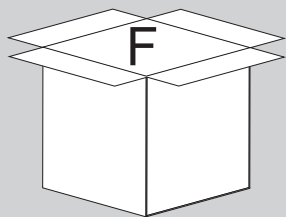


5x
Bolt, 5/16" x 3/4"
90-0506

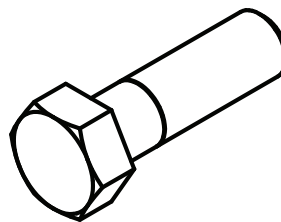


2x
Bolt, 3/8" x 3/4"
90-0606

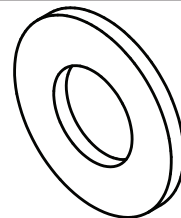
REQUIRED PARTS CONTINUED



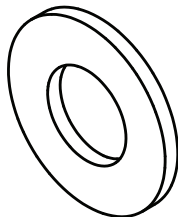
6x
Bolt, 3/8" x 1"
90-0608



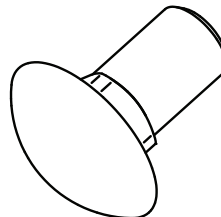
2x
Bolt, 3/8" x 1-1/4"
90-0610



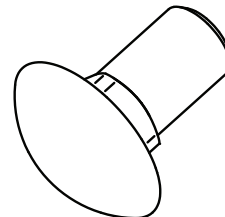
5x
Washer, Flat 5/16"
95-05



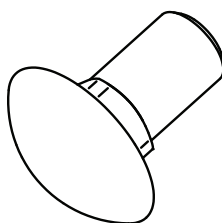
11x
Washer, Flat 3/8"
95-06



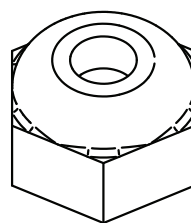
16x
Bolt, Carriage
3/8" x 3/4"
97-0606



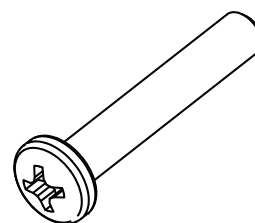
2x
Bolt, Carriage
3/8" x 1"
97-0608



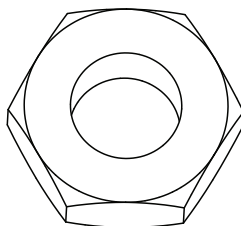
2x
Bolt, Carriage 3/8" x 2
1/2"
97-0620



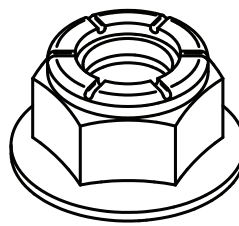
2x
Locknut, Nylon
#8-32
99-E0133



2x
Machine Screw
#8-32 X 1
99-K0044

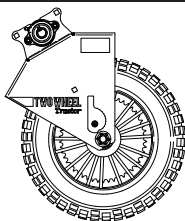
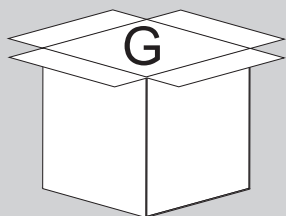


2x
Nut, Jam
3/8 - 16
99-E0037

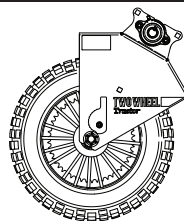


27x
Nut, Nylon Locking
Flange 3/8"
99-E0136

REQUIRED PARTS CONTINUED



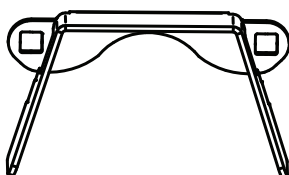
1x
Frame, Wheel Mount
Left Hand (Narrow)
AU-6002



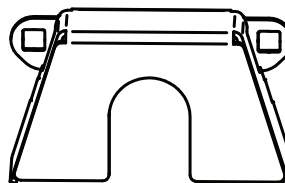
1x
Frame, Wheel Mount
Right Hand (Narrow)
AU-6020



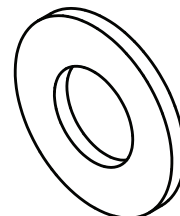
2x
415 Chain
1/2" Pitch x 80 Rollers
81-0186



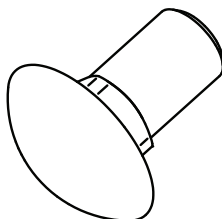
1x
Cover, Sprocket
Left Hand
AU-1011



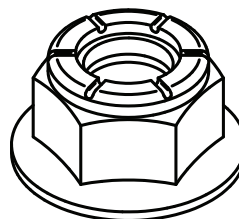
1x
Cover, Sprocket
Right Hand
AU-1071



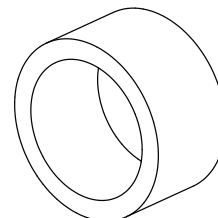
2x
Washer, Flat 3/4"
95-12



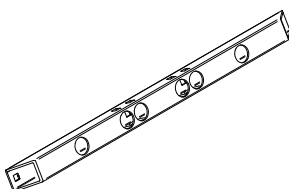
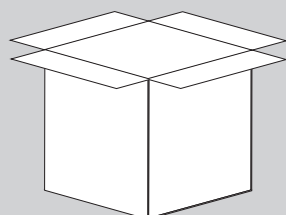
12x
Bolt, Carriage 3/8" x
3/4"
97-0606



12x
Nut, Nylon Locking
Flange 1/4"
99-E0136

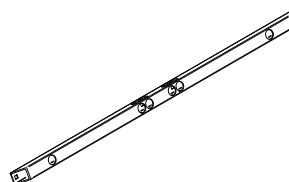


1x
Hub Spacer
AU-1077

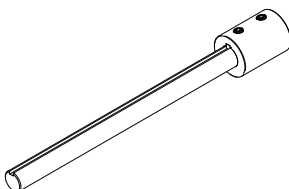
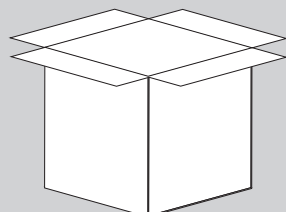


2x
Tube, Frame Width Nar-
row, Narrow Wheels
AU-3011

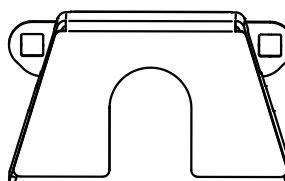
OR



2x
Tube, Frame Width
Wide, Narrow Wheels
AU-3012



2x
Drive Shaft and Coupler
Assembly

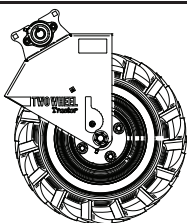
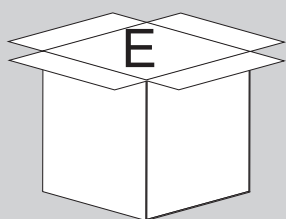


1x
Cover, Sprocket Right
Hand
AU-1071

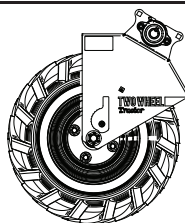


Required for tractors
configured with the
wide width frame.

REQUIRED PARTS CONTINUED



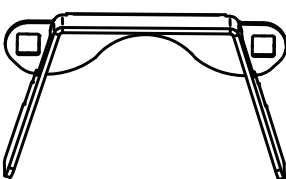
1x
Frame, Wheel Mount
Left Hand (Wide)
AU-6024



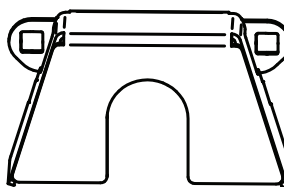
1x
Frame, Wheel Mount
Right Hand (Wide)
AU-6025



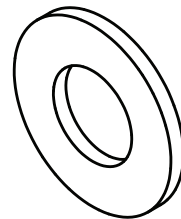
2x
415 Chain
1/2" Pitch x 80 Rollers
81-0186



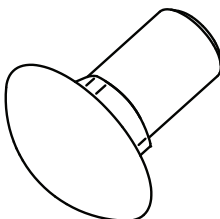
1x
Cover, Sprocket
Left Hand
AU-1011



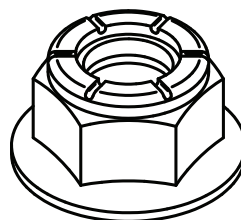
1x
Cover, Sprocket
Right Hand
AU-1071



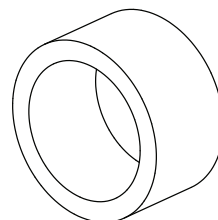
2x
Washer, Flat 3/4"
95-12



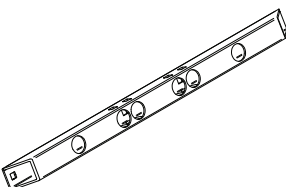
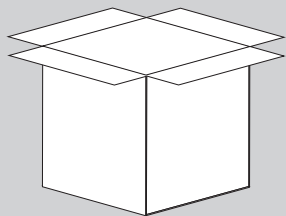
12x
Bolt, Carriage 3/8" x
3/4"
97-0606



12x
Nut, Nylon Locking
Flange 1/4"
99-E0136

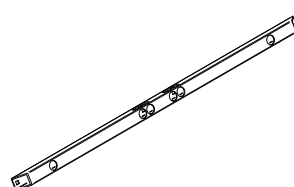


1x
Hub Spacer
AU-1077

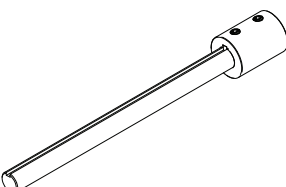
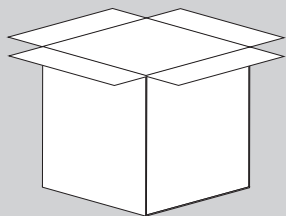


2x
Tube, Frame Width Nar-
row, Wide Wheels
AU-3001

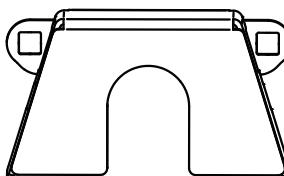
OR



2x
Tube, Frame Width
Wide, Wide Wheels
AU-3002



2x
Drive Shaft and Coupler
Assembly



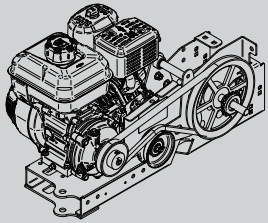
1x
Cover, Sprocket
Right Hand
AU-1071



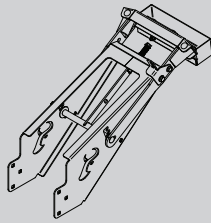
Required for tractors
configured with the
wide width frame.

