

M113 VEHICLE FAMILY
RUBBER TRACK
INSTALLATION INSTRUCTIONS

SOUCY TRACK SYSTEM

04-M113-1ENS
(SPLIT IDLER)

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LIST OF PARTS AND TOOLS

Assembly Components

- Please refer to assembly drawing No. E1030022

Special Tools

- 2 Sprocket guide pins

Standard Tools Required

- General mechanic's tool kit
- Adequate lifting equipment
- 2 Jack stands
- Air wrench
- Grease gun with pressure gauge
- Torque wrench
- Lift truck (if available)
- 16 ft string (for measuring)



WARNING



- Always take safety precautions before attempting any work on your vehicle.

INSTALLATION OF COMPLETE KIT



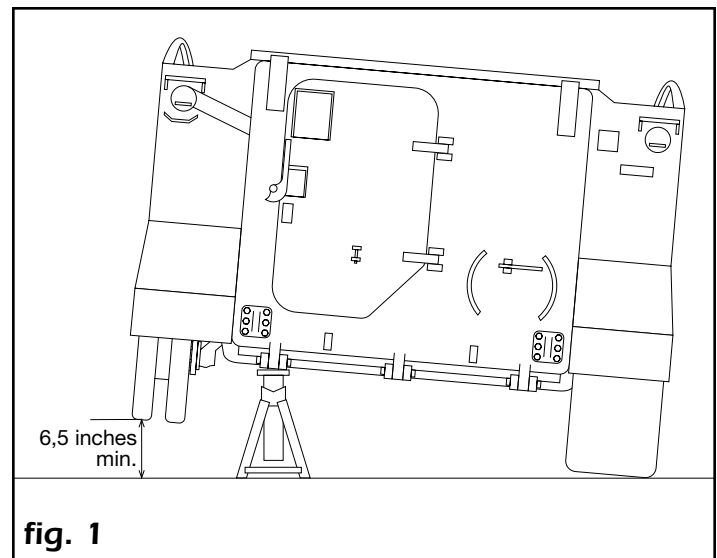
WARNING



All instructions below are sequential. All operations requires the preceeding ones to be safe and complete.

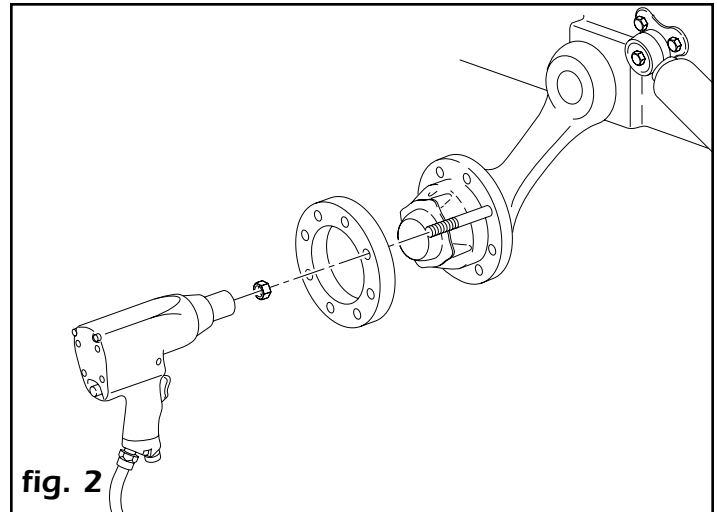
A. VEHICLE PREPARATION

- a.1) Position the vehicle on a hard flat surface. Ensure adequate clearance to move and work around the vehicle easily.
- a.2) Block the vehicle.
- a.3) Remove track shrouds and covers.
- a.4) Empty grease completely from track tension adjuster (one side at a time only).
- a.5) Remove pin and separate the metal track.
- a.6) Roll vehicle off metal track and store away.
- a.7) Ensure proper alignment of road wheels and idler wheels.
- a.8) Jack one side at a time. Lift the vehicle and secure with two jack stands (minimum of 10 tons each). **(See fig. 1)**
- a.9) Remove idler and road wheels.
- a.10) Remove idler and road wheel studs.
- a.11) Remove drive sprockets.

