

ECO-TRACKS™

WHEEL TRACK MANUAL



BASICS

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Basics

The tracks are made from carbon manganese steel, alloyed with boron by a special metallurgical treatment. After hardening with water, the steel has a 500 HB degree of hardness. All track components consist of the same material and are through hardened for good welding properties and wear characteristics.

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IMPORTANT INFORMATION

1. Tire dimension
 2. Machine type and model
 3. Tire brand and model
 4. Ground conditions
 5. Type of use
- (No 1 - 3 are very important)

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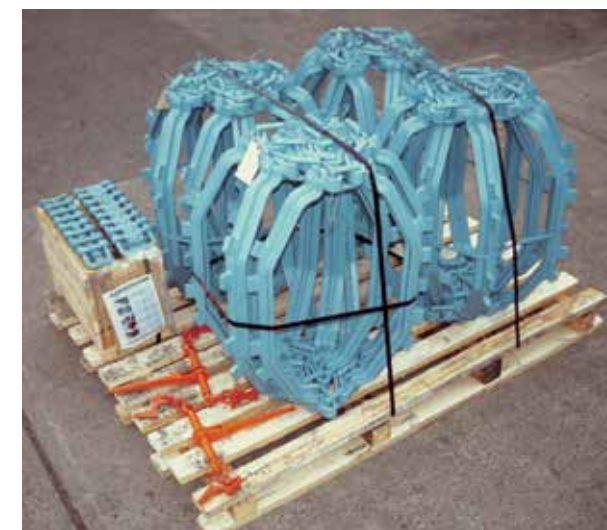
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Track Shipping



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Tracks are normally shipped in 4 rolls on one or two pallets. The joining track locks are either mounted on the ends of the rolls or in a joining set box.

The joining set contains two mounting tools, extra track locks and mounting instructions.

Note: 1 set equips 2 tires.

ECO-WHEEL TRACK

ECO-Wheel Tracks from Olofsfors are suitable for skidders, forwarders, harvesters and wheeled feller bunchers.

Thanks to its qualities, wheel tracks are a very economic alternative to conventional chains.

The advantages of using wheel tracks:

- Improved traction
- Less maintenance, easy adjustments
- Increased stability
- Less wear on drive train - reduced spin and grab effect
- Extended operating season
- Reduces ground pressure
- Less ground compaction
- Self cleaning



ECO-Wheel Track

Primarily used for skidder applications. These tracks come standard with the heavy duty link system. Different cleating configurations are available.



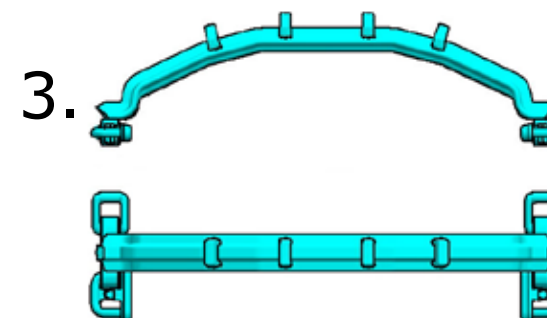
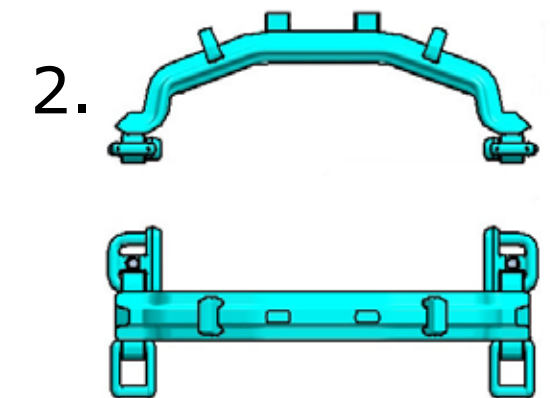
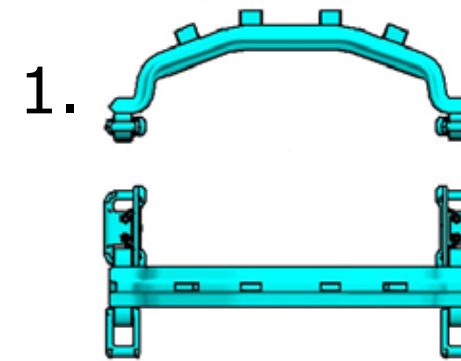
ECO-Wheel Track (CTL)

The lighter ECO-Wheel track is used mainly in cut-to-length applications. It fits on metric sized tires for harvesters and forwarders.