FRONT AND REAR FRAME ASSEMBLY

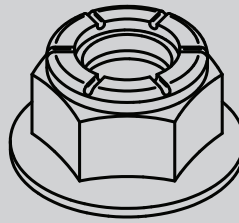
 9/16" Socket, Torque Wrench



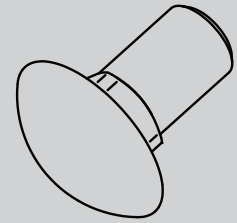
1x
Kit, Front Frame
AU-9009



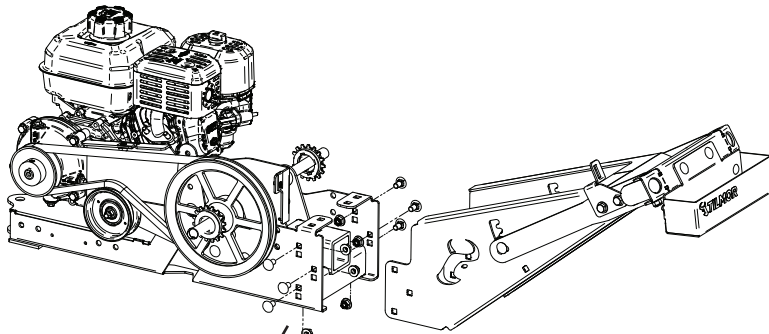
1x
Rear Frame & Lower
Handle Mount Assembly





6x
Nut, Nylon Locking
Flange 3/8"
99-E0136

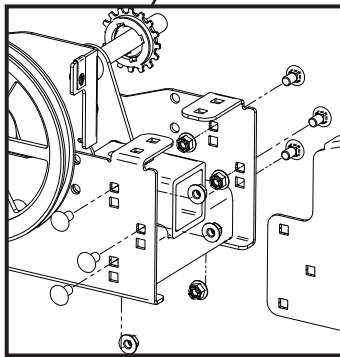


6x
Bolt, Carriage
3/8" x 3/4"
97-0606

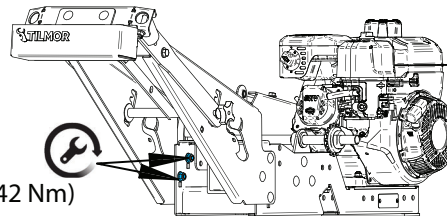


 The upper mounting holes are recommended to enhance ground clearance. However, if the operator is of shorter height, the lower mounting location may be desired for better comfort.

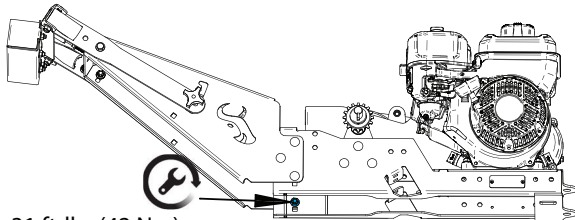
 To ensure the frame is aligned properly, alternate between all six bolts, tightening each bolt evenly until torque is reached.



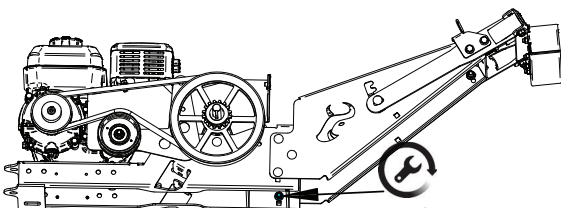
31 ft-lbs (42 Nm)



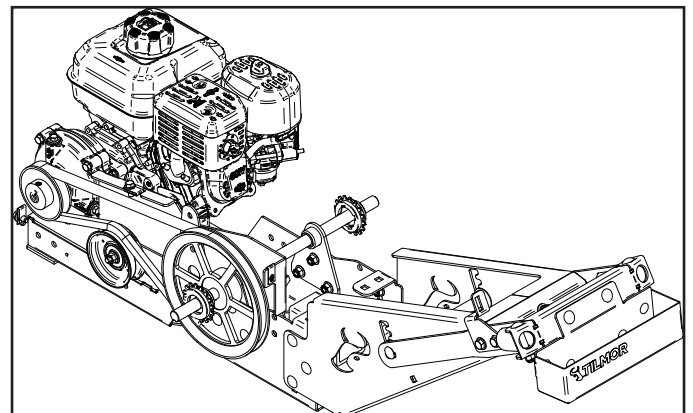
31 ft-lbs (42 Nm)



31 ft-lbs (42 Nm)

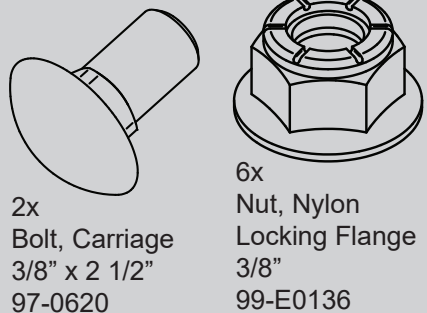
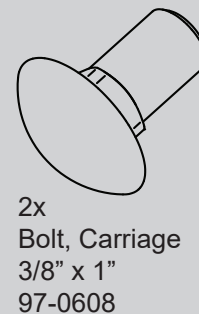
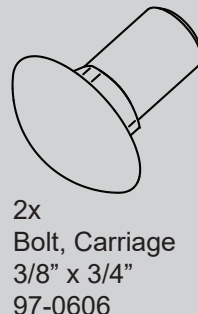
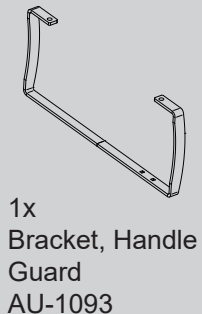
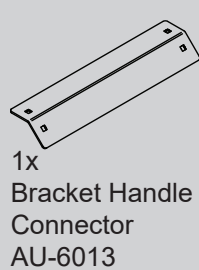
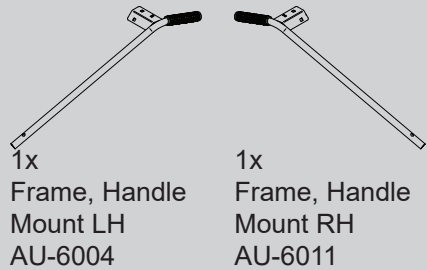



31 ft-lbs (42 Nm)

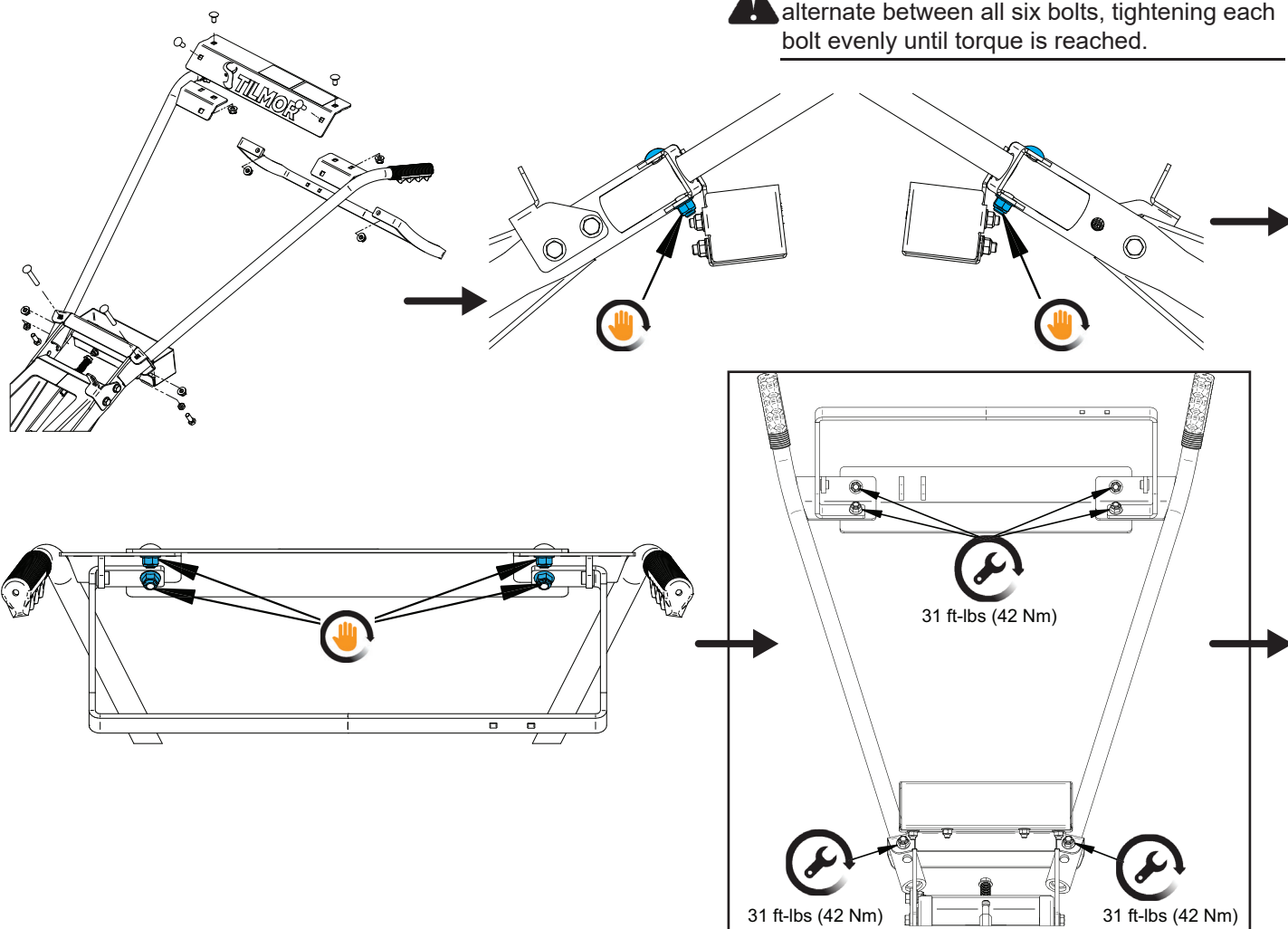


HANDLE BAR ASSEMBLY

 9/16" Socket, Torque Wrench

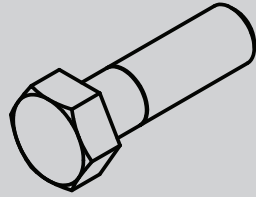


 To ensure the handle bars are aligned properly, alternate between all six bolts, tightening each bolt evenly until torque is reached.

