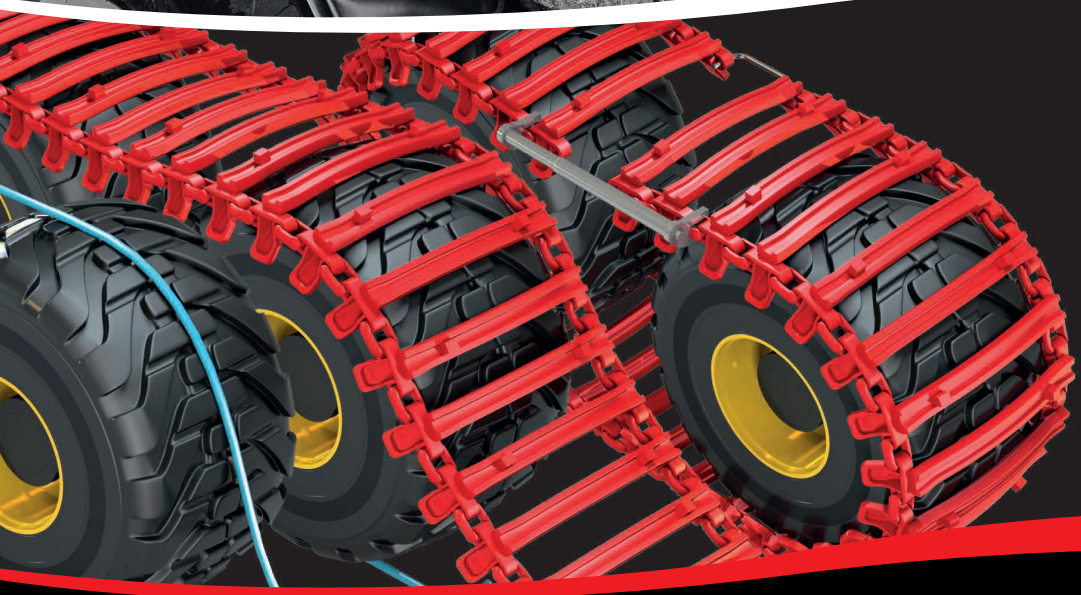
CLARK TRACKS™

high performance for maximum work life



USER Guide

Forest Machine Tracks

Flotation | Multi-Terrain | Demanding

www.clarktracks.com

Multi-Terrain | Demanding | Flotation

Clark Tracks Ltd specialise in developing and manufacturing forest machine tracks to suit almost all Cut-to-Length machines and Skidders. Our company can supply tracks in various sizes and designs to suit virtually all terrain, all climates and all machine types.

This handbook has been collated to offer assistance, both in track selection and in the use of our tracks. The information provided will help you to achieve maximum performance as well as trouble free operation throughout the working life of your tracks.

Contents

Website - track selector	3
Introduction	4
Why choose Clark Tracks?	5
Lite–Link System	6
Choosing your tracks	6
Track Identification / General Rules	7
Lateral Traction	8
Icons Explained	9
Terra85 - grip & flotation	10-11
Terra85 - multi-terrain	12
Terra95 - multi-terrain	12
FX - heavy duty multi-terrain	12
Grouzer - demanding-terrain	13
CS - climbing special	13
CX - climbing xtreme	13
TXL - grip & flotation	14-15
TXL Standard Extended Versions	16
TXL Upgrade to Half on Link	16
TXL - ultimate flotation	17
TXCL - multi-terrain flotation	17
TXFX - heavy duty flotation	17
TXGL - demanding flotation	17
FL15 - advanced flotation	18
FL16 - advanced flotation	18
SFL15 - super flotation	19
SFL16 - super flotation	19
ATF - all terrain flotation	19
Rocky - snow and ice	21
GSG - ultimate climbing	21
TXSG - super grip flotation	21
Haggis Link	22
CS - unstoppable climbing	24
Spare Parts	25
Anti-Skid Spikes	26
Customised Tracks	27
Extra Track Plate Width	27
Spike Welding Procedure	28
Driving with Tracks	29
Driving Speeds	29
Track Interaction with Tyre	29
Tyre Suitability	30
Tyre Pressure (NOKIAN)	30
Fitting your Tracks	31
Machine Clearance	34
Re-tensioning of tracks	34
Design & Quality	35
Delivery	35
Repair & Support	35