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CLEATING

Part. no	Description	Kg/Pair	Lb/Pair	Cleating
073-628020	ECO-Wheel Track 700/55 x 34	872	1 923	1
073-631020	ECO-Wheel Track 600 x 34	801	1 766	1
073-654020	ECO-Wheel Track 750 x 26.5	793	1 749	1
073-658020	ECO-Wheel Track 700/70 x 34	979	2 159	1
073-658021	ECO-Wheel Track 700/70 x 34	1 019	2 247	2
193-623060	ECO-Wheel Track 23.1 x 34	1 165	2 569	2
193-626040	ECO-Wheel Track 24.5 x 32	1 174	2 589	2
193-627020	ECO-Wheel Track 30.5 x 32	1 391	3 067	2
193-628020	ECO-Wheel Track 28L x 26	1 104	2 434	2
193-631020	ECO-Wheel Track 23.1 x 26	1 017	2 242	2
193-660020	ECO-Wheel Track 35.5 x 32	1 593	3 513	3
293-626040	ECO-Wheel Track HS 24.5 x 32	1 246	2 747	2
293-627020	ECO-Wheel Track HS 30.5 x 32	1 452	3 202	2
293-628020	ECO-Wheel Track HS 28L x 26	1 200	2 646	2
293-631020	ECO-Wheel Track HS 23.1 x 26	1 082	2 385	2
293-660020	ECO-Wheel Track HS 35.5 x 32	1 668	3 678	3

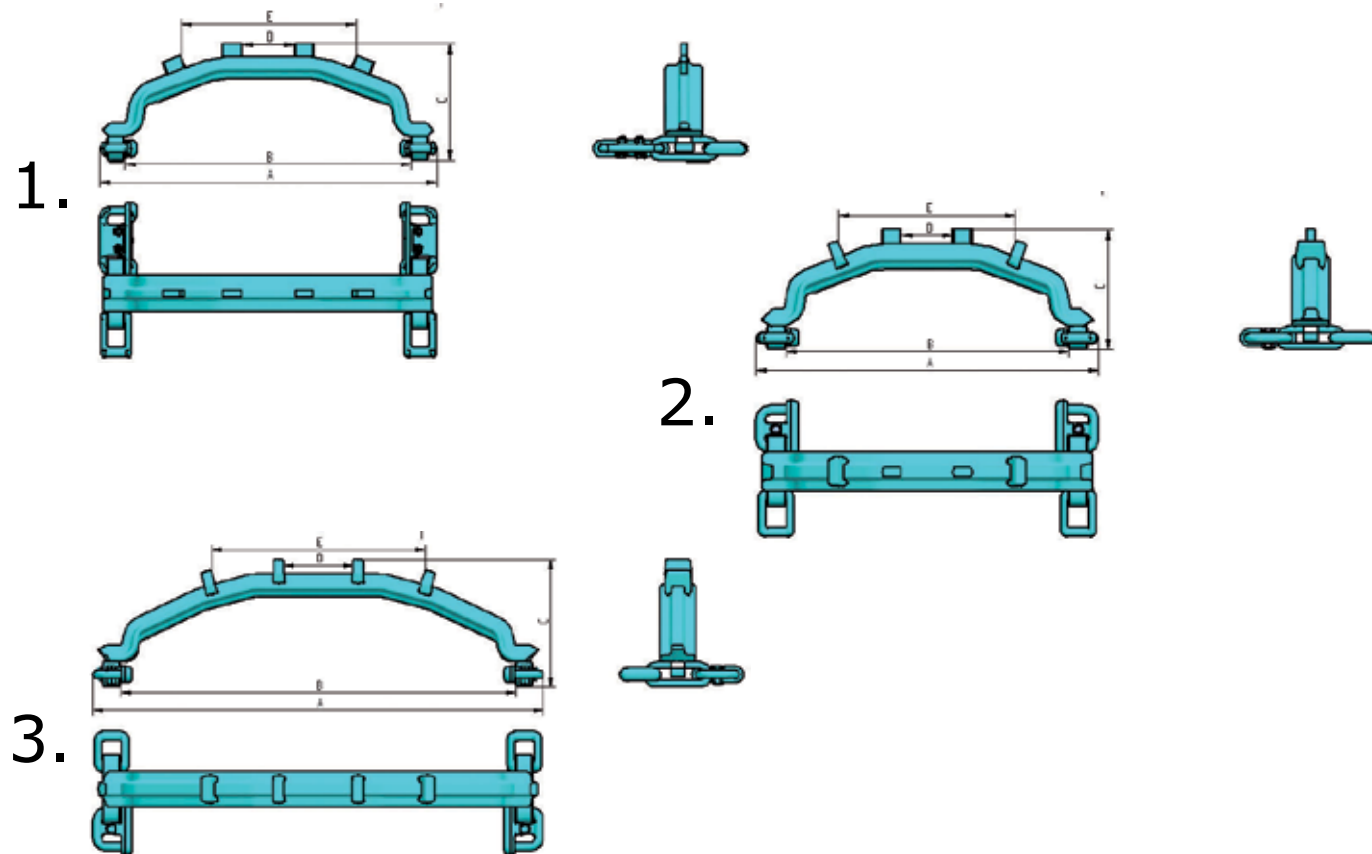


Other options are also possible.