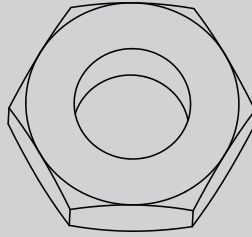


HANDLE BAR ASSEMBLY CONTINUED

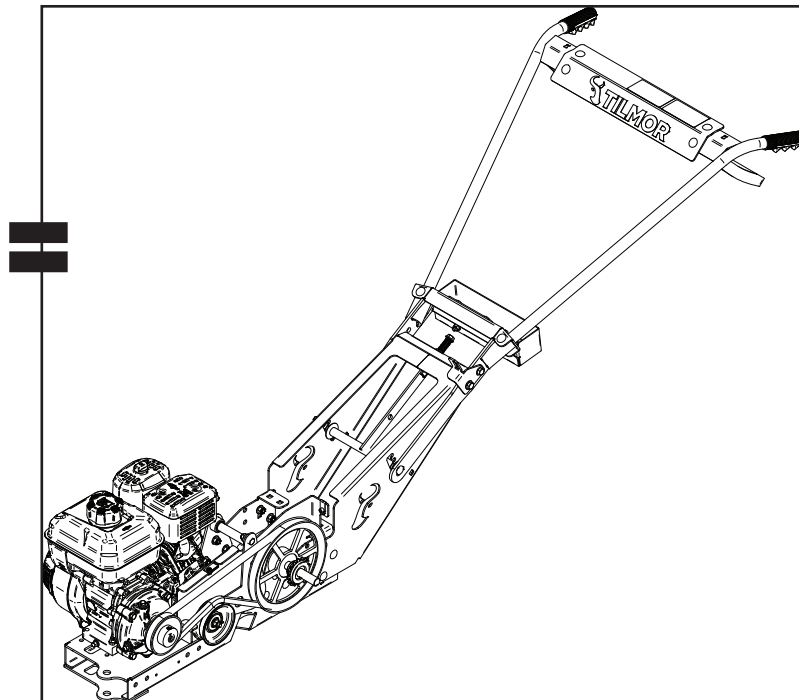
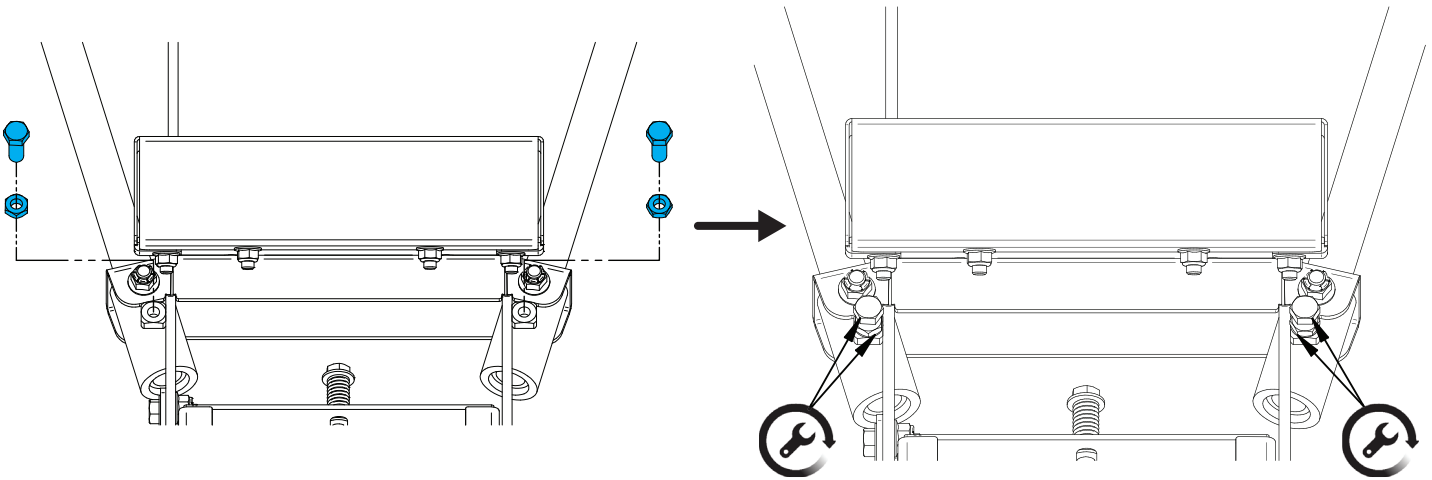
 9/16" Socket, 9/16" Wrench



2x
Bolt, 3/8" x 1"
90-0608

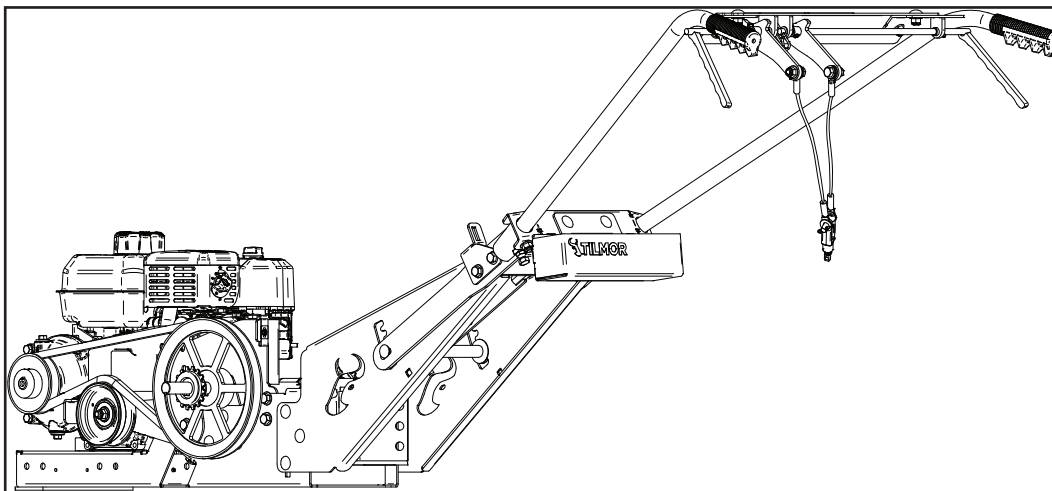
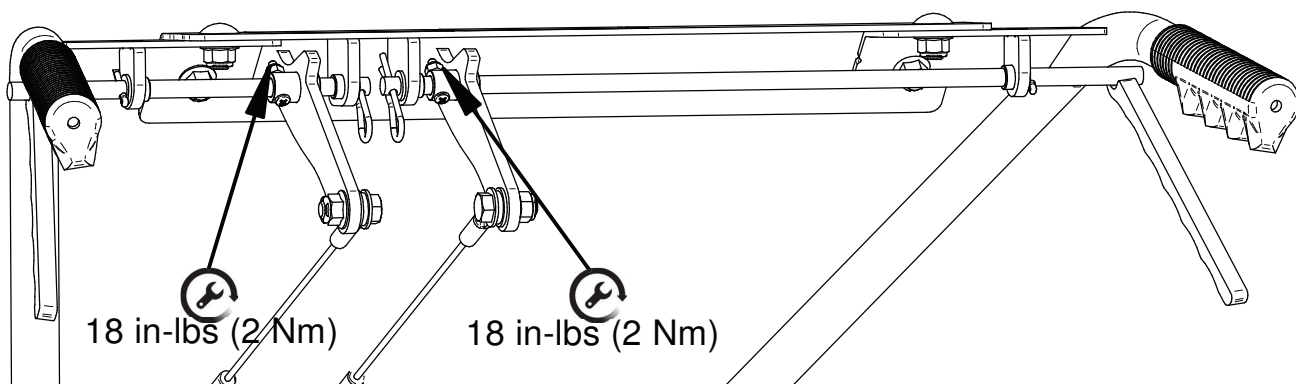
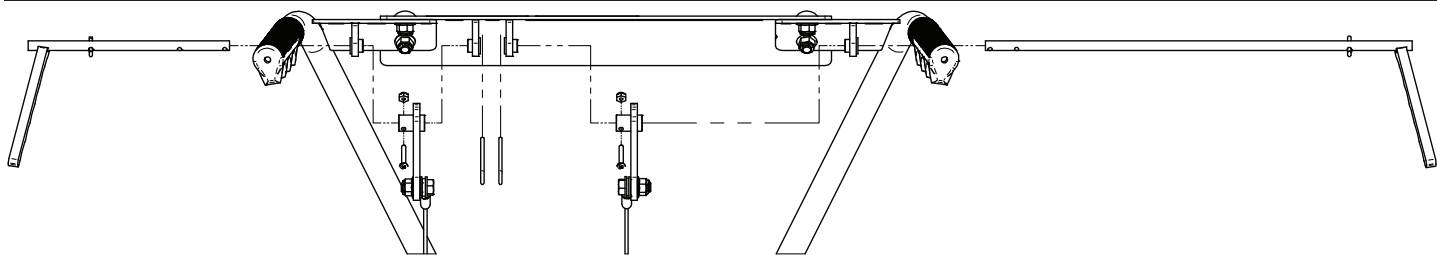
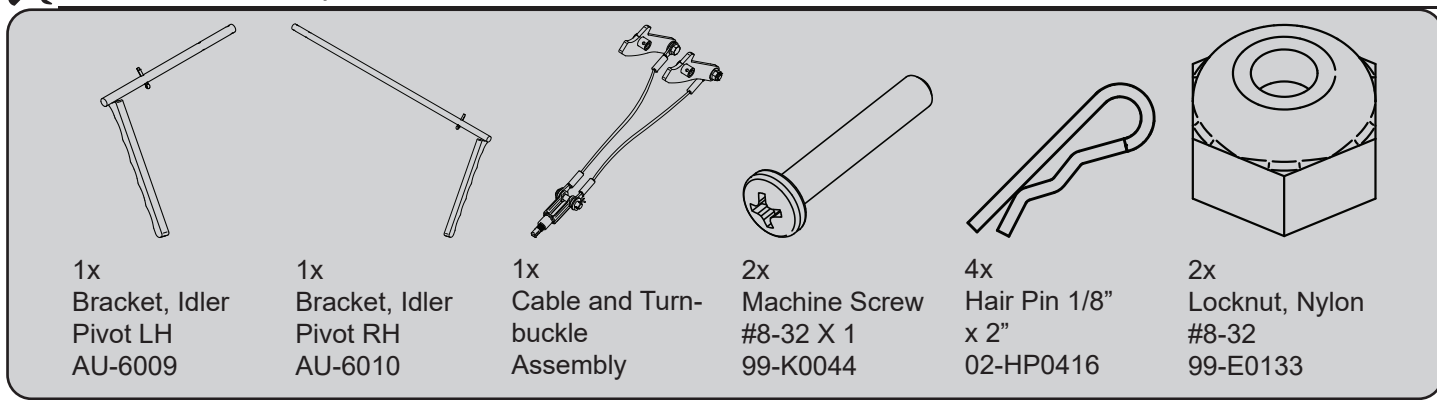