KEY: Harvester | Forwarder over 14 Tonne | Forwarder under 14 Tonne | Skidder | Multi-terrain | Demanding | Flotation | Temperate | Ice | Snow | Link sizes 28mm 24mm

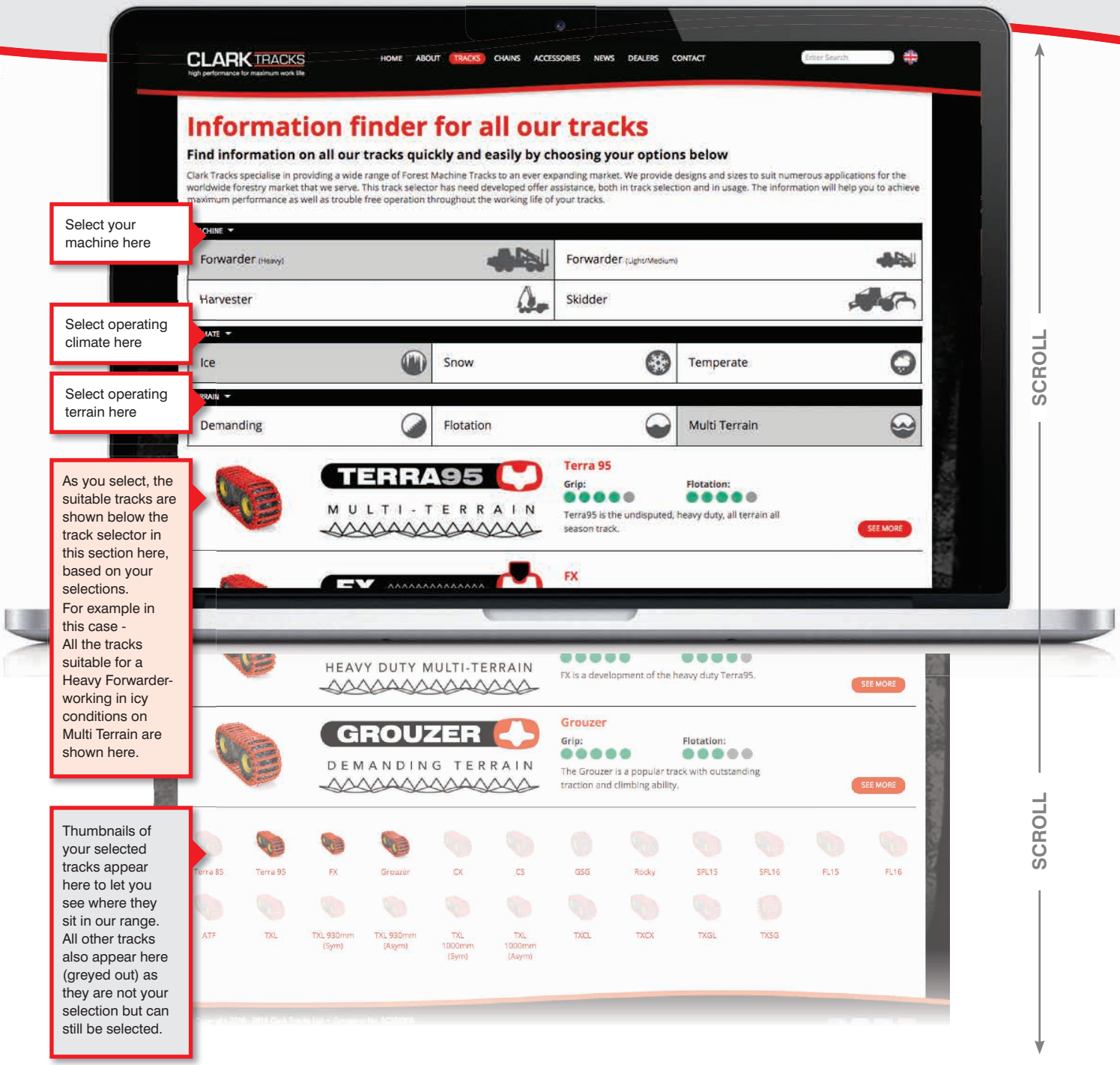
www.clarktracks.com

Website - Track Selector

Three levels of selection in order for you to see the best suited track for your machine.

