

TRACK MAINTENANCE

Track Damage Identification

Cutting Of Steel Cords

Figure 40-30-1

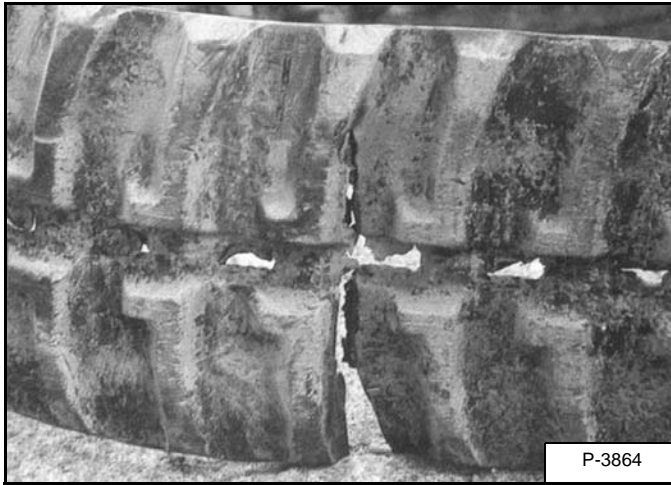
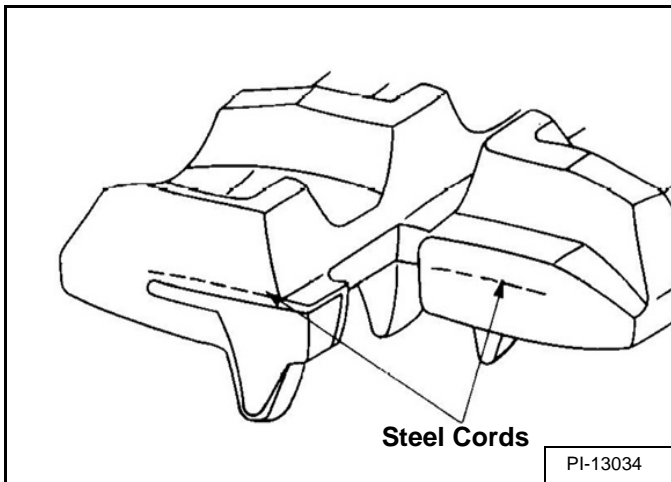


Figure 40-30-2



The following pages show photos and illustrations of track damage and the probable cause of the damage. It is intended to be used for identifying the reason for track damage and how to avoid future track damage.

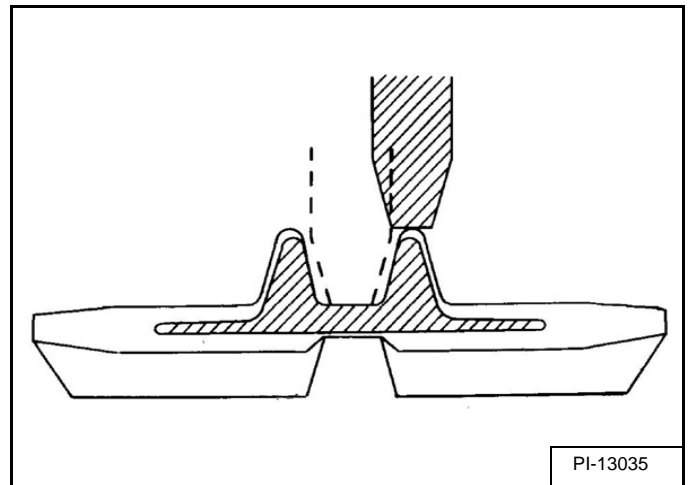
Damage:

Embedded steel cords are cut off [Figure 40-30-1] and [Figure 40-30-2].

Replacement:

Replacement is required [Figure 40-30-1] and [Figure 40-30-2].

Figure 40-30-3



Causes of the damage:

When applied to rubber tracks under the following circumstances, tension in excess of the breaking strength of the embedded steel cords causes steel cords to be cut:

When the rubber track is detracking, the idler or sprocket rides on the projections of the embedded metal [Figure 40-30-3].

When the rubber track is detracked, projections of rubber tracks get stuck between the frame of the undercarriage.

The rubber track is clogged with stones or foreign obstacles.

Furthermore, when moisture invades through a cut on the lug side rubber surface, the embedded steel cords will corrode. The deterioration of the design strength can lead to the breaking off of the steel cords.

Prevention:

The following preventions should be taken to minimize the risk of this damage:

Periodical checking on site of the recommended track tension. (See Checking Tension on Page 40-20-2.)

Avoiding quick turns on bumpy and rocky fields.

Drive carefully to avoid having stones and other articles clog the rubber tracks.