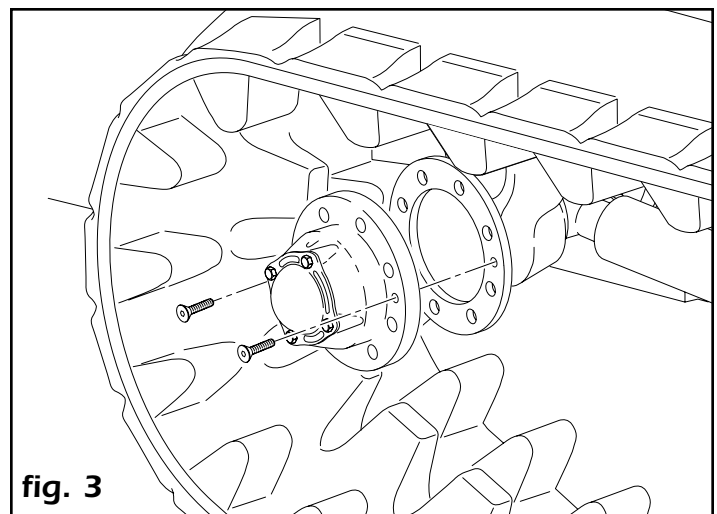


B. INSTALLATION

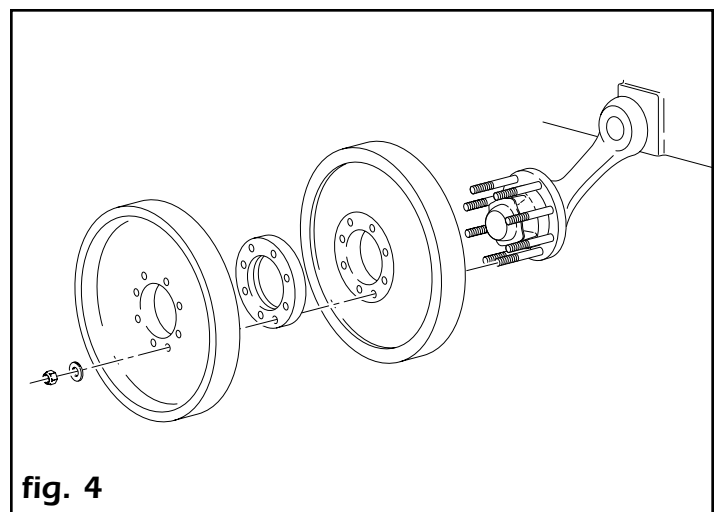
- b.1)** Install (8) 5/8" nc X 3^{3/4}" long wheel studs on each of the six road wheels. Remove hubs and press new studs in. If a press is not available, use a road wheel spacer for take-up and tighten nuts to pull the stud into the flange. **(See fig. 2)**



- b.2)** Remove idler hubs. Install the new threaded ring inside on the idler flange. Align the ring with the existing holes and drill/counter sink 5/16" holes. **(See fig. 3)**



- b.3)** Put the inner road wheel first, then the spacers and complete installation with the outer road wheels. Insert flat washers and nylon lock nuts and torque to **160 ±10 ft-lb (210 ±15 Nm)**. **(See fig. 4)**