Machine - Select what machine your track is to fit.
Climate - Select what climate the track will be operating in.
Terrain - Select what terrain the track will be working in.

(what you see)



Select your machine here

Select operating climate here

Select operating terrain here

As you select, the suitable tracks are shown below the track selector in this section here, based on your selections.
For example in this case -
All the tracks suitable for a Heavy Forwarder-working in icy conditions on Multi Terrain are shown here.

Thumbnails of your selected tracks appear here to let you see where they sit in our range. All other tracks also appear here (greyed out) as they are not your selection but can still be selected.

ENGINEERED ON EXPERIENCE, BUILT WITH PRIDE

Introduction to Clark Tracks

Clark Tracks are based in Dumfries, in the South West of Scotland. As a manufacturer of forest machinery tracks for almost 30 years, we have built a strong reputation for delivering high quality products to the largest forestry machinery manufacturers around the world.

Due to the high demand for our products we have doubled the size of our facilities and workforce over the last few years. This has allowed us to increase our production rate and continue to provide high quality products to all our customers.

Clark Tracks take pride in supplying high quality products and service to every customer, worldwide.

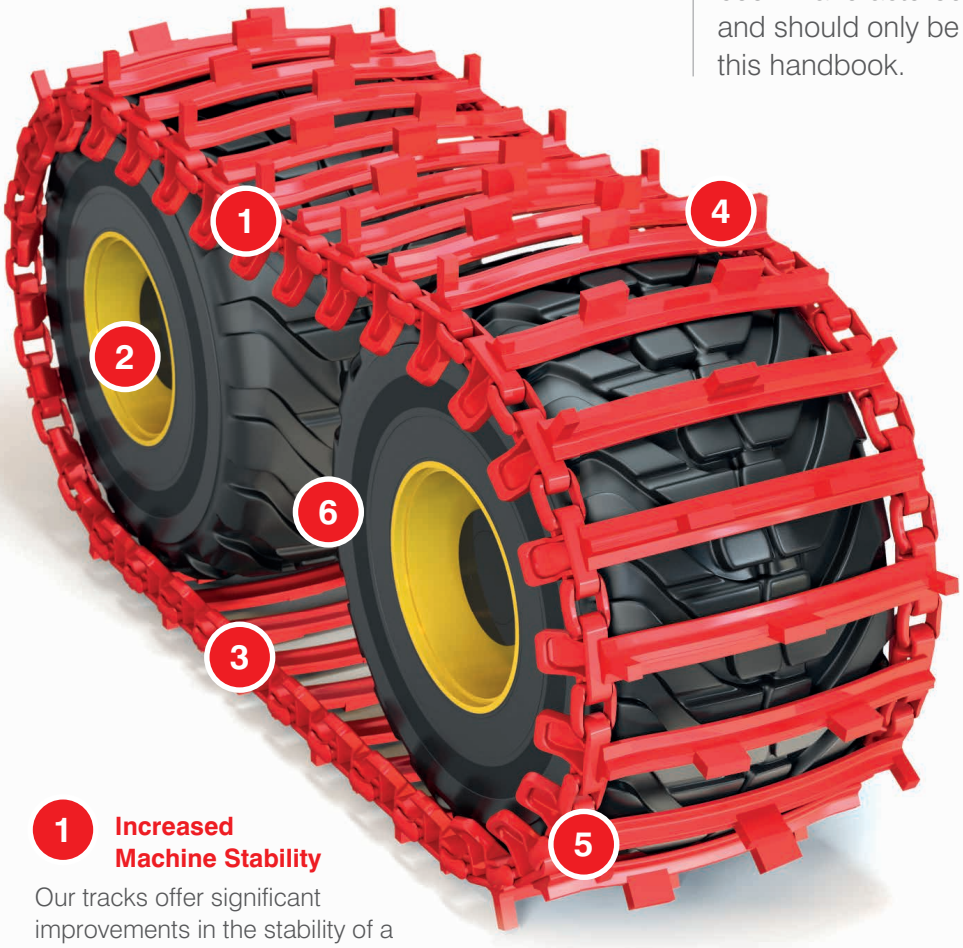
Clark Tracks Ltd. Head Office
Irongray Park, Dumfries, DG2 0HT, Scotland, UK
Tel: +44 (0) 1387 722370
Fax: +44 (0) 1387 720978
Email: clarktracks@clarktracks.com