2x
Nut, Jam
3/8 - 16
99-E0037



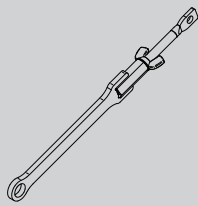
DRIVE CONTROL HANDLE ASSEMBLY

 9mm Wrench, Torque Screwdriver, Pliers



DRIVE CONTROL LINKAGE ASSEMBLY

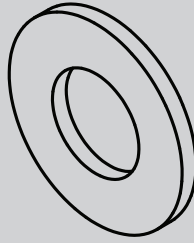
 9/16" Socket, Torque Wrench



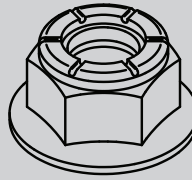
1x
Idler Pivot Linkage,
Upper



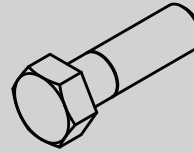
1x
Idler Pivot Linkage,
Lower
AU-1034



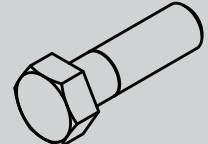
2x
Washer, Flat 3/8"
95-06



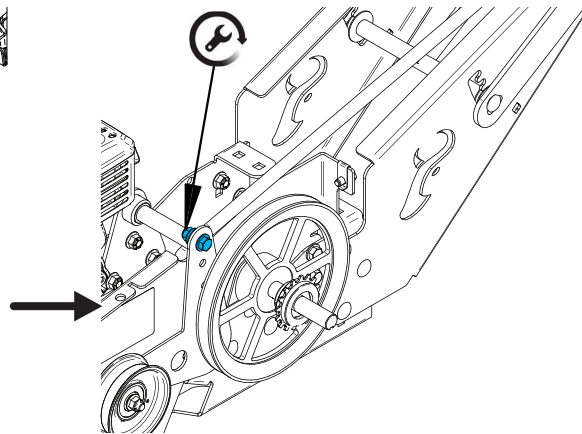
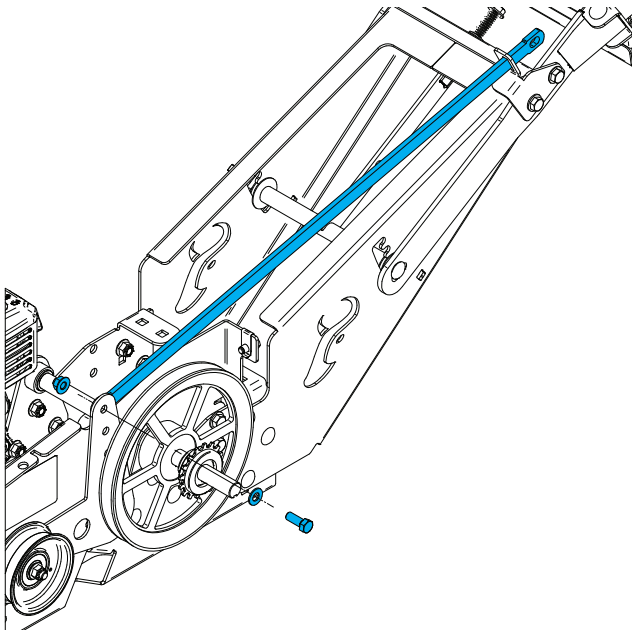
2x
Nut, Nylon Locking
Flange 3/8"
99-E0136



1x
Bolt, 3/8" x 1-1/4"
90-0610

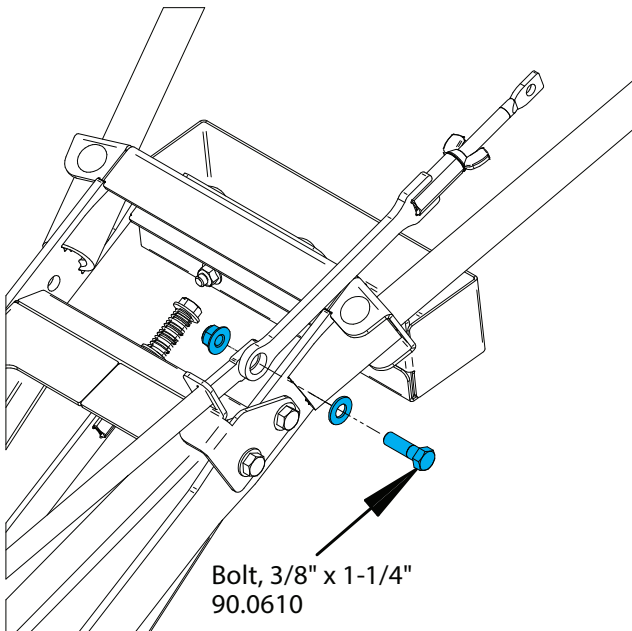


1x
Bolt, 3/8" x 1"
90-0608

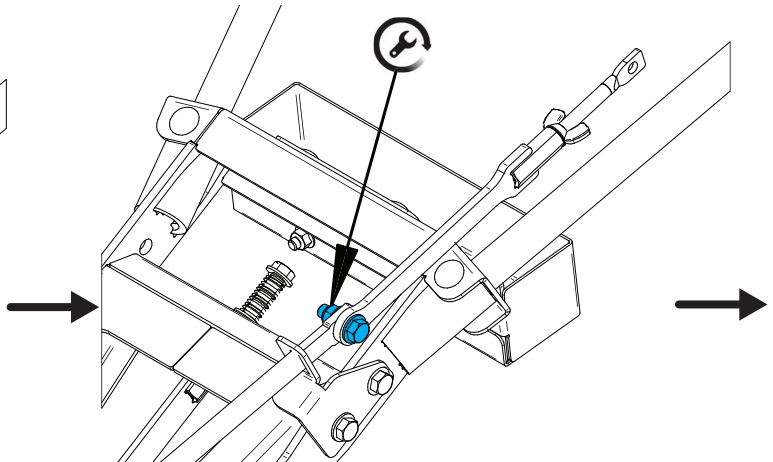


Attention

Tighten the hardware so that the nylon insert of the locking nuts engage the bolt threads. However, the linkage should be able to move freely.



Bolt, 3/8" x 1-1/4"
90.0610

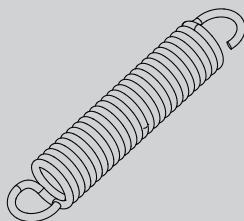


Attention

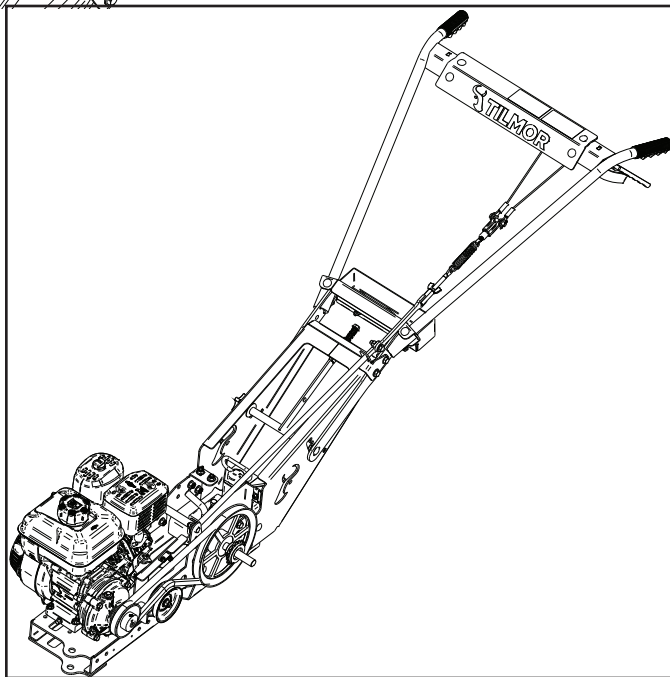
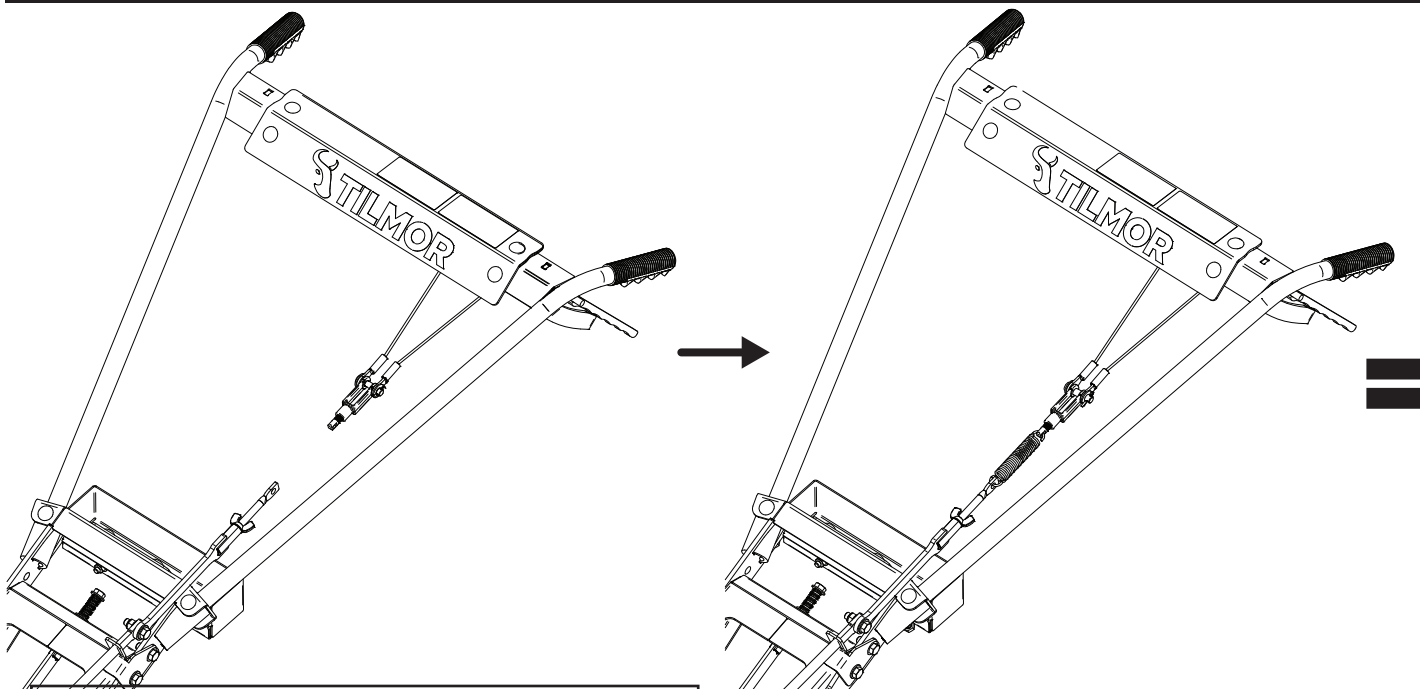
Tighten the hardware so that the nylon insert of the locking nuts engage the bolt threads. However, the linkage should be able to move freely.

DRIVE CONTROL LINKAGE ASSEMBLY CONTINUED

 9/16" Socket, Torque Wrench



1x
Spring, Ext.844"
OD x 4"
41-0131



CAUTION

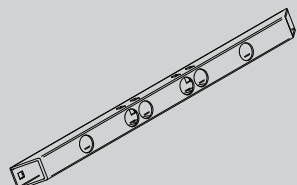
Failure to properly adjust the drive control linkage could result in over tightening of the drive control linkage. Over tightening will prevent the belt tensioner from disengaging, resulting in tractor movement on startup. Bodily injury or damage to equipment may occur.

CAUTION

Ensure that the Power Ox is not running before adjusting the drive control linkage. Bodily injury or damage to equipment may occur.