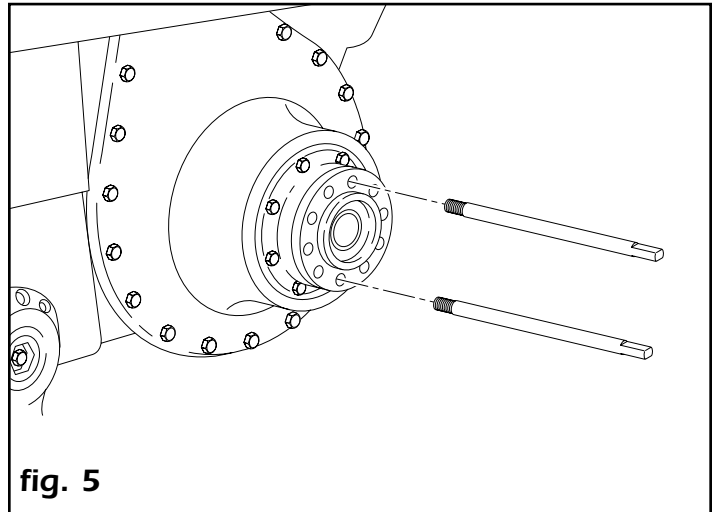


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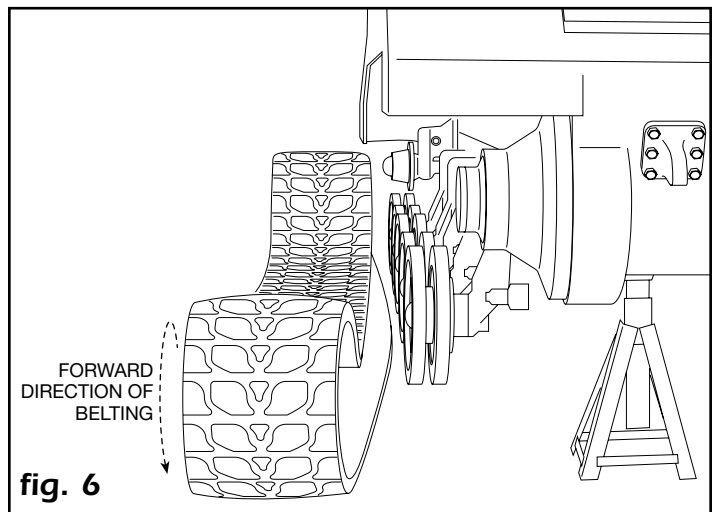
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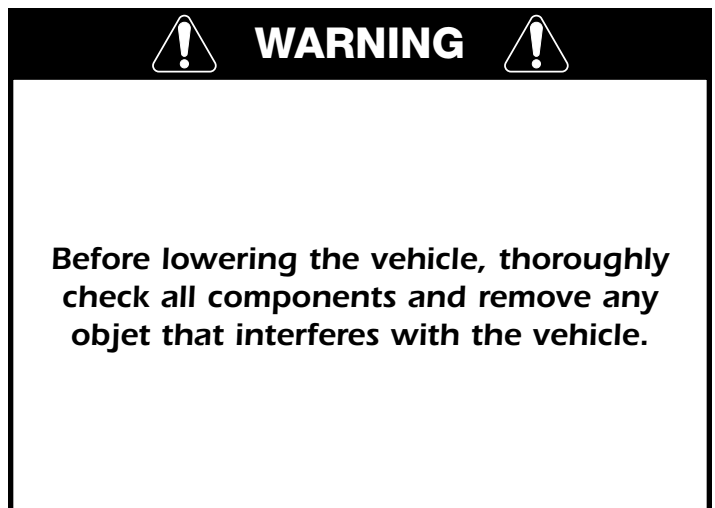
- b.4)** Install (2) guide pins on the final drive. No torque is required but all the threads need to be fully engaged. **(See fig. 5)**



- b.5) NOTE :** The right side (106 pitches) of the track system is shown on this picture. Perform the same steps for the left side but use the 105 pitches track. Count the number of pitches to make sure you have the proper track length. Lay the track closely by the road wheels without touching them. Ensure proper orientation. **(See fig. 6)**