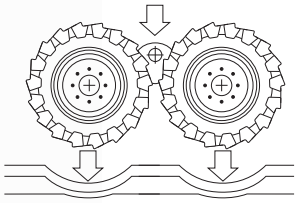
KEY: Harvester | Forwarder over 14 Tonne | Forwarder under 14 Tonne | Skidder | Multi-terrain | Demanding | Flotation | Temperate | Ice | Snow | 28mm 24mm Link sizes

Why choose Clark Tracks?

All of Clark Tracks Forest Machinery Tracks are manufactured from special boron alloy steel. The durability and toughness of the steel is maximised using specialised induction heating processes.

Specifically designed and manufactured steel sections and forgings are used to give high performance combined with the longest possible working life. Each set of tracks has been manufactured for use with a particular tyre and should only be used as recommended by this handbook.

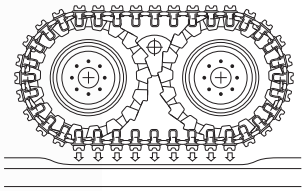




Before

Bare Tyres:

- Increased Ground Pressure
- Less Flotation
- Deep Ruts
- Soil Disturbance and compaction



After

With Clark Tracks:

- Increased Contact Area
- Lower Ground Pressure
- Increased Flotation
- Greater Machine Stability
- Increased Traction
- Reduced Ground Disturbance

1 Increased Machine Stability

Our tracks offer significant improvements in the stability of a machine by increasing the traction footprint and lowering the machines centre of gravity. This is particularly advantageous on steep slopes with loader crane movements.

2 Reduce Fuel Consumption

Putting the link system close to the effective rolling radius of the tyre reduces the drag the track adds to the machine / transmission.

3 Reduced Ground Damage

Clark Tracks Lite-Link System combined with our advanced flotation profiles (see tracks in the FL, TXL and TXCL ranges) have been specifically designed to minimise ground disturbance by reducing pressure on sensitive soils and ensuring constant levels of grip and traction.

4 Increased Traction

Using our tracks will significantly increase traction over normal tyres. This allows forest machines to climb slopes and negotiate obstacles that would otherwise have been impossible.

5 Reduced Ground Pressure

Using our tracks will increase the overall footprint of the machine and spread its weight over a much bigger ground contact area. This reduces ground pressure by as much as 50% or more over normal tyres and allows machines to be driven in conditions often impassable without tracks.

