Chains and Other Drive Assemblies

This section contains advice and other information not necessarily available in the owner's manual

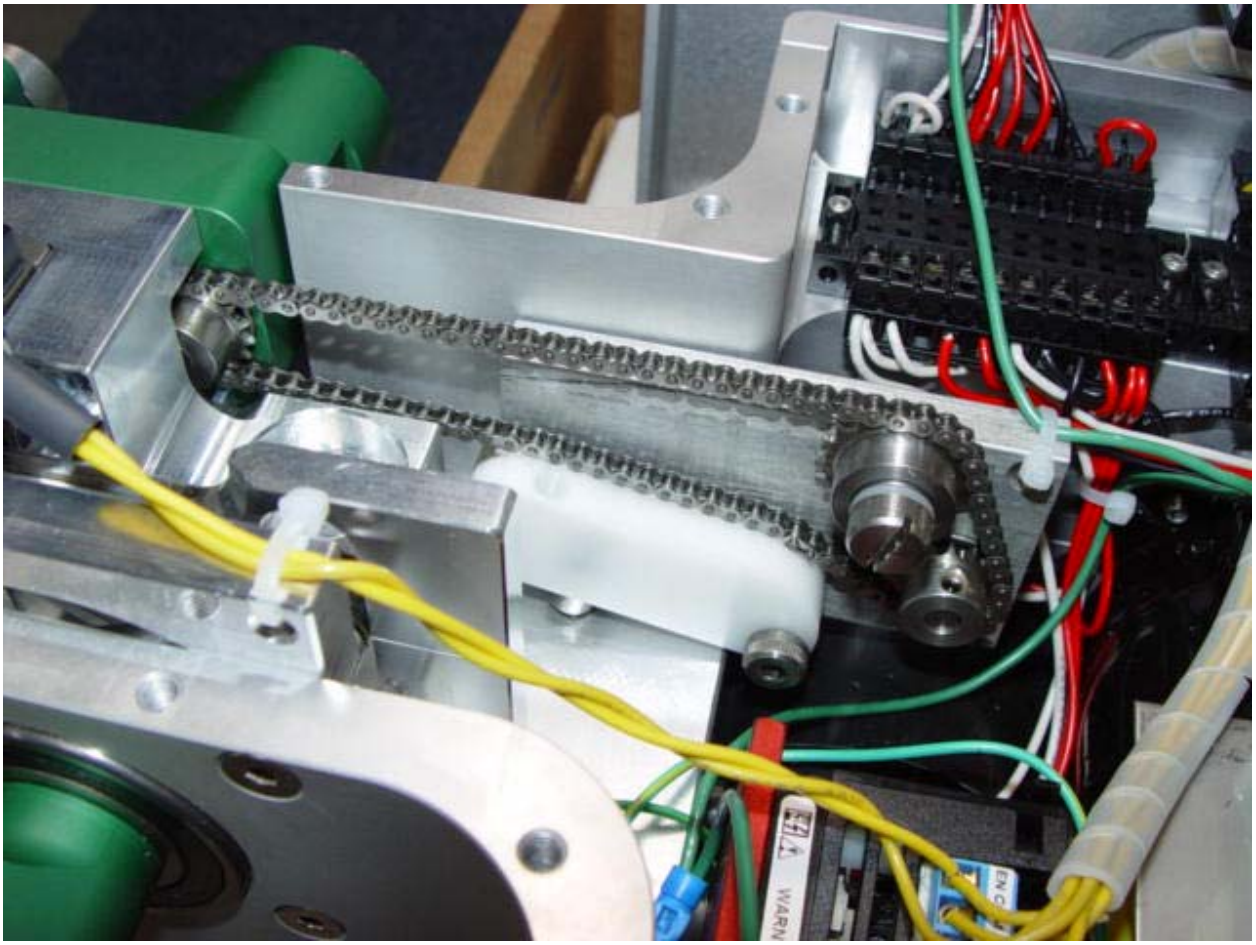
TO JOIN TRIAD CHAIN

1. Place master link (part #310134) with pins upright close to chain ends. Place chain ends over master link pins. Drop backing plate over pins and push into place.

2. Put master link clip over one pin and against the other as shown, squeeze the clip with small pliers as shown. It should snap into place.

NOTE:

Direction of travel, the master link safety clip should be installed with the closed end of the clip as the leading end with the machine moving forward (see arrow). This may be clockwise or counter clockwise depending on which chain you are servicing.