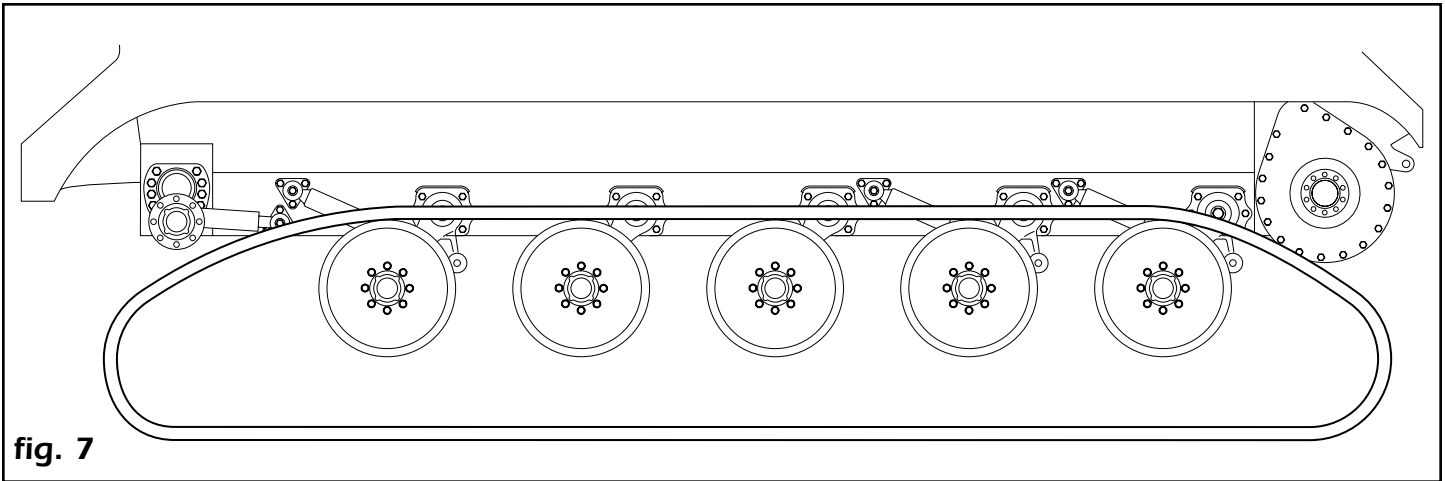
- b.6)** Lift the top run of the track over the road wheels. Slide the track under the road wheels. Make sure the track guides are properly aligned with the road wheels, and lower the vehicle. **(See fig. 7)**



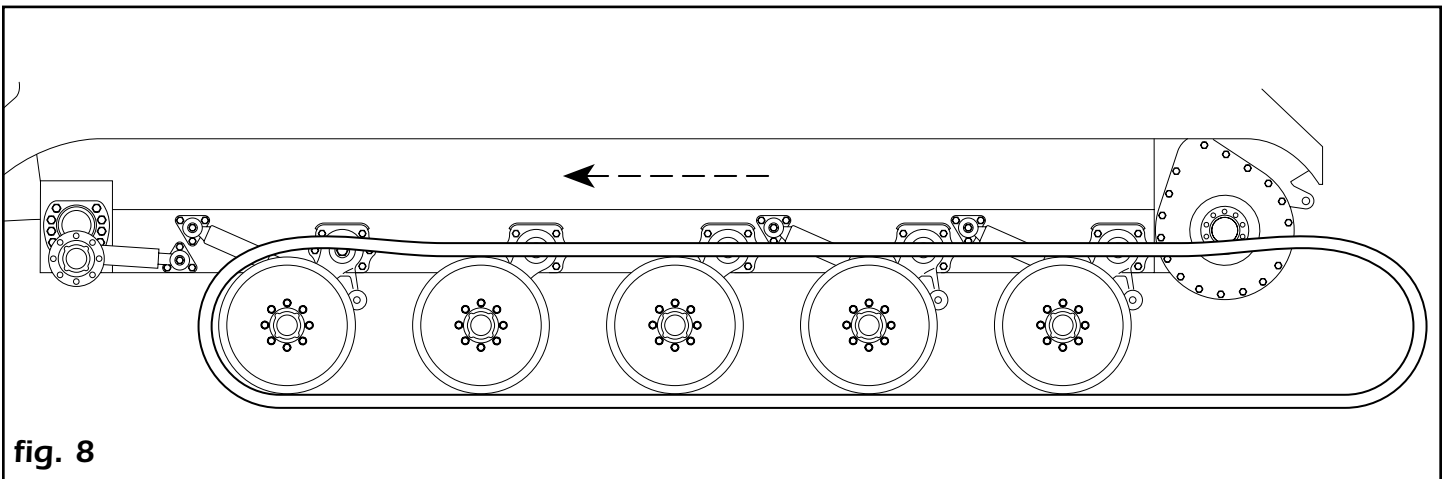
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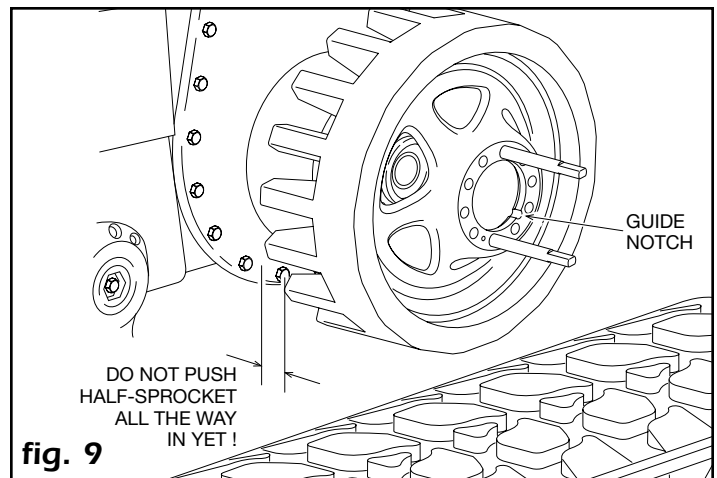
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b.7) Move the vehicle back (or pull the track by hand forward) to leave as little space as possible between the track and the last road wheel. **(See fig. 8)**