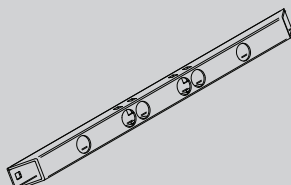
NARROW WIDTH FRAME ASSEMBLY

 9/16" Socket, Torque Wrench

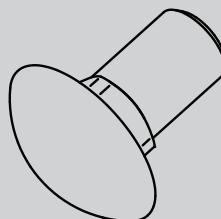


2x
Tube, Frame Width Nar-
row, Wide Wheels
AU-3001

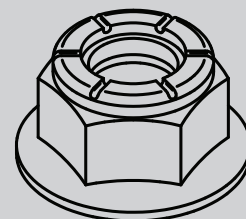
OR



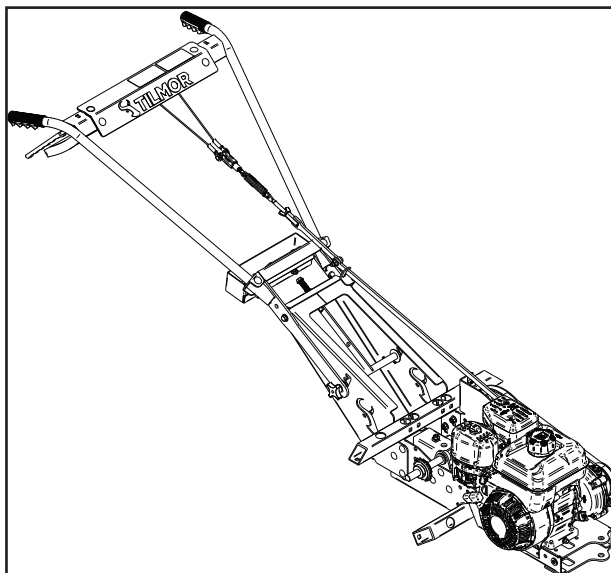
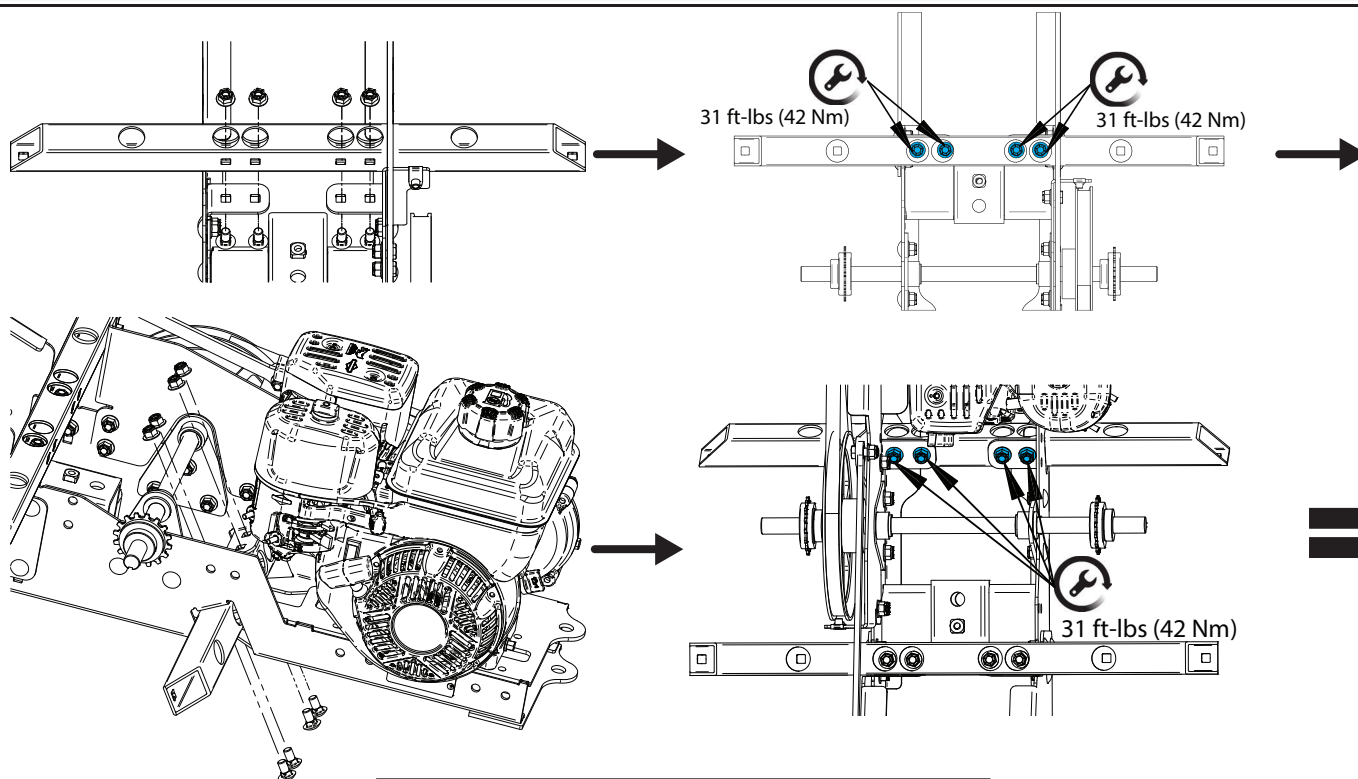
2x
Tube, Frame Width Nar-
row, Narrow Wheels
AU-3011



8x
Bolt, Carriage
3/8" x 3/4"
97-0606

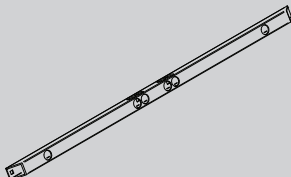
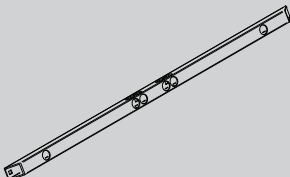
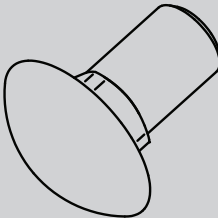
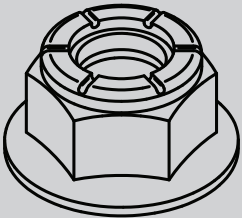


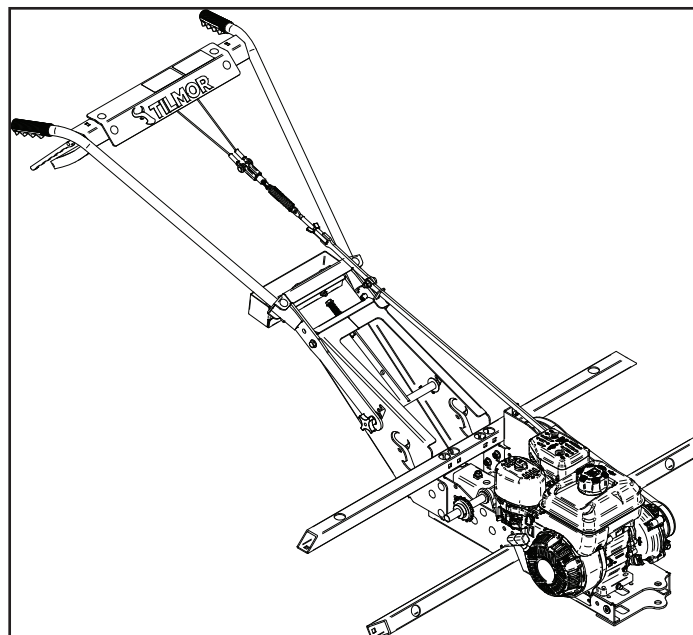
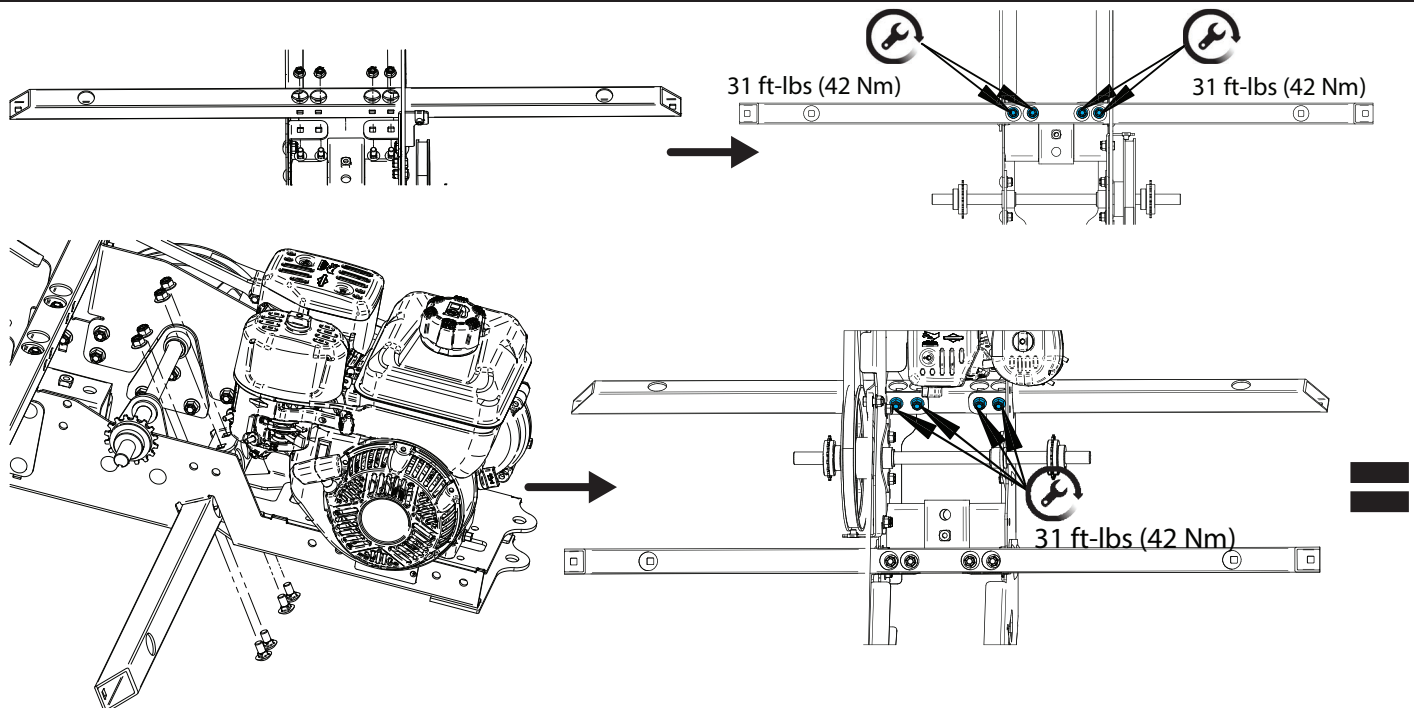
8x
Nut, Nylon Locking
Flange 3/8"
99-E0136



WIDE WIDTH FRAME ASSEMBLY

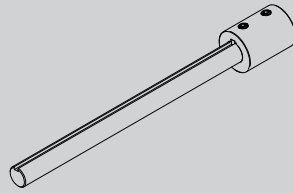
 9/16" Socket, Torque Wrench

	OR			
2x Tube, Frame Width Wide, Wide Wheels AU-3002		2x Tube, Frame Width Wide, Narrow Wheels AU-3012	8x Bolt, Carriage 3/8" x 3/4" 97-0606	8x Nut, Nylon Locking Flange 3/8" 99-E0136