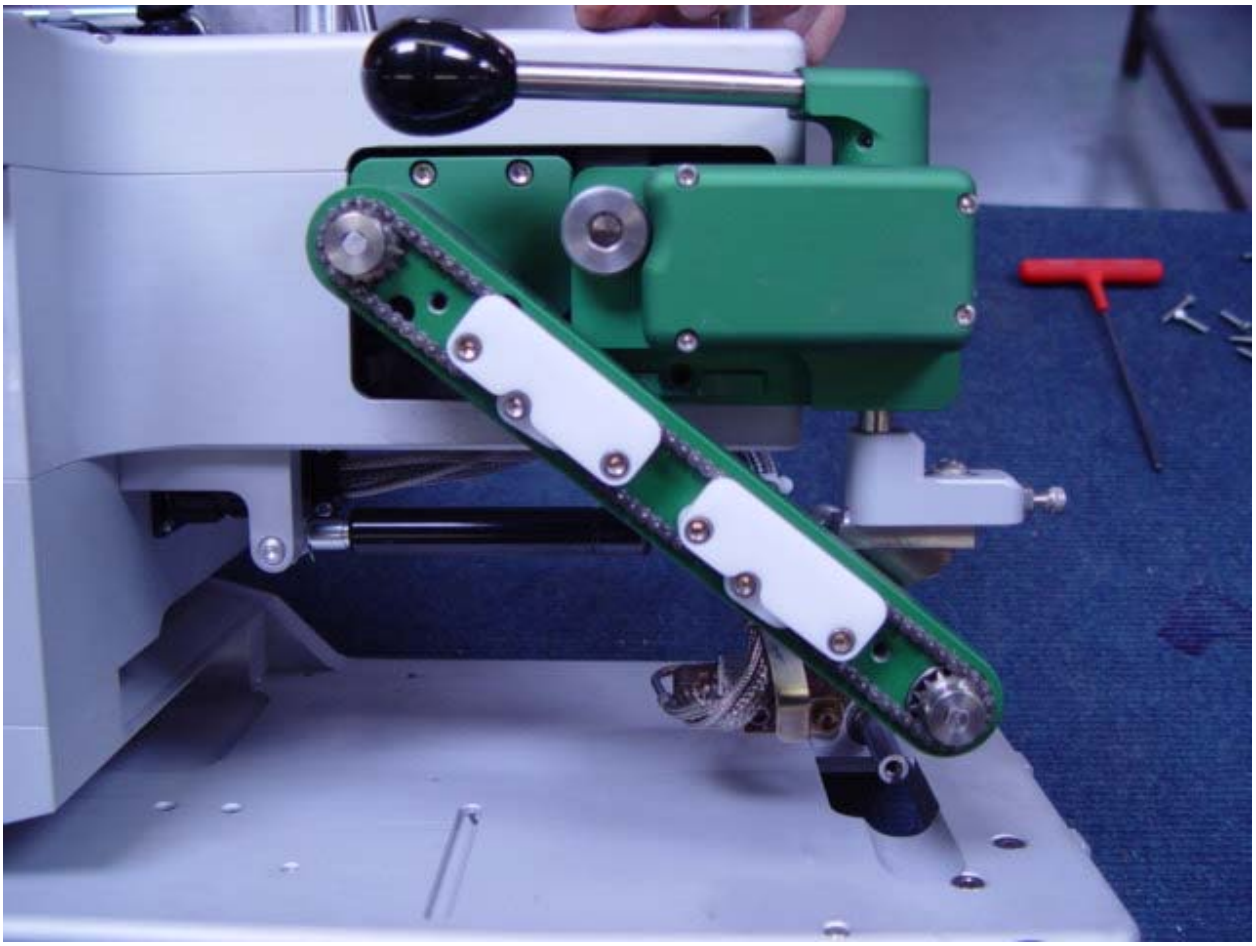
Upper primary chain part # 300 223 forward rotation clockwise

The tensioner on this chain is spring loaded and cannot be adjusted. There may be a bit of slack in the chain with the pinch arm in the up position. This will go away when the arm is dropped and the tensioner loads the chain.

The easiest way to remove this chain is to undo the shoulder bolt that holds the larger idler sprocket in place. With the pinch arm up the chain has the least amount of tension on it, making it easier to remove and replace the idler sprocket. With a new chain, it may also be necessary to push the tensioner down while starting the shoulder bolt.

There is a 1/16” clearance shim behind both drive sprockets. The idler sprocket has a bearing pressed into it that protrudes the same dimension as the clearance shim. If the chain has carved a path in the support plate, replace the shoulder bolt, (part #392042) and the bearing (part #320024) in the idler sprocket, as well as the support plate (part #300 025).

Parts in this view are represented on drawing 300-M07-5-3 in the operating instructions



Upper final drive chain part # 300 222 forward rotation anti-clockwise

Both sprockets have 1/16” clearance shims behind them. Bearings need to be flush with the surface of the arm.