b.8) Install the first half-sprocket on the guide pins. Do not push all the way in. **(See fig. 9)**

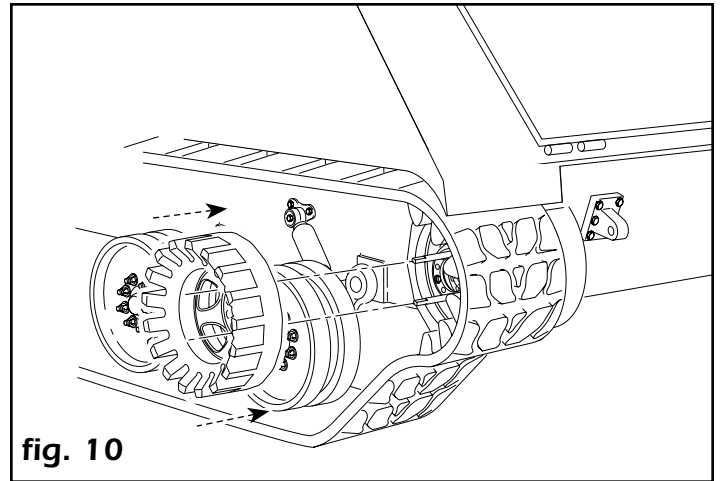
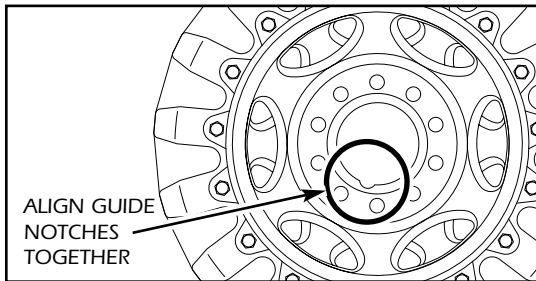