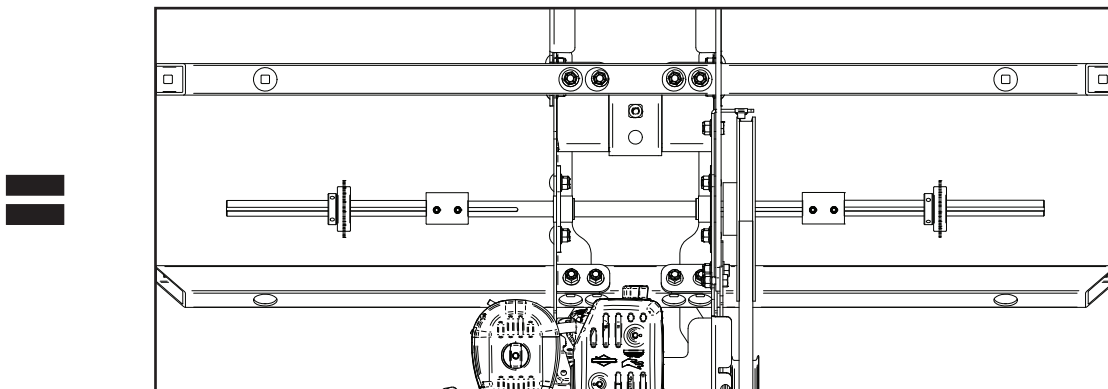
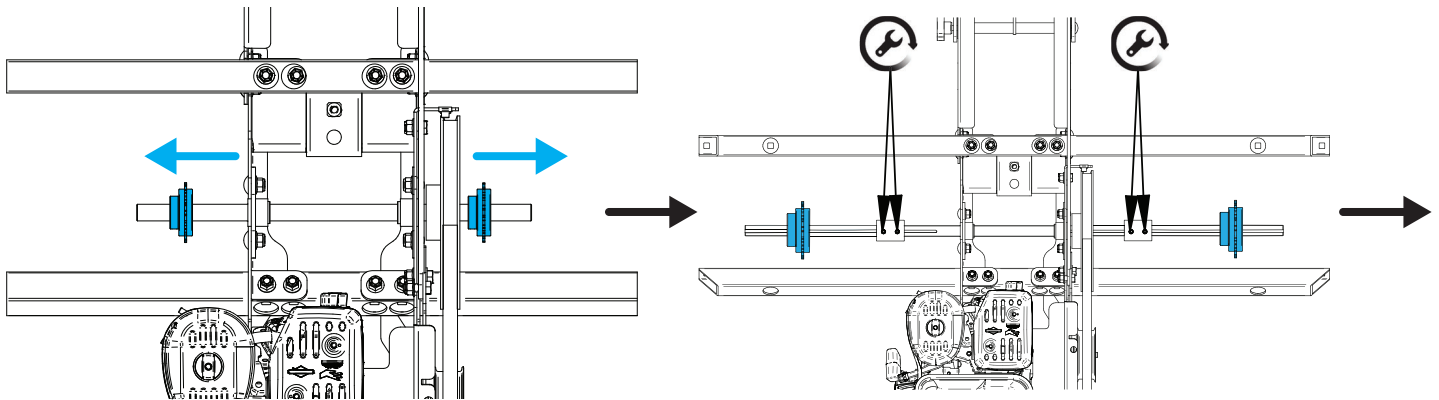
WIDE AXLE INSTALLATION

 3mm Hex Key, 5/32 Hex Key




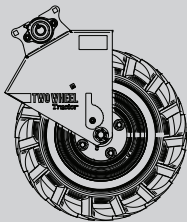
2x
Drive Shaft and Coupler
Assembly

 The sprockets must be removed from the axle.
Loosen the set screws and remove the sprocket and key from the axle shaft.

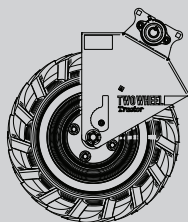


WHEEL KIT INSTALLATION

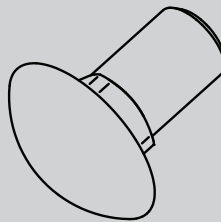
 9/16" Socket, 1/2" Socket Torque Wrench



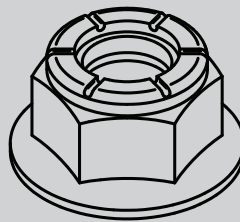
1x
Frame, wheel mount
Left Hand (Wide)
AU-6024



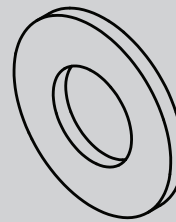
1x
Frame, wheel mount
Right Hand (Wide)
AU-6025



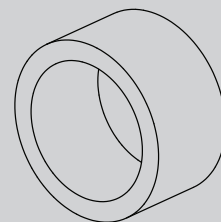
8x
Bolt, Carriage
3/8" x 3/4"
97-0606




8x
Nut, Nylon Locking
Flange 3/8"
99-E0136

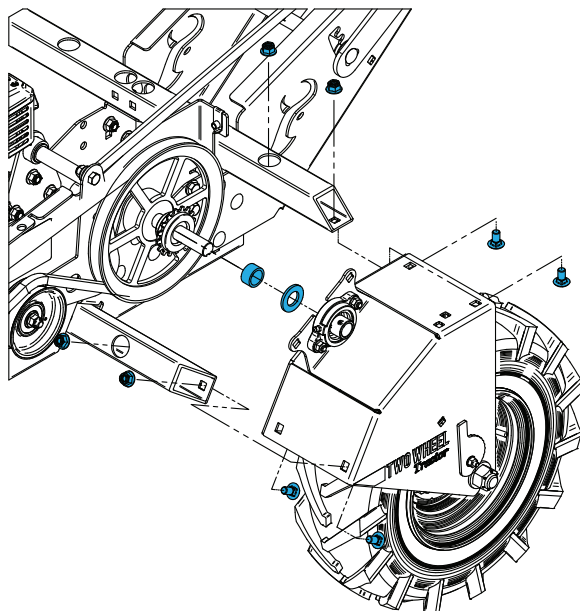



2x
Washer, Flat 3/4"
95-12

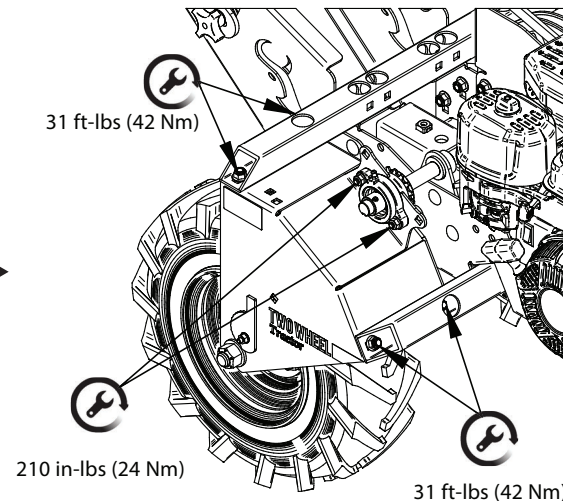
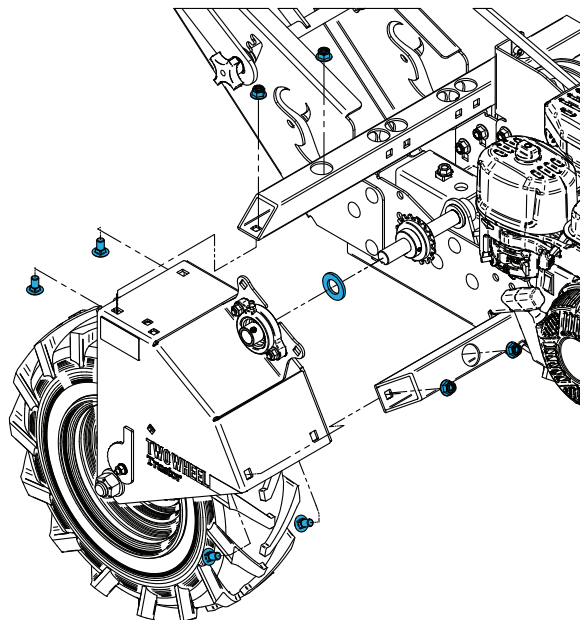
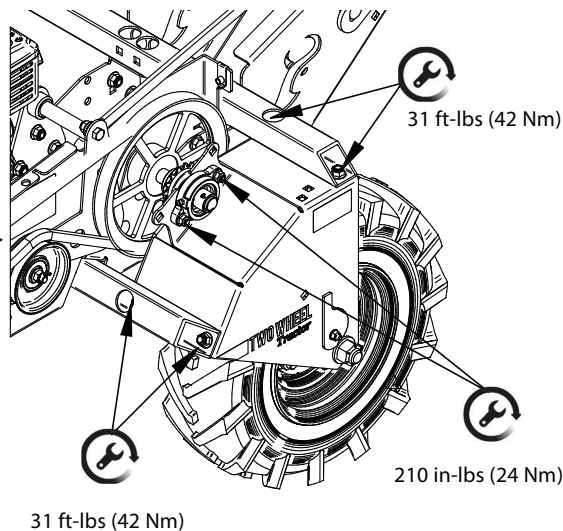



1x
Hub Spacer
AU-1077

 Before beginning make sure that the tractor is securely supported with jack stands.



 It may be necessary to loosen the axle mounting bolts on the front frame, as well as the flange bearing mounting bolts on the wheel assembly.



 Tighten the flange bearing set screws.

WHEEL KIT INSTALLATION CONTINUED

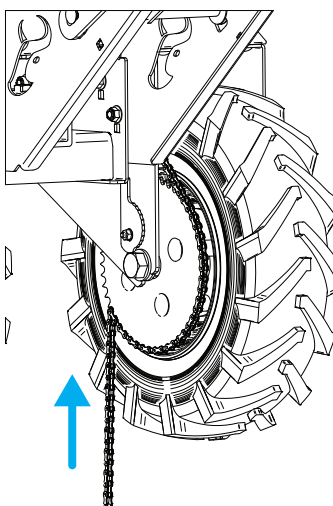
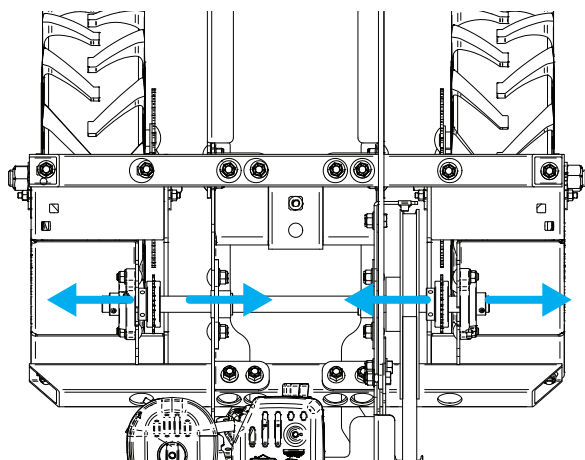


2x
415 Chain
1/2" Pitch x 80 Rollers
81-0186



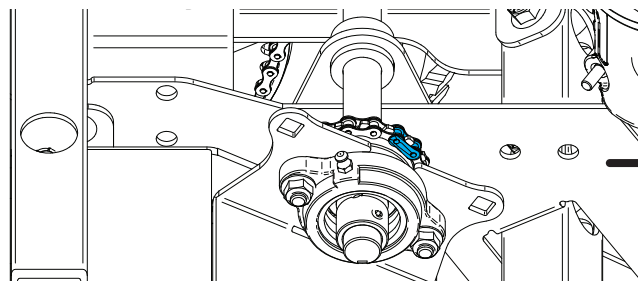
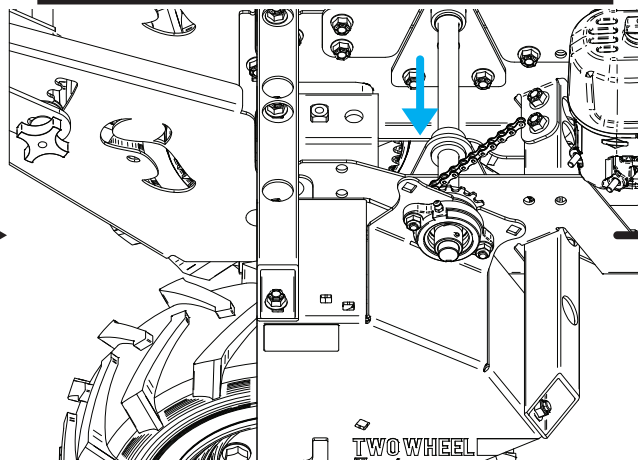
Attention

Loosen the set screws on the upper sprockets, align the upper sprockets with the wheel sprockets.