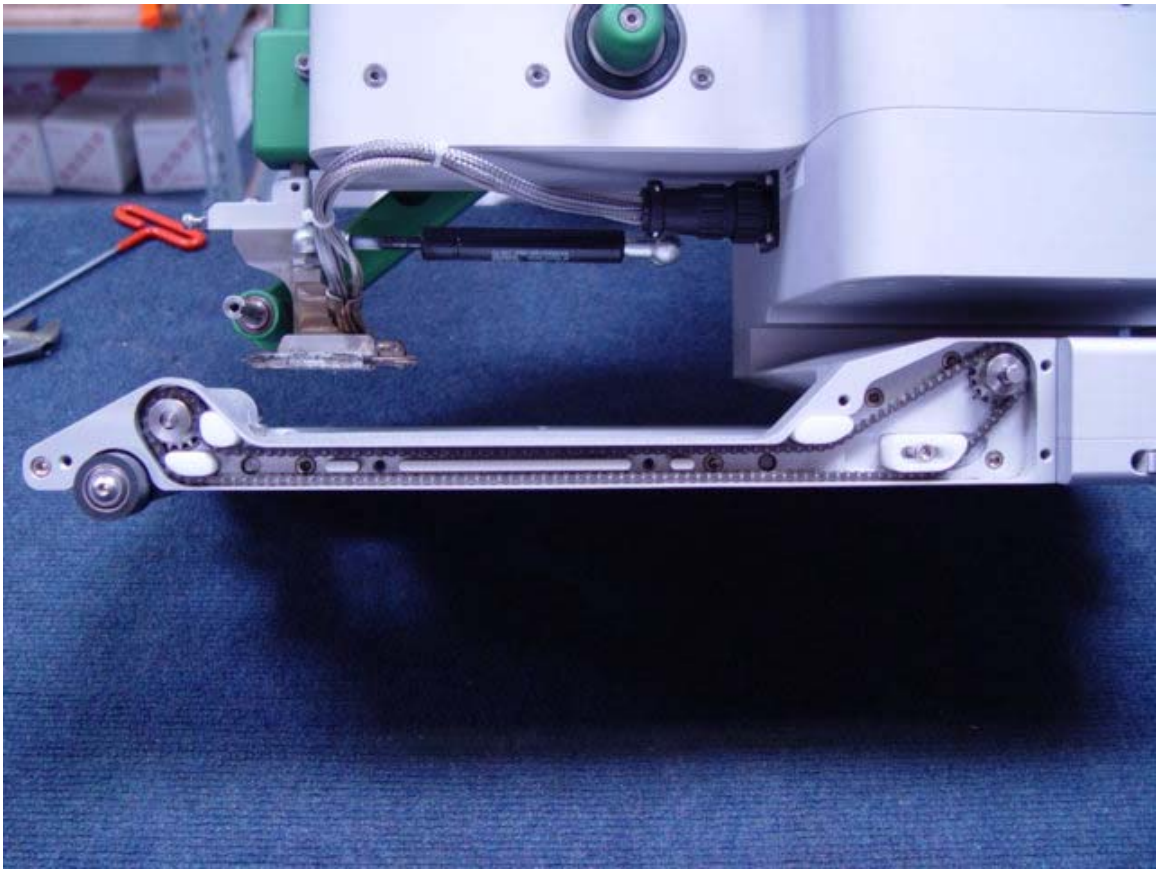
Parts in this view are represented on drawing 300-M07-5-3 in the operating instructions.

Primary drive shown with drive cover removed
Chain part # 300 220 forward rotation clockwise.
Gear on left is motor gear, part # 300 020
Center gear & sprocket assembly part # 38 165
Gear & shaft assembly on right is part #38 162
The sprocket on the bottom of the chain is attached to the u-joint shaft assembly, part #38 160. This assembly does not include bearings or sprockets.

The chain sprocket shafts here are supported by bearings in the cover. If this chain tensioner needs adjustment, lift the center shaft assembly slightly while making the adjustment. This will leave a bit of slack so the cover bearings will line up with the shaft.

The sprockets in this view are lined up with the top of the sprocket even with the face of the housing. Shaft assembly 38 165 is built in the correct dimensions to accomplish this. You should use a straightedge to check the position of the lower sprocket as it is installed. This is important to keep the chain line straight.

Parts in this view are represented on drawing 300-M07-7-1 in the operating instructions



Lower final drive chain part # 300 221 forward rotation anti-clockwise
Sprocket on the right is attached to u-joint shaft assembly # 38 160

Both sprockets in this view have 1/16” clearance shims behind them. It is important, when servicing this area, to make sure the bearings in the housing are flush with the face of their pockets and the sprockets have the correct clearance shims behind them. Otherwise the chain will carve into the back side of the cover.