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TRACK DIMENSIONS

Tire size	Part. no	Clea-ting	Metric					Imperial				
			A ±10mm	B ±3mm	C ±5mm	D ±5mm	E ±5mm	A ±3/8"	B ±1/8"	C ±3/16"	D ±3/16"	E ±3/16"
700/55 - 34	073-628020	1	900	770	280	160	470	35.4	30.3	11.0	6.3	18.5
600 - 34	073-631020	1	775	655	266	120	380	30.5	25.8	10.5	4.7	15.0
750/55-26.5	073-654020	1	900	770	280	160	470	35.4	30.3	11.0	6.3	18.5
700/70 - 34	073-658020	1	900	770	280	160	470	35.4	30.3	11.0	6.3	18.5
700/70 - 34	073-658021	2	900	770	280	160	470	35.4	30.3	11.0	6.3	18.5
23.1 - 34	193-623060	2	800	655	280	110	400	31.5	25.8	11.0	4.3	15.8
24.5 - 32	193-626040	2	860	720	290	140	440	33.9	28.3	11.4	5.5	17.3
30.5 - 32	193-627020	2	1000	860	310	180	510	39.4	33.9	12.2	7.1	20.0
28 L - 26	193-628020	2	960	820	290	160	470	37.8	32.3	11.4	6.3	18.5
23.1 - 26	193-631020	2	795	655	280	120	410	31.3	25.8	11.0	4.7	16.1
35.5 - 32	193-660020	3	1156	1016	315	200	550	45.5	40.0	12.4	7.9	21.7
30.5 - 32	293-627020	2	1000	860	318	180	510	39.4	33.4	12.5	7.1	20.1
28L -26	293-628020	2	960	820	318	160	440	37.8	32.3	12.5	6.3	17.3
35.5 - 32	293-660020	3	1156	1016	325	200	550	45.5	40.0	12.8	7.9	21.7



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OPERATING RECOMMENDATIONS

To maximize the life of the ECO-Wheel track linkage system, **it is very important to keep the tracks as tight as possible on the tires and keep the tires inflated to maximum allowable inflation pressure.** Maximum inflation pressure and tight tracks will minimize the "flexing" of the linkage system. Maximum tire inflation pressure will also prevent tire "scuffing" and potential side wall damage.

Keeping the tracks as tight as possible, the linkage system will only wear under load. Some users let air out of the tire when installing and tightening, then re-inflating to achieve maximum tightness.

During the initial operating period, it is normal to have to tighten the wheel tracks frequently until the paint and any rough surfaces wear smoothly. All wheel tracks are manufactured to fit new tires and may be necessary to remove one or more cross members if being mounted on used/worn tires.

Differential locks are not required with good traction and should be disengaged under normal operating conditions. Only use differential locks if required to get the skidder through or out of difficult situations. Make sure operators are trained in the correct use of differential locks.

To get the most out of your machine and wheel tracks, Olofsors recommends you install tracks on all four tires. It is especially important in demanding and difficult terrain. If equipped on one axle only in these conditions, tire wear might be experienced. Wheel tracks work well on the front only or rear only if used in gentle conditions.

Recommended Track Adjustments

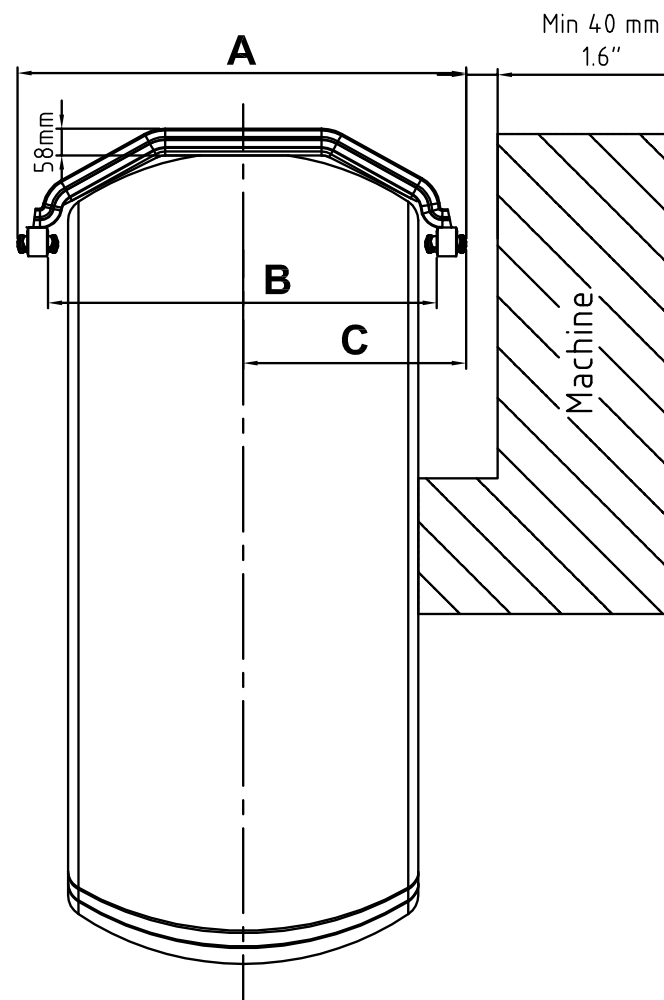
When it is time to remove a cross member to adjust your track tightness, Olofsors recommends the following procedure be followed:

1. Instead of removing a cross member by taking out the track locks, it is suggested you cut off the solid links
2. To start, remove a set of track locks to unfasten the track
3. Roll the track off the machine
4. Cut off the solid links on both sides of the track to remove one cross member
5. Roll the track back on to the machine
6. Join the track back together with a long or short track lock
7. At all times there should be a total of 8 track locks per side
8. This will assure easier tensioning through out the life of the track

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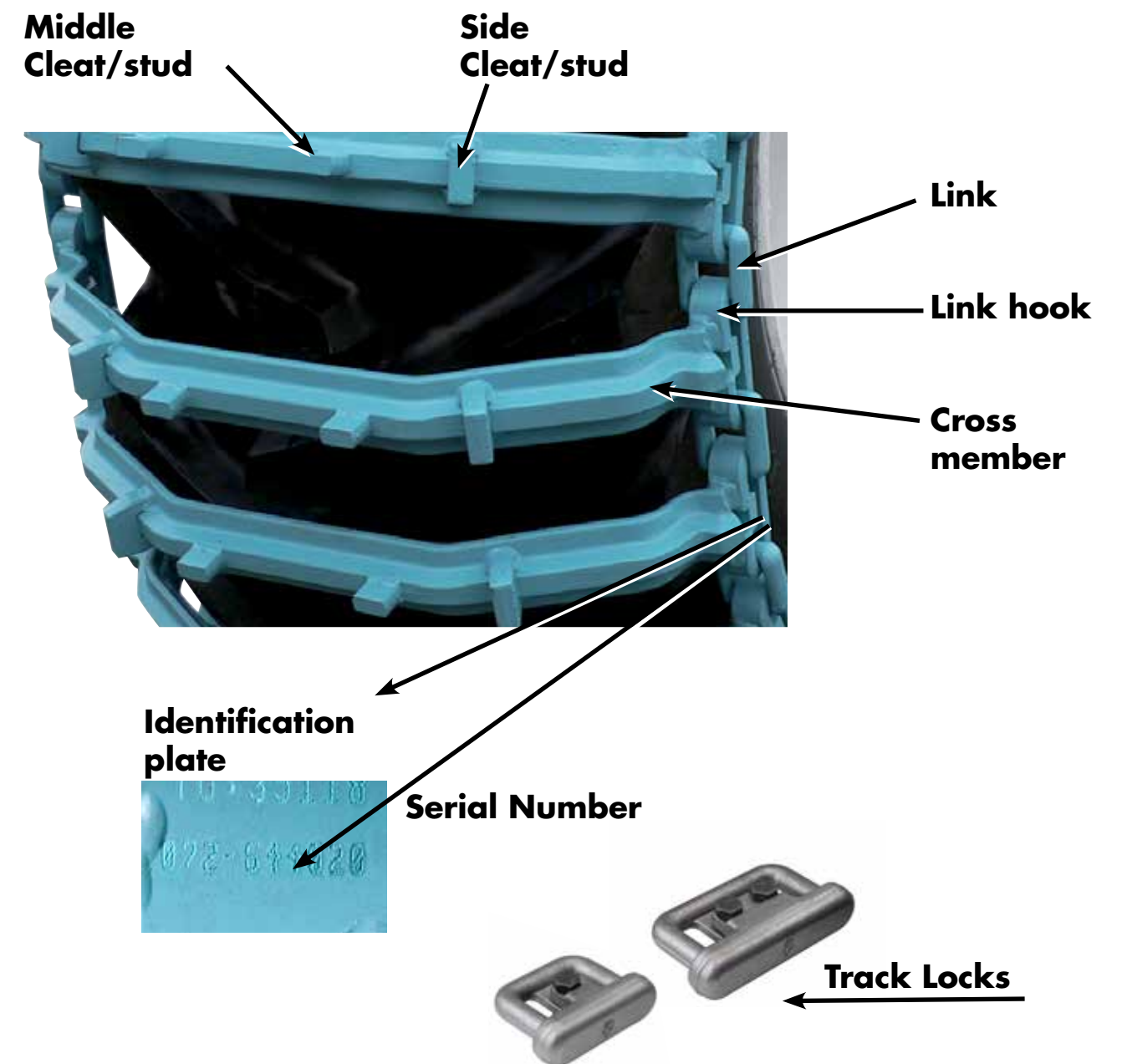
MACHINE CLEARANCE

Wheel tracks require 4-5" (100-125 mm) of clearance from the machine to the outside of the tire. Generally fixed axle configurations have no clearance issues; however machines that have oscillating axles must check the clearance at full oscillation to prevent possible damage to machine enclosures or other components.