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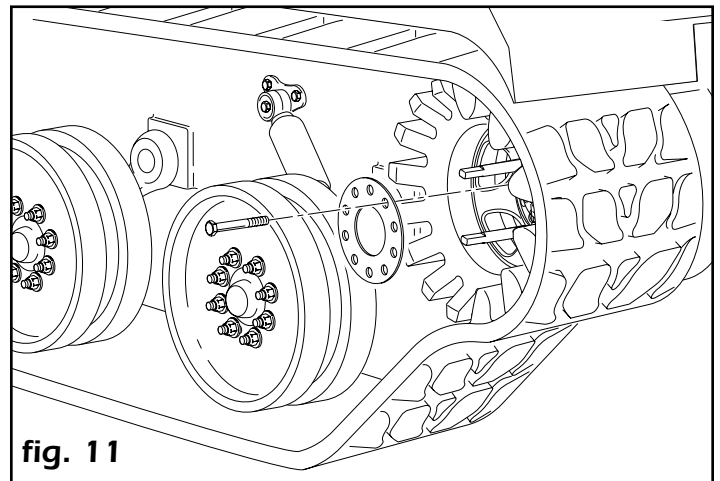
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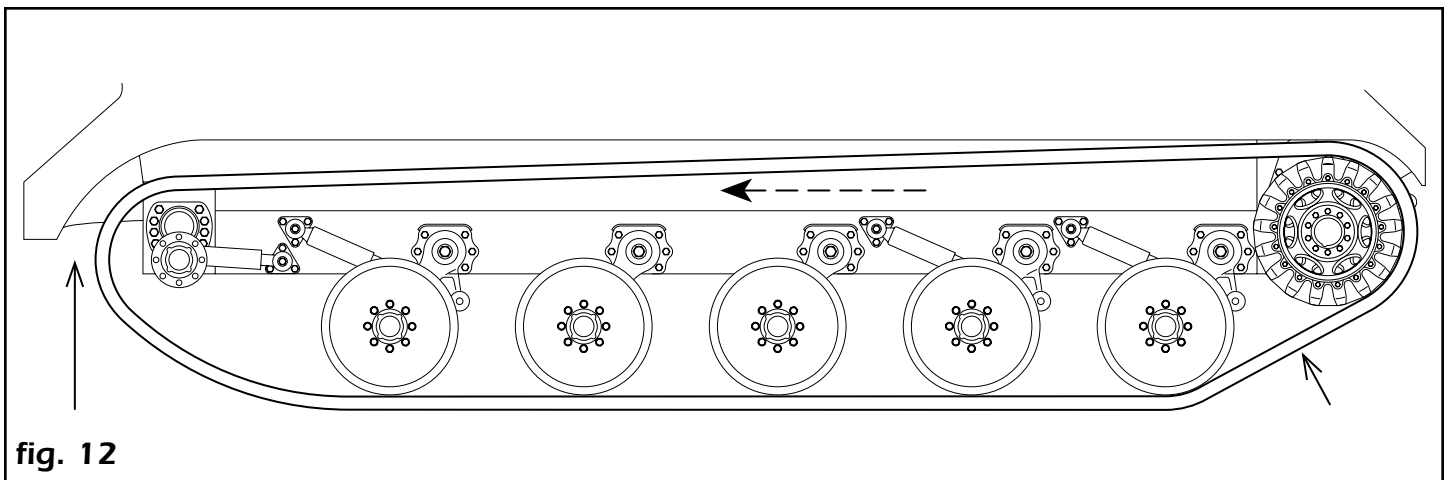
- b.9)** Install the track over the first half-sprocket. Install the second half-sprocket on the guide pins. Make sure the sprockets are properly timed.
(See fig. 10)



- b.10)** Secure the sprocket with 1/8" thick outer ring (10 hole washers 6^{1/2}" dia) and 5/8" nc x 3" long cap screws. Do not use any other type of washers. Remove the guide pins and screw the last 5/8" nc x 3" long cap screws. **WARNING : You may damage the final drive seal if :**
A) You do not use outer ring;
B) You use longer screw.
Torque at **210 ±10 ft-lb (285 ±15 Nm)**. (See fig. 11)



- b.11)** With engine power, rotate the sprocket backward to obtain tension under the sprocket, and simultaneously slide the track behind the idler hub. Lock sprocket with hand brake. **(See fig. 12)**



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- b.12)** Align the first half-idler in position towards the front of the vehicle (as shown on fig. 13). Install the retaining ring first then lock washers and screws. Hand tighten only, do not torque at this point.

(See fig. 13)

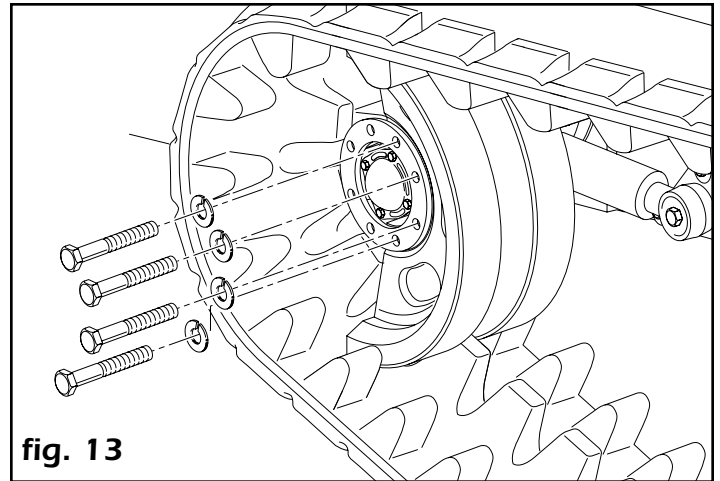


fig. 13

- b.13)** Move the vehicle forward to rotate the half-idler in position, then install the second half-idler wheel (the same way as in **b.12**). Install cap screws and lock washers. Torque rearmost half only at **160 ±10 ft-lb (210 ±15 Nm)**, rotate again to move other half-idler into rear position and then torque the four remaining screws. (See fig. 14 and 15)