Attention

Route the chain from the top down to the wheel sprocket.



Attention

When installing the master link ensure that the spring clip is installed with open end facing away from the direction of rotation. This will prevent the spring clip from becoming dislodged by debris during operation.



Attention

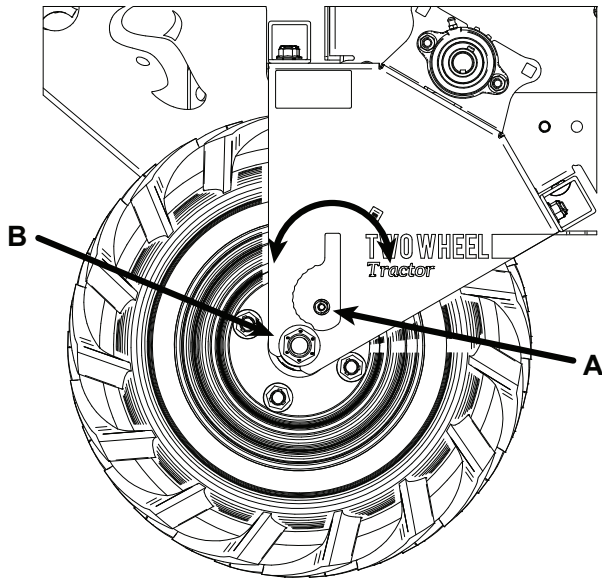
With both drive chains installed roll the tractor forward and backwards. Ensure the sprockets are aligned and tighten the upper sprocket set screws.

WHEEL KIT INSTALLATION CONTINUED

7/16" Wrench, 1-1/8" Wrench, 1-1/8" Socket, Ratchet

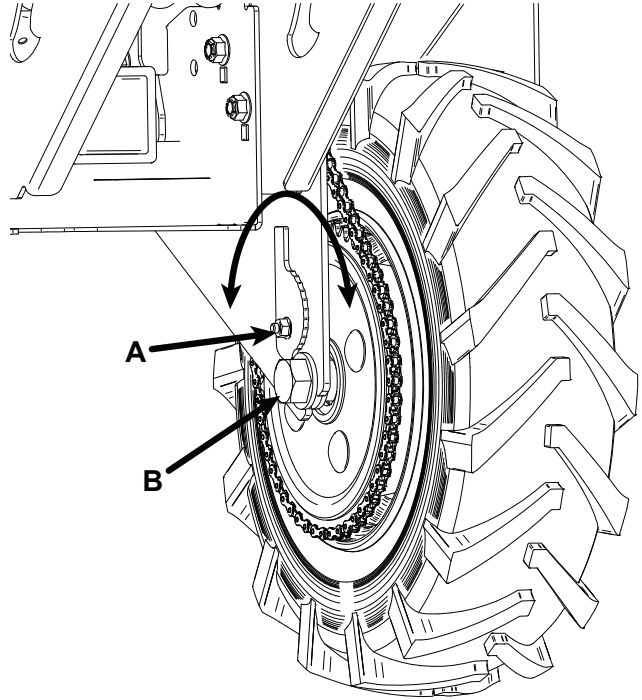
⚠ CAUTION

Failure to properly tension the drive chains properly can result in damage to the chain or sprockets.



Outer chain tension adjustment plate

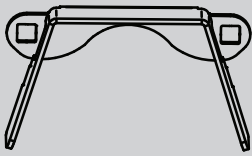
Loosen the axle bolt (B). Slightly loosen the adjustment plate mounting bolt (A), on both the inner and outer adjustment plates. Rotate the inner and outer adjustment plates evenly to tension the chain. The chain should have 1/8" to 1/4" of deflection. When the desired tension is reached tighten the inner and outer adjustment plates. Tighten the wheel axle so that the wheel is securely held in place and still rotates freely.



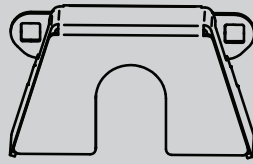
Inner chain tension adjustment plate

WHEEL KIT INSTALLATION CONTINUED

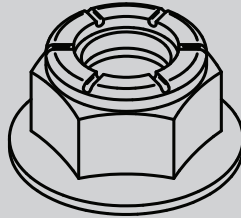
 9/16" Socket, Torque Wrench



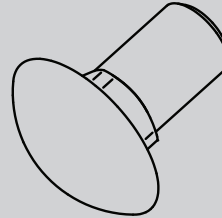
1x
Cover, Sprocket
Left Hand
AU-1011



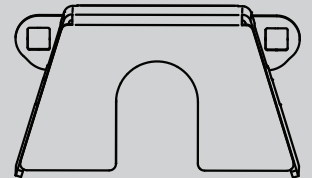
1x
Cover, Sprocket
Right Hand
AU-1071



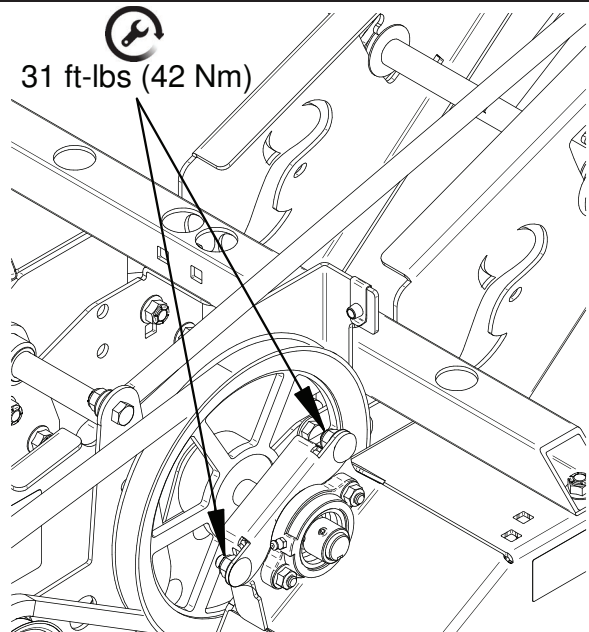
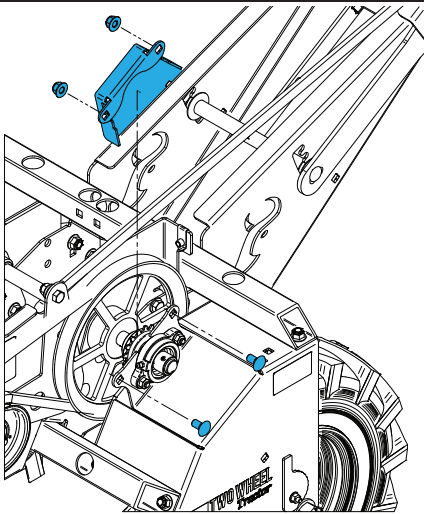
4x
Nut, Nylon Locking
Flange 1/4"
99-E0136



4x
Bolt, Carriage 3/8"
x 3/4"
97-0606

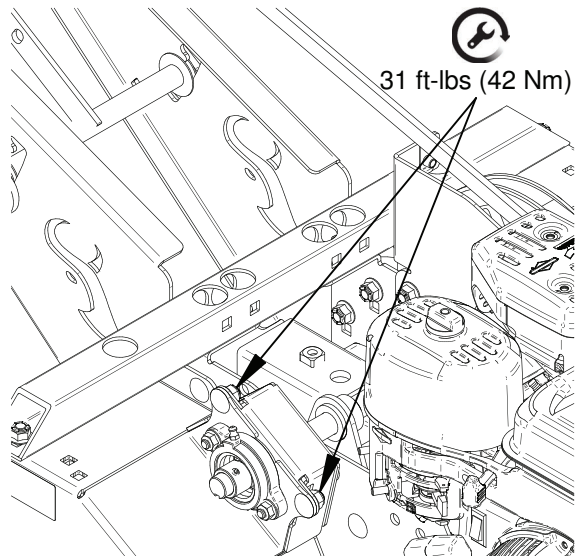
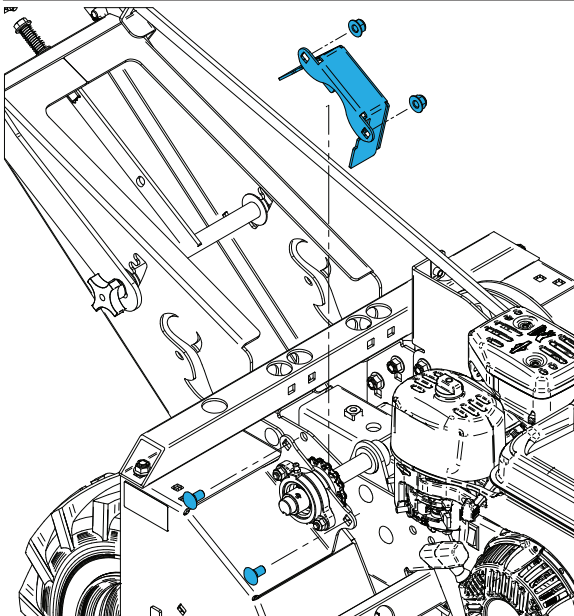


1x
Cover, Sprocket
Right Hand
AU-1071



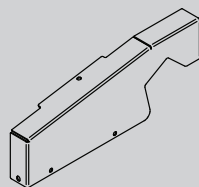
Attention

If the sprocket covers are being installed on a unit equipped with the wide axle or frame, the left hand sprocket cover will be replaced with an additional right hand sprocket cover.