TRACK COMPONENTS AND DESCRIPTIONS

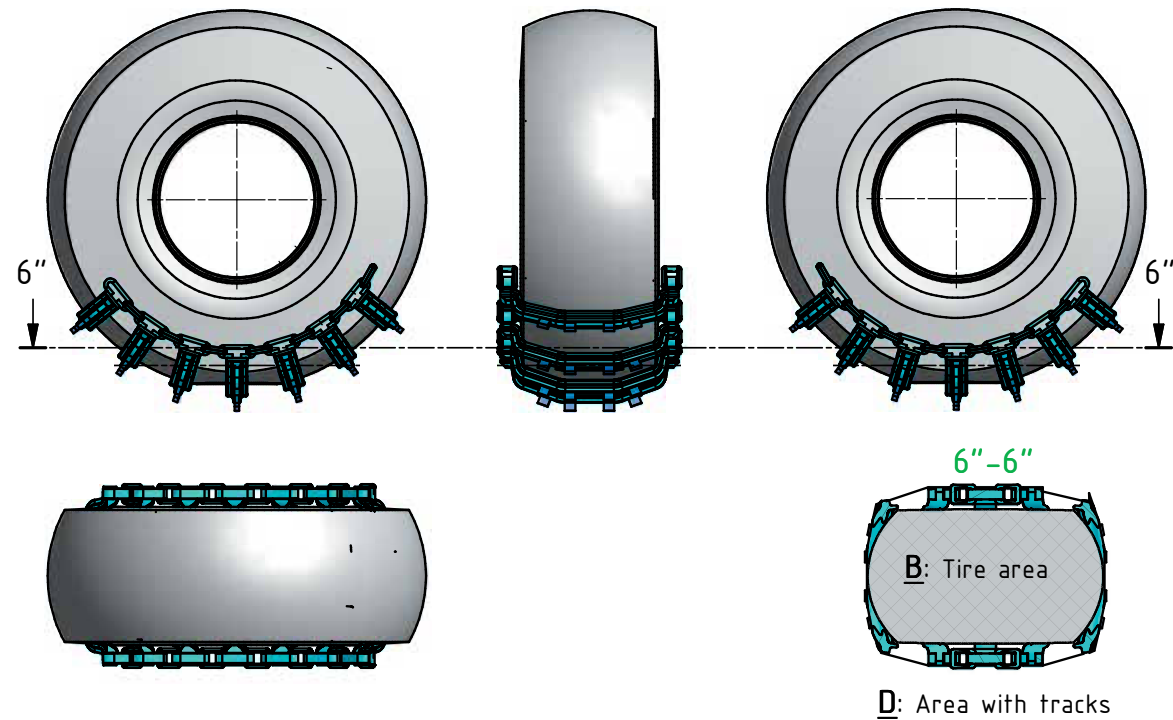
ECO-Wheel Track link systems			
Track	Track mod.	Link Ø	Link hook
ECO-Wheel Track (CTL)	073 -	20 mm (13/16")	40 x 15 mm (1 ³ / ₁₆ " x 9/16")
ECO-Wheel Track	193 -	22 mm (7/8")	45 x 15 mm (1 ³ / ₄ " x 9/16")
ECO-Wheel Track HS	293 -	25 mm (1")	45 x 18 mm (1 ³ / ₄ " x 11/16")



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GROUND CONTACT COMPARISON



Contact Area Comparison 6" Penetration					
Tire size	Without Tracks		With Tracks		Difference %
	sq.in	cm ²	sq.in	cm ²	
23.1 - 26	907	5852	1227	7918	35,3%
24.5 - 32	1051	6780	1467	9467	39,6%
28L - 26	1135	7326	1520	9807	25,3%
30.5 - 32	1382	8920	1781	11495	22,4%
35.5 - 32	1644	10608	2092	13500	27,3%
700/55 - 34	1086	7007	1395	9005	28,5%
700/70 - 34	1156	7462	1480	9553	28,0%

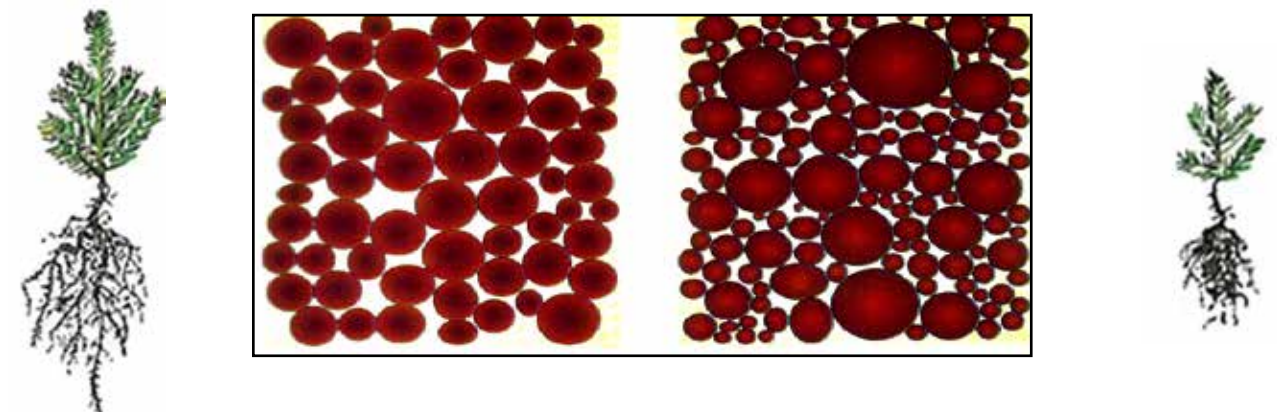
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WHY TRACKS?