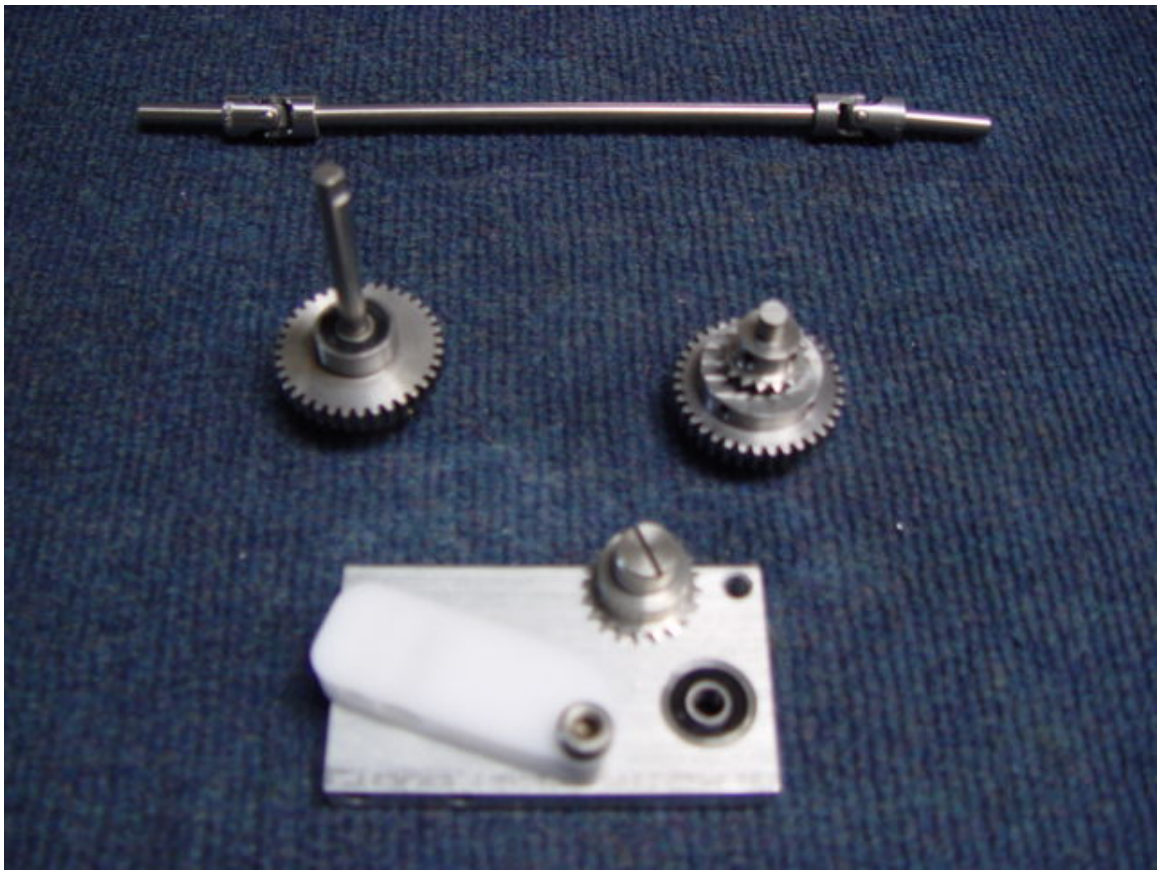
It is also important not to over tighten this chain. Just take up any slack without putting tension on the chain. It is not a guitar string and will stretch and break easily if too tight.

To gain access to the u-joint shaft, remove this chain, the sprocket on the right and the pinch roller from the shaft on the left. You can then remove the 6 screws that hold the housing onto the chassis. Pull the housing away from the chassis, the pinch roller shaft will come out with the housing and can be serviced separately. The u-joint shaft bearing should also stay in the drive housing. There are dowels in the base that align the drive housing.

The u-joint shaft is driven out with a non-marring hammer towards the opposite side of the machine. There is a shouldered hole for a u-joint behind the drive housing, lift the u-joint up in this pocket with a screwdriver while driving the shaft. This way the u-joint will clear the back of the pocket. The shaft assembly will likely collapse into itself while you are driving it out, it will need to be reassembled or replaced.

Parts in this view are represented on drawing 300-M07-3-3 in the operating instructions

Triad drive assemblies available for repair



Pictured here are the four subassemblies discussed previously.

At the top is the standard u-joint shaft assembly part # 38 160.
This assembly in the 6” pocket machine has a longer center shaft, part # 38 160.6

Center left is the upper layshaft assembly part #38 162. It includes the gear, shaft and bearing. There is also a bushing and clearance shim built into this part.

Center right is the lower primary shaft assembly part #38 165. It includes the bearing, shaft, gear and sprocket, all assembled to the correct dimensions.

At the bottom is the layshaft support assembly part # 38 168. Support plate is assembled with tensioner, idler sprocket and a bearing pressed into the plate.