6 Tyre Protection

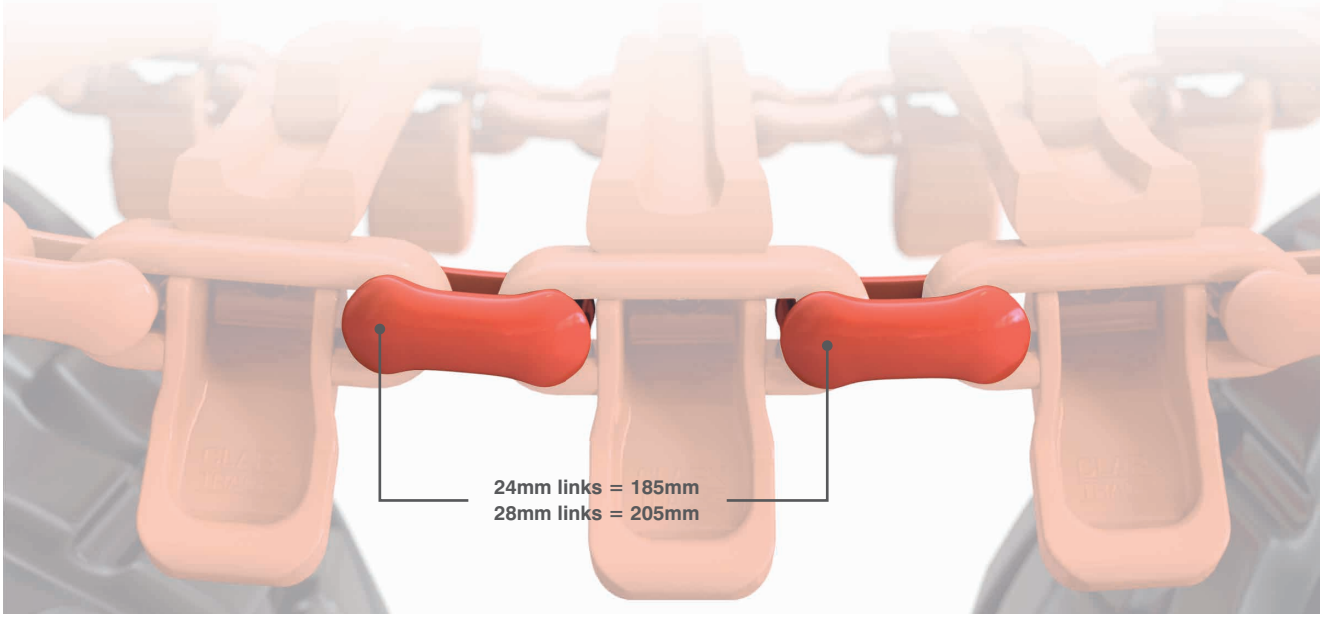
Clark Tracks are compatible with a wide range of tyres, offering protection from punctures and other damage, and in many cases, increasing the overall lifetime of the tyre.

Lite-Link System

28mm
24mm

The *Lite-Link* System features side mounted joining links which are positioned at approximately the same level as the tyre surface, thereby providing a smoother running track which absorbs much less machine driving power than other link systems.

The track is held onto the machines tyres using a system of side "paws", which have the added benefit of tyre side wall protection. Clark Tracks lite range of products offer tracks that are both kind to the forest floor and forest roads, whilst delivering excellent grip, traction and flotation.



Links are available in either as Standard 24mm pin or 28mm HEAVY DUTY. Further, links can be specified as NEW Haggis Links with special OVOID pins that maximise life and reduce retensioning maintenance.

(FOR LINK UPGRADE SEE PAGES 22 - 23.)

- **Kind to the forest floor and roads**
- **Suitable for use on sensitive soils**
- **Low machine driving power requirements**
- **Reduces fuel consumption**

Suitability

Lite-Link Systems are suitable for all forest machine applications –
Forwarders, Harvesters & Scarifiers etc.

- **Easy to fit and tension on tyres**
- **Wide range available to suit all terrains**
- **Long service life**

Choosing your tracks

Great care should be taken when selecting tracks as some will perform better than others in specific terrain.

Although Clark Tracks cannot make exact recommendations due to the fact working conditions, machine or tyre limitations and terrain can vary considerably, this handbook aims to help all customers make an informed decision.