Soil is one of the most important components of a forest ecosystem. All plant life in the forest depends on the soil supply nutrients, gases, moisture and support for roots. Soil forming processes take time, and soil structure can be fragile.

Undamaged soil with pore space almost half the volume, gives good growth and undisturbed water and air transportation.

Compacted soil with less porosity and future less growth.



The best solution to minimize soil compaction and rutting is widening the contact area against the ground by putting tracks on the machine.

The main advantage of tracks is that the cross members distribute the load over a larger area compared with standard tires.

Branches, roots, etc often cover the ground, which help to support a tracked vehicle. Tires however, tend to sink into and compact the ground.

The advantages of using the right tracks:

- Improved traction
- Less maintenance, easy adjustments
- Increased stability
- Less wear on drive train - reduced spin and grab effect
- Extended operating season
- Reduces ground pressure
- Less ground compaction
- Self cleaning

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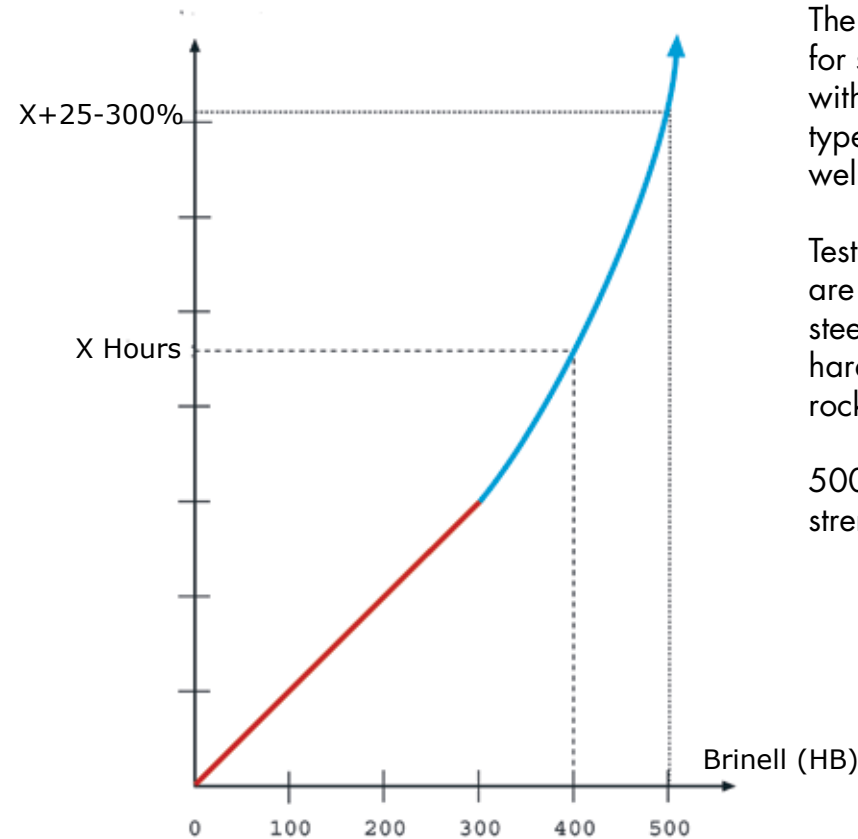
SERVICE LIFE

Considering the large variety and types of machines, wide range of applications and different ground conditions, it is impossible to provide exact length of service life on tracks.

In general, a track is considered as being worn out if the links, link hooks, or cross members are worn to the point that they begin to break down. The following conditions or factors directly affect service life:

Snow	Reduces wear of the track	Increased service life
Sand / clay	Increased wear on links and link hooks	Significantly reduced service life
Rocks	Increased wear on cross members	Reduced service life.
Harvesters	Travel short distances at low speed	Increased service life
Forwarders	Travel with load long distances	Reduced service life
Bogie skidders	Continual travel at high speed	Significantly reduced service life
Scarification	Continual travel at high speed	Significantly reduced service life
Small machine	Less wear of the tracks	Increased service life
Large machine	Increased wear of the tracks	Reduced service life

These factors decisively influence the tracks service life. Variations of 15 to 20 times can be noted.