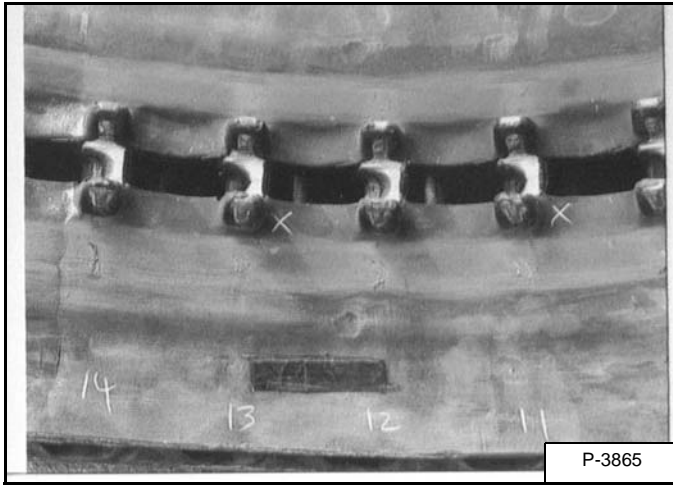
Driving over sharp objects should be avoided. If this is impossible, do not make turns while driving over sharp objects.

TRACK MAINTENANCE (CONT'D)

Track Damage Identification (Cont'd)

Abrasion Of Embedded Metals

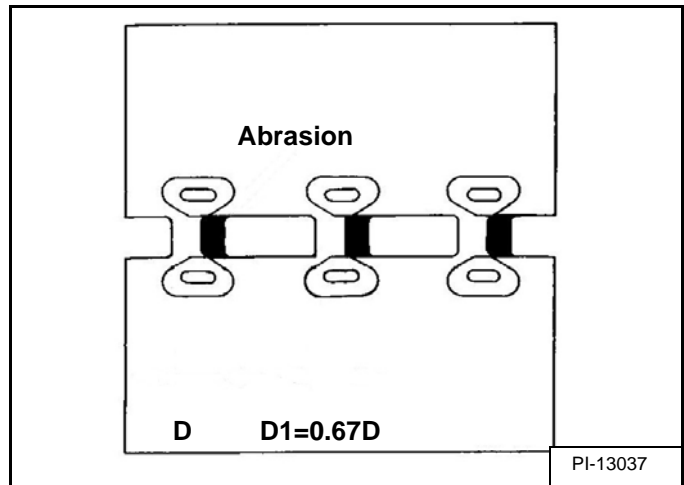
Figure 40-30-4



Damage:

In proportion to the service time, embedded metals will gradually wear away by friction [Figure 40-30-4].

Figure 40-30-5



Replacement:

Replacement is required when the width of the embedded metals (D1) becomes 67% of their original width (D) [Figure 40-30-5].

Causes of the damage:

When the track rollers, sprockets and idler gears roll over the embedded metals, abrasion of embedded metals is inevitable. The following cases sometimes accelerate their abrasion:

Rubber tracks are driven with an extraordinary heavy load on them.

Rubber tracks are used on sandy fields.

Prevention:

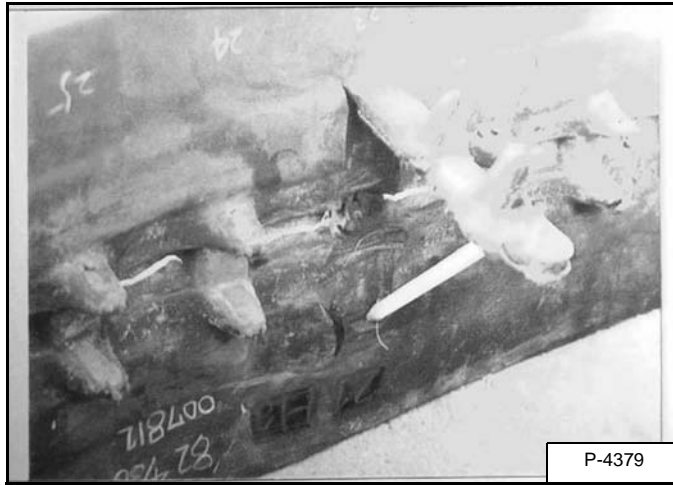
As long as rubber tracks are used under normal operating conditions, abnormal abrasion is unlikely to occur. The level of abrasion should be carefully checked when the machines are used for dozing which generate a heavy load for rubber tracks, and when they are operated under a sandy field condition for a long time.

TRACK MAINTENANCE (CONT'D)

Track Damage Identification (Cont'd)

Separation Of Embedded Metals

Figure 40-30-6



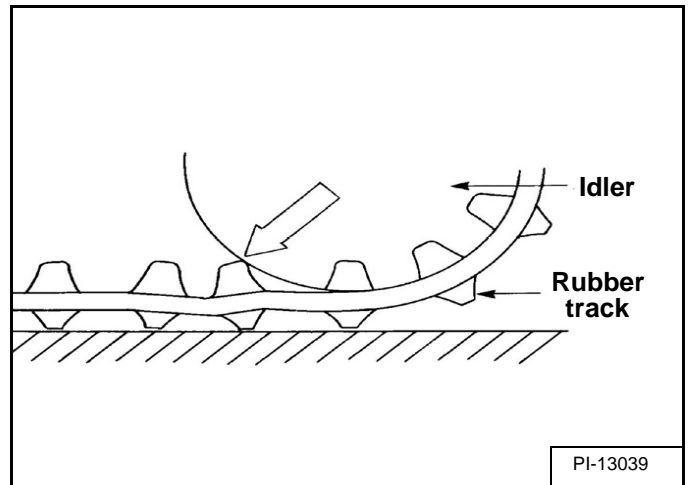
Damage:

Extraordinary outer forces applied to embedded metals cause their separation from the rubber track's body [Figure 40-30-6].