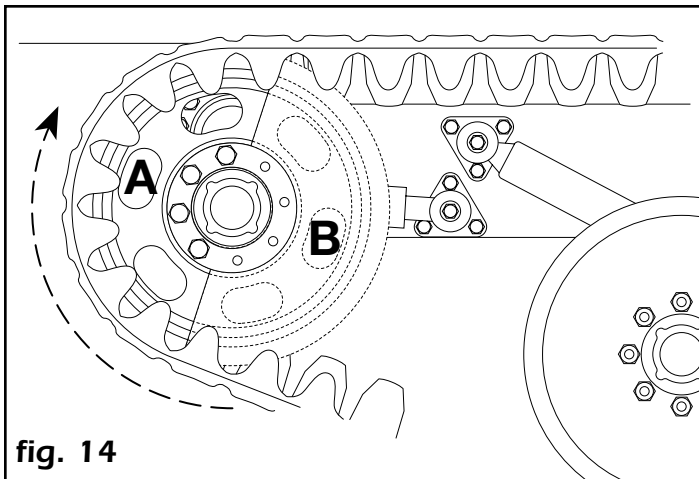


fig. 14

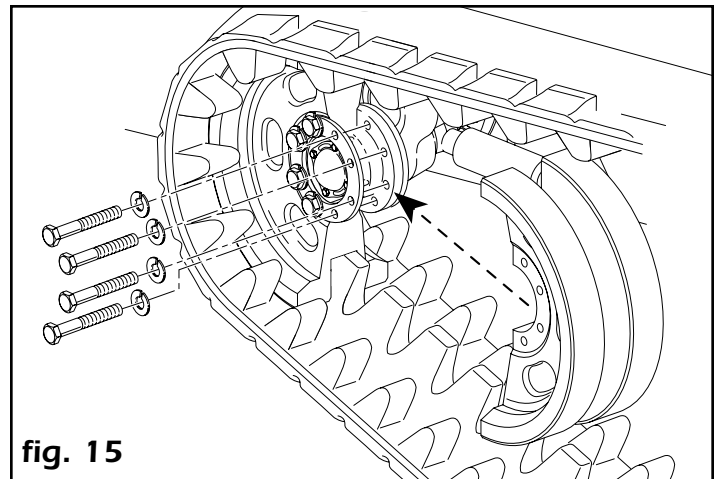


fig. 15

C. TENSIONNING THE TRACK

c.1) With the grease gun, pump grease in the cylinder until a pressure of **2500 psi** is obtained (See fig. 16)

OR

measure the distance between a tight string and the track as shown below. Loop one end of the wire and attach around inside track pad at sprocket end. Pull tight and bind with a heavy object suspended at the other end. Pump grease until dim is $1\frac{7}{8}$ " ($\pm 1/8$ ") over the center wheel (No. 3).

(See fig. 17).