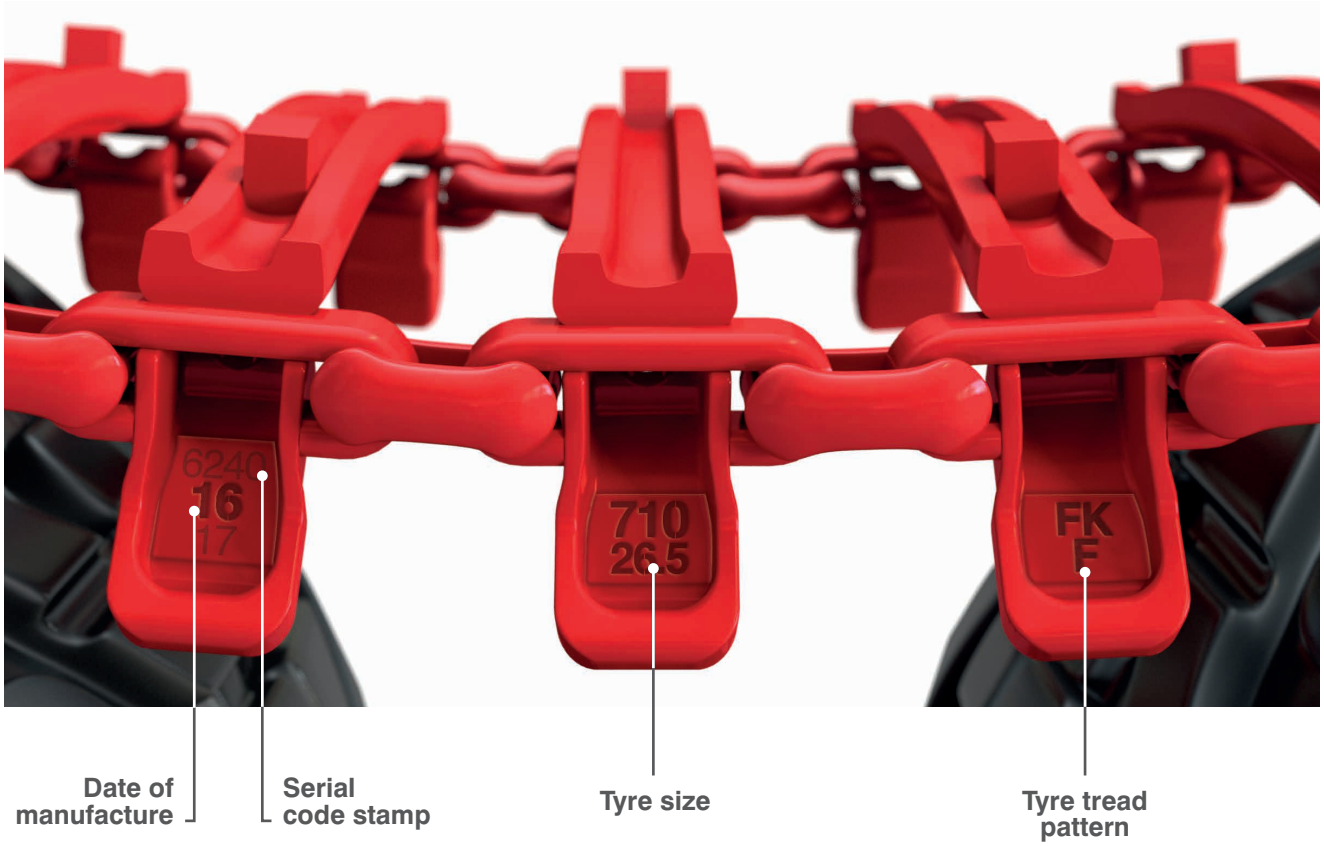
Once you are ready to select your tracks, refer to your Clark Tracks Dealer for price and availability. alternatively, you can contact our office...

e: **clarktracks@clarktracks.com** • t: **+44 (0) 1387 722370** • w: **www.clarktracks.com**

Warning... Some tracks are unsuitable for use in heavy snow and some types of sticky mud conditions.

KEY: Harvester | Forwarder over 14 Tonne | Forwarder under 14 Tonne | Skidder | Multi-terrain | Demanding | Flotation | Temperate | Ice | Snow | 28mm 24mm Link sizes

Track Identification / General Rules



As a general rule, close spaced tracks with wide plates are better suited to soft terrain. Wider spaced tracks with narrower plates are better suited to harder terrain and steeper slopes, offering greater climbing ability.