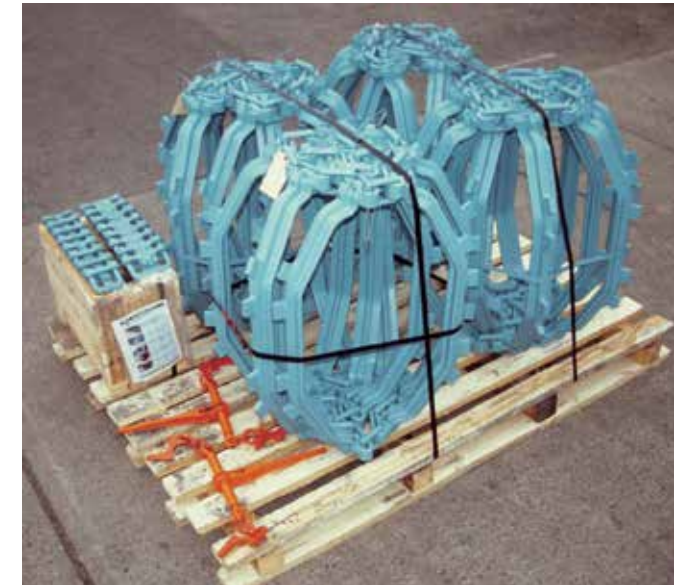
The steel type is of decisive importance for service life. Hard steel types withstand hard minerals. There are two types of wear. Heavy and fast wear as well as a milder and slower wear.

Tests have shown that if the minerals are 1.8 times harder than the steel, the steel wears fast. If you choose sufficiently hard steel, you get slower wear. Every rock type wears in its own unique way.

500 Brinell gives 25% better wear strength than 400 Brinell (see diagram).

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TRACK SHIPPING AND MOUNTING



Tracks are normally shipped in 4 rolls on one or two pallets. The joining track locks are either mounted on the ends of the rolls or in a joining set box.

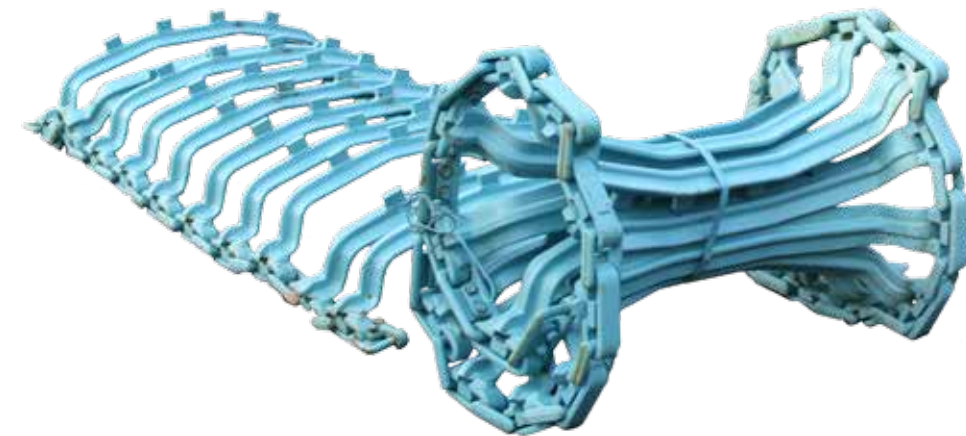
The joining set contains two mounting tools, extra track locks and mounting instructions. It is important to keep the tracks as tight as possible.

Note: 1 set equips 2 tires.

MOUNTING INSTRUCTIONS

Each pair of tracks consist of:

- 2 Sections without removable track locks
- 2 Sections with track locks at one end



Layout the track with the top of the cross members facing up. Using a long track lock from the joining set, connect one section that does not have track locks with a section that has track locks.

Note: Join the section that has track locks so that the track locks are at a loose end. This will make it easy to remove a cross member if necessary. A cross member may need to be removed if the tracks are being installed on used (worn) tires.

For more information, refer to mounting instructions.

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MOUNTING INSTRUCTIONS



1
Layout two sections of the track with the top of the cross members facing up. Use one section with track locks and one without. Make certain the track locks are at the loose end.



2
Join the two sections using long track locks.



3
Connect a long chain to the centre of the cross member at the end with the track locks.



4
Position the machine so that the wheel is lined up with the track and wrap the chain around the centre of the tire. Place the loose end of the chain on ground in front of the tire.



5
Pull the track around the top of the wheel by driving over the chain.

MOUNTING INSTRUCTIONS



6
Using the track installation tool, tighten the track until a track lock can be installed. Make sure the track locks are installed from the outside with the backings against the tire.



7
Two lengths of track locks are provided to ensure proper track tension. If the tires are worn, it may be necessary to remove a cross member.



8
Install the bolt so that the nut is on the inside of the link system. This will prevent damage to the thread during machine operation.



9
Keep the tracks as tight as possible on the tires. During the first days of operation, the paint and any rough surfaces in the link system will wear smooth requiring the tracks to be tightened again. Keep tires inflated to maximum allowable pressure as recommended by the manufacturer.



10
Tools needed:
-Track installation tools
-Long Chain
-Hammer
-22mm wrench
-22mm socket/ratchet

WELDING

General:

- All track components are made from special carbon manganese steel alloyed with boron.
- It is important that the material being welded is clean and dry. It is extremely important that only **new and dry** electrodes be used.
- The overall temperature of the tracks must be at least 18° C (65° F) prior to welding. Recommended pre-heating temperature is 150-200° C (300 - 390° F) to a maximum of 250° C (480° F).