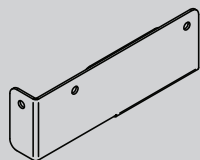


BELT COVER INSTALLATION

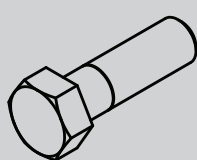
✂ 9/16" Socket, 1/2" Socket, Torque Wrench



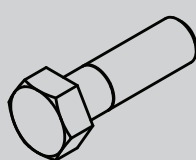
1x
Cover, Belt &
Pulley
AU-1050



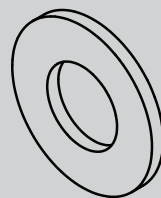
1x
Cover, Mount
Lower
AU-1052



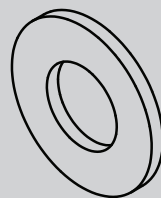
5x
Bolt, 5/16" x
3/4"
90-0506



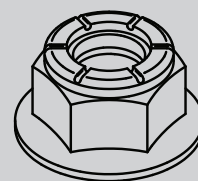
2x
Bolt, 3/8" x 3/4"
90-0606



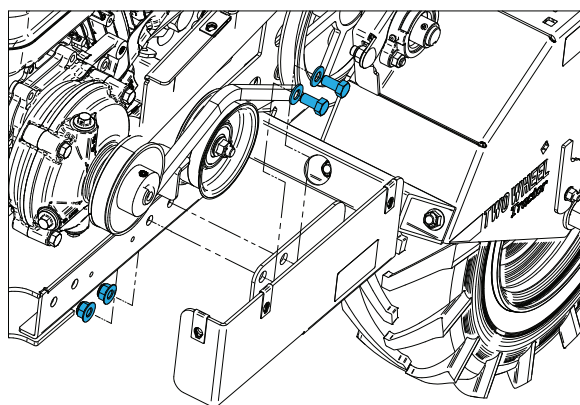
5x
Washer, Flat
5/16"
95-05



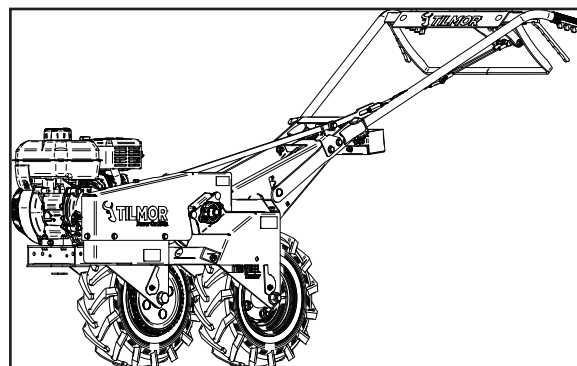
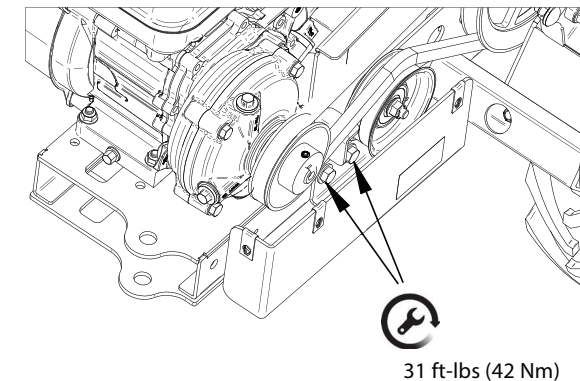
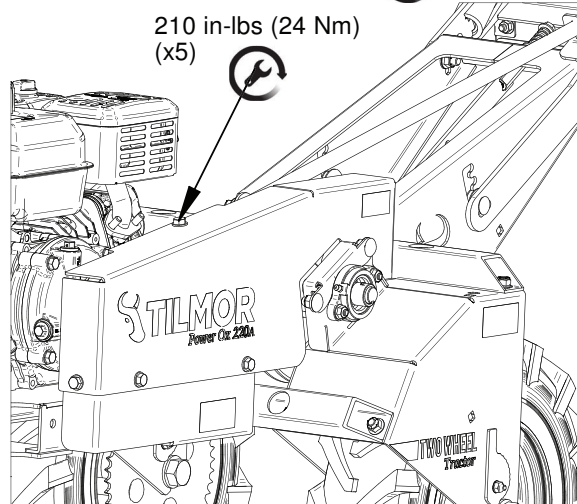
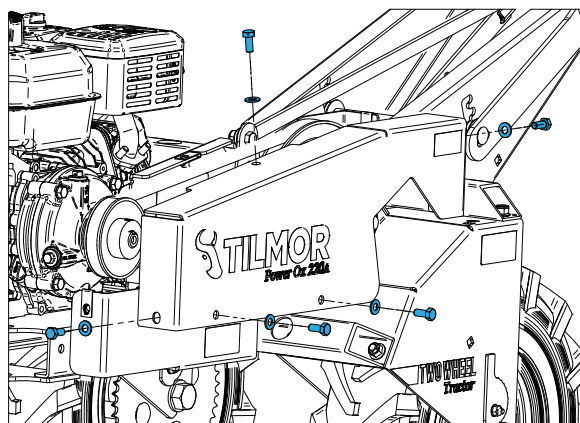
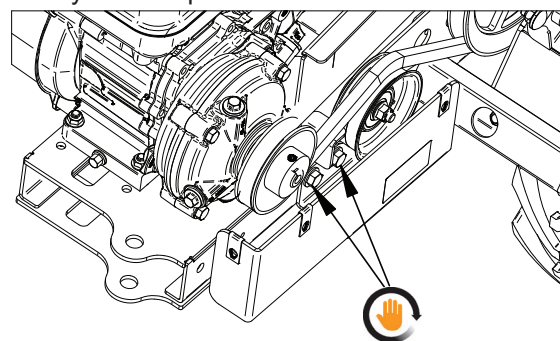
2x
Washer, Flat
3/8"
95-06



2x
Nut, Nylon
Locking Flange
3/8"
99-E0136

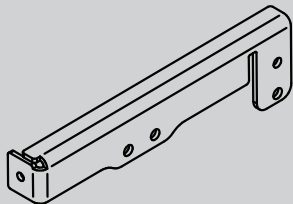


! To ensure proper fit of the belt cover, alternate between all seven bolts, tightening each bolt evenly until torque is reached.

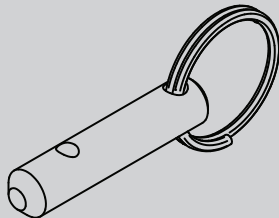


KICK STAND INSTALLATION

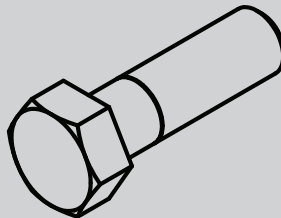
 9/16" Socket, Ratchet



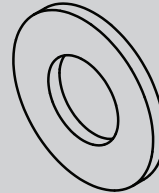
1x
Kick Stand Front
AU-1061



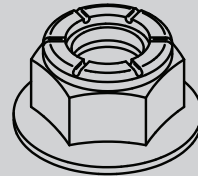
1x
Pin, Ball 3/8" x 1"
03-0006



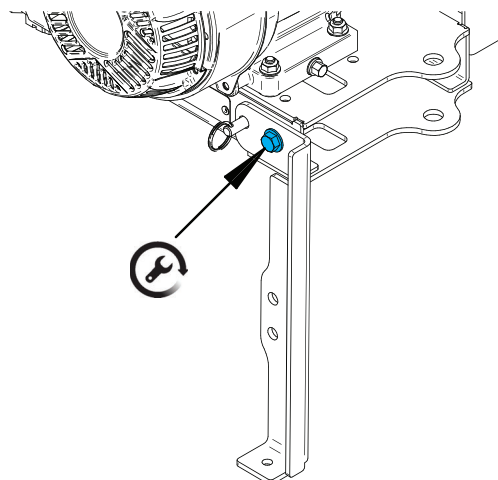
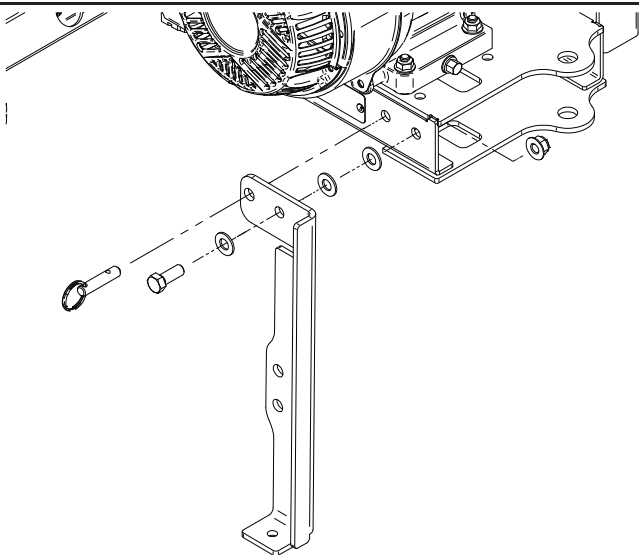
1x
Bolt, 3/8" x 1"
90-0608



3x
Washer, Flat
3/8"
95-06

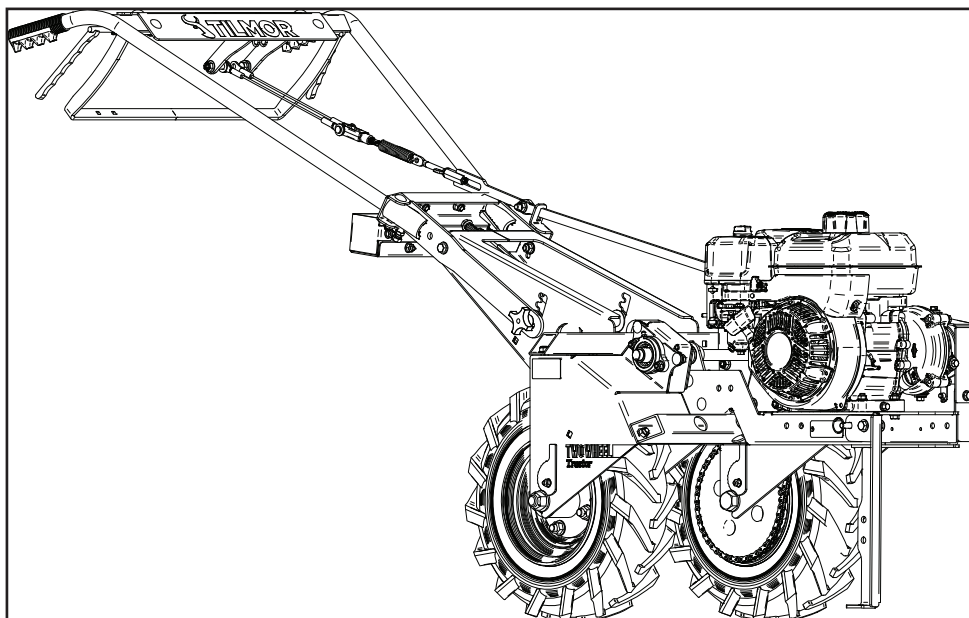


2x
Nut, Nylon
Locking Flange
3/8"
99-E0136



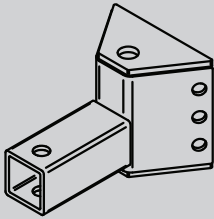
Attention

Tighten the hardware so that the nylon insert of the locking nuts engage the bolt threads. However, the kick stand must be able to move freely from the up position to the down position.

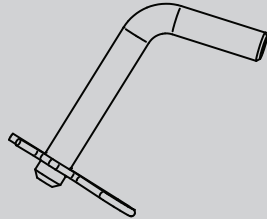


RECEIVER HITCH INSTALLATION

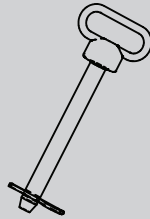
 9/16" Socket, Torque Wrench



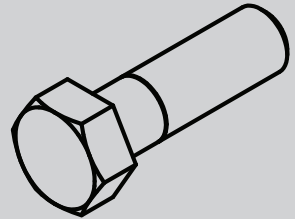
1x
Bracket, Receiver Hitch
AU-6003




1x
Pin, Hitch 5/8" x 3"
03-0014



1x
Pin, Hitch 3/4" x 6 1/2"
03-0034



2x
Bolt, 3/8" x 1-1/4"
90-0610

 The rear frame is removed for a clear visual perspective. The rear frame does not need to be removed to install the receiver hitch.