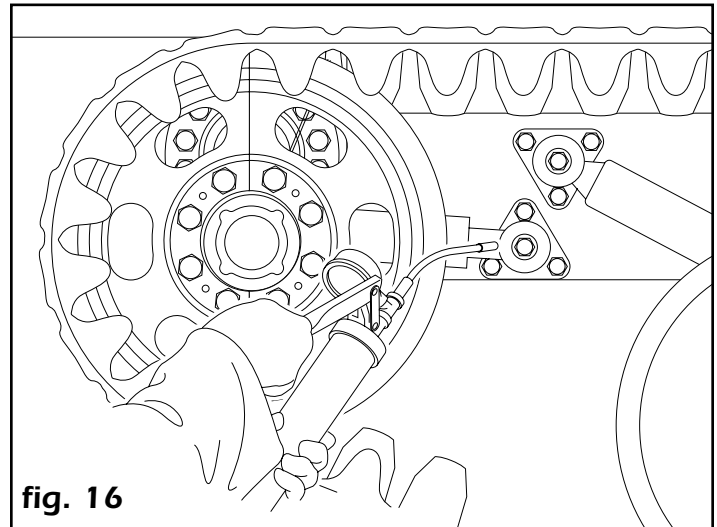


fig. 16

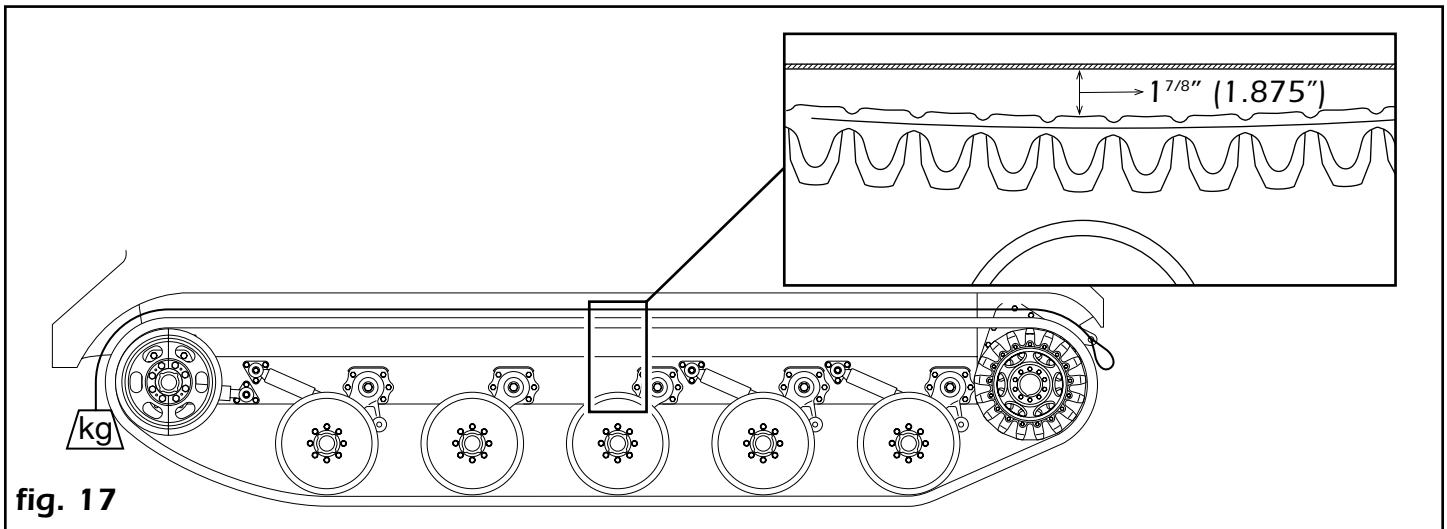


fig. 17

c.2) Road test vehicle to verify that track is properly installed. Re-check the tension 2 or 3 times after complete track rotations (approx. 200 yards) until it maintains its nominal pressure.

MAINTENANCE

Check track tension periodically :

Track will bed-in during the first 20 hours of operation and may require daily or weekly tension adjustments. Track will not stretch much during its life but vehicle load and suspension sag will affect track tension. Always inspect before running.

STORAGE

Track and components can sustain A1 & C2 climatic cycling as described in OSTAG-360 for a period of minimum 5 years. Recommended temperatures range is : Minus 40 to 60 degrees Celsius (-40° to +140°F). Track life should improve when temperature and humidity are kept close to 0 degree Celsius (32°F) and 40% humidity.

OPERATING CONDITIONS

Track and components can sustain A1 & C2 climatic cycling as described in OSTAG-360 for a period of minimum 5 years. Recommended temperatures range is : Minus 40 to 50 degrees Celsius (-40° to +122°F). Track life should improve when temperature and humidity are kept close to 15 degrees Celsius (60°F) and 40% humidity.

VEHICLE OPERATION WITH RUBBER TRACK

Ratcheting :

It is possible that the track will jump teeth under certain limit conditions such as panic stops and/or negotiating very steep downward slopes under brakes. This condition is deemed normal and will not entail any degradation or loss of performance for the life cycle of the track.