However, it should be noted that tracks with close spaced plates are not suited to use in heavy snow conditions or some types of sticky mud conditions. This is due to the potential of material being unable to escape between the track plates and building up between track and tyre which can, in extreme cases, cause machine bogey transmission problems.

Each set of tracks carries identification badges giving the exact tyre size and tread pattern for which the track was designed. Also included here is date of manufacture and serial number.

It is essential that the correct track is used for each tyre type.

Lateral Traction

Tracks in our DEMANDING and MULTI-TERRAIN class can either have standard width plates (ends on the C-Link) or extended for additional traction and flotation. In most cases these are finished with a square edge to reduce side slippage on icy forest roads or when traversing moderate slopes (traversing slopes should be avoided if possible to eliminate risk of machine roll-over).

Tracks for FLOTATION (sensitive and soft ground) are available with extended plate widths, for example; TXL, Super Flotation (SFL) and ATF. These tracks feature upturned edges to reduce soil damage whilst steering and reduce root or brash cutting, making them particularly suited to thinning operations.

CLARK TRACKS
high performance for maximum work life

KEY: Harvester | Forwarder over 14 Tonne | Forwarder under 14 Tonne | Skidder | Multi-terrain | Demanding | Flotation | Temperate | Ice | Snow | Link sizes 28mm 24mm

Icons Explained

Machine Icons

Forwarder (Heavy)
Denotes tracks that are suitable for a Forest Forwarder Heavy machine over 14 Tonne.

Forwarder (Light/Medium)
Denotes tracks that are suitable for a Forest Forwarder Light/Medium machine under 14 Tonne.

Harvester
Denotes tracks that are suitable for a Forest Harvester machine.

Skidder
Denotes tracks that are suitable for a Forest Skidder machine.

Terrain Icons

Multi-Terrain
Denotes tracks that are suitable in a multi-terrain environment.

Flotation
Denotes tracks that are suitable in soft ground conditions.

Demanding
Denotes tracks that are dedicated to steep incline ground conditions.

Demanding + Multi-Terrain
Denotes tracks that are suitable on steep incline and multi-terrain ground conditions.

Multi-Terrain + Flotation
Denotes tracks that are suitable on multi-terrain and soft ground conditions.

Demanding + Flotation
Denotes tracks that are suitable on steep incline and soft ground conditions.

Climate Icons

Temperate
Denotes tracks that are suitable in a moderate to temperate climate.

Snow
Denotes tracks that are suitable in snow cover and snowing conditions.

Ice
Denotes tracks that are suitable in sub zero icy conditions and climate.

Link Icons

28mm
24mm

Indicates the link sizes used on the track. 24mm and 28mm are available.

Grip and Flotation Indicators

EXTRA

The number of green dots indicates the level of grip or flotation, with 5 green dots being full. Where the extra icon is added on some tracks this denotes the best possible grip.

TERRA85

MULTI-TERRAIN

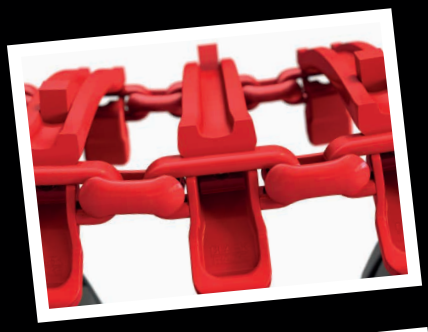
GRIP FLOTATION ∞

Ground Condition

Flotation

Grip

THE LEADING ALL TERRAIN ALL SEASON TRACKS



NEW WEBSITE

FIND YOUR PERFECT TRACK

CLARK TRACKS™
high performance for maximum work life

KEY: Harvester | Forwarder over 14 Tonne | Forwarder under 14 Tonne | Skidder | Multi-terrain | Demanding | Flotation | Temperate | Ice | Snow | Link sizes 28mm 24mm