Replacement:

Even a partial separation of embedded metals requires replacement of the track.

Figure 40-30-7

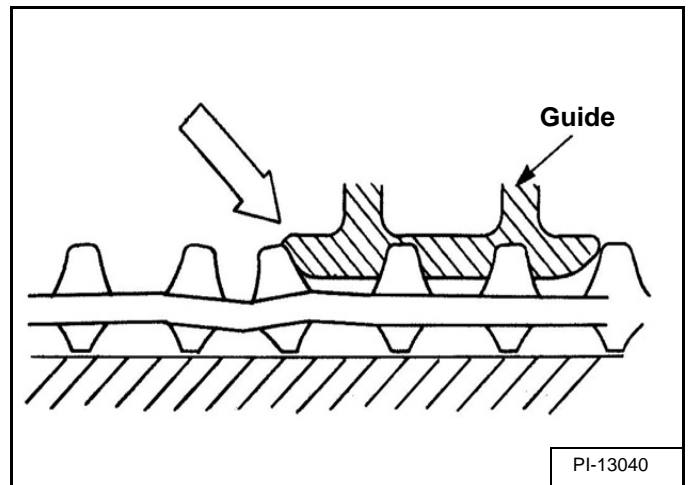


Causes of the damage:

Embedded metals are adhered between the steel cords and the rubber body. The following cases generate external forces greater than the adhesion strength, causing separation of the embedded metals:

When the idler continually rides on the projections of embedded metals, the embedded metals will eventually peel off [Figure 40-30-7].

Figure 40-30-8



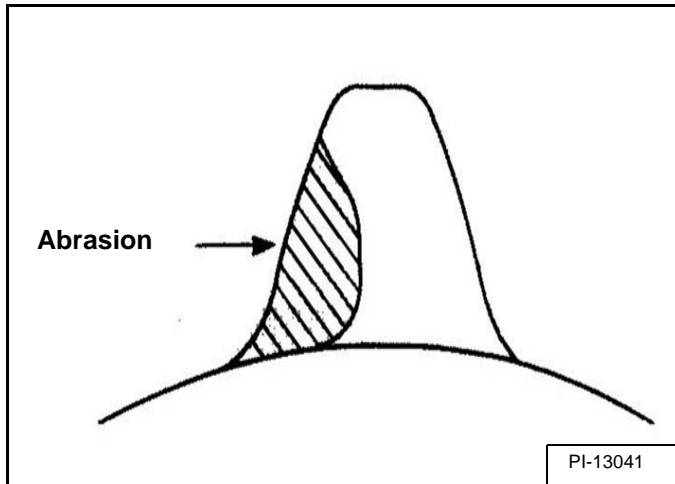
When a rubber track is detracked, it becomes stuck between the guide or the undercarriage frame, causing the separation of embedded metals [Figure 40-30-8].

TRACK MAINTENANCE (CONT'D)

Track Damage Identification (Cont'd)

Separation Of Embedded Metals (Cont'd)

Figure 40-30-9



Abnormally worn sprockets as shown will pull embedded metals out [Figure 40-30-9].

Prevention:

Similar to the prevention against the cutting of the steel cords:

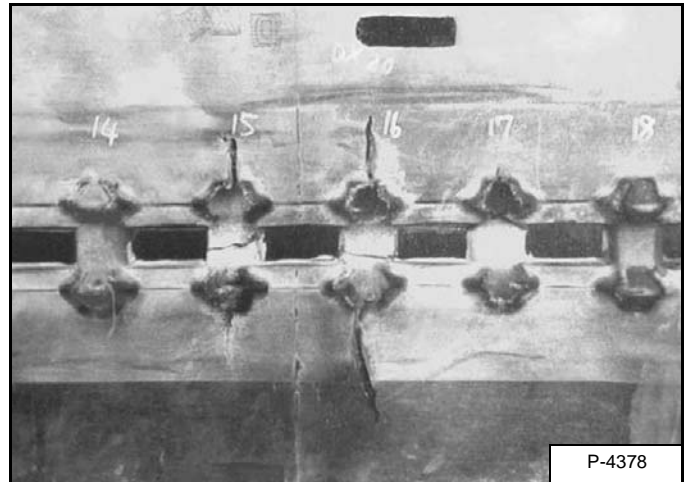
Recommended track tension should be periodically checked. (See Checking Tension on Page 40-20-2.)

Quick turns on bumpy and rocky fields should be avoided.

If abnormal wear of sprockets is observed, they should be immediately replaced.

Separation Of Embedded Metals Due To Corrosion

Figure 40-30-10



Damage:

Due to corrosion of embedded metals, the adhesion to the rubber body deteriorates, resulting in complete separation [Figure 40-30-10].

Replacement:

Even a partial separation of embedded metals requires a rubber track replacement.