Recommended Welding Materials:

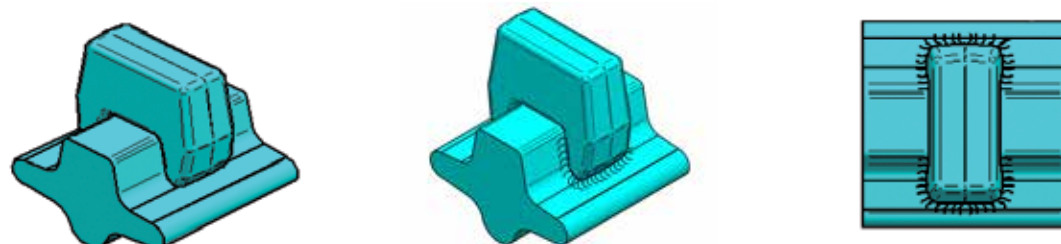
Manual Welding Electrode (Stick Welding)
OK 48.30, OK 48.00 (E7018), OK 74.78 or equivalent

MAG Welding (Gas Metal Arc Welding)
OK Autorod 12.51, OK Autorod 12.50 (ER70S-6), OK Autorod 13.13
Argon gas with 16% CO2 or 23% CO2 is recommended as protection gas.

Note: Maximum electrode size is 3.25 mm (1/8")

Welding Cleats:

- Never weld cleats on the centre section of the cross-member. See fig. 1 below.
- All welding passes are to be parallel with the cross-member.
- Position cleats and tack weld in place. (Never welding cleats on the centre section of the cross-member). Weld 10-15 cleats in place on the opposite side of the tack weld. This will prevent a localized over-heating of the cross-member material, at this point return to the previous 10-15 cleats and complete the welding on the opposite side of the cleat.
- Consult your local dealer for the correct replacement cleat. It is highly recommended to use the replacement cleats because they are made of the same material as the cross members. Fillet welds are to be a maximum of 3/16".



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WELDING

This is a sample of a welding procedure specification. WPS for ESAB OK 67, 45 (Stainless) and OK Autrod 12,50/12,51 (Gas Metal Arc Welding), can be found at our home page www.olofsors.se

Svetsdatablad WPS		WPS111PA01-02									
Welding Procedure Specification		Look at WPAR no. WPAR111PA01-00									
SVETSMETOD		111		FOGUTFORMNING/ GROOVE DES.				SVETSFÖLJID/ WELDING SEQ.			
GRUNDMATERIAL	MATERIALTYP	W02									
	TJOCKLEKSOMRÅDE	50mm									
	KOLEKVIVALENT C _{ew} (IIW)	0,58									
	CARBON EQUIVQLENT C _{ew}										
TILLSATSMATERIAL	FABRIKAT	ESAB									
	BENÄMNING	OK 48.00		POS	GILTIGHETSOMRÅDE		PA, PB				
	DIN / EN CODE	EN 499: E 42 4 B 42 H5			RANGE OF POSITION QUA.						
	TORKNING AV ELEKTRODER	Distributor recom.			FÖRÄRMNING	FÖRÄRMNINGSTEMP.		75° C			
PULVER			MELLANSTRÄNGSTEMP.			150-200° C					
FLUX			VÄRMNINGSMETOD			Acetylene/ Propane					
SKYDDSGAS	SKYDDSGAS										
	FLÖDE										
	ROTSTÖD										
	BACKING										
TEKNIK	STRÄNG, PENDLING	String									
	RENGÖRINGSMETOD	Grinding									
	HÄFTNINGSMETOD	Weld									
	ROTSTIDANS BEHANDLING										
STRÄNG	METOD	TILLSATSMATERIAL									
	PROC.	FILLER MATERIAL									
BEAD	StickOut	VARUNAMN	DIAM.	AC	POL.	AMPERE		VOLT		CM/ MIN	STRÄCKENERGI
	mm	TRADENAME		DC		MIN	MAX	MIN	MAX	TRAVELSP.	HEATINPUT
1	111	OK 48.00	3,2	DC	(+)	95	105	24	- 26	11 - 17	1,0
2 - 5	111	OK 48.00	3,2	DC	(+)	140	150	25	- 27	16 - 24	1,2
GODKÄNNANDE	OLOFSORS		KUND				MYNDIGHET				
	DATUM		CLIENT				DATUM				
	DATE		DATE				DATE				

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OF
250
1762-2012

Olofsfors was founded in 1762, and since its conception 250 years ago, it has been producing world renowned high quality steel products. To this day, production is still at the same place located in Northern Sweden. Three families have been involved since the beginning of our dynamic company: Jennings, Pauli and Wikstrom. The proud Wikstrom family have been owners since 1864. From 1762 up until the late 19th century, Olofsfors has produced steel with its own mill. From the 19th century Olofsfors has been focused on the development of special and hardened steel products. This focus has produced the absolute best and highest quality of wear resistant steel products in the world since 1970 resulting in Olofsfors becoming a contracted supplier to many well known Large Equipment Manufacturers. The Olofsfors business model still holds true today; produce high quality steel products through a focused mixture of knowledge, and durability and value adding to our partners products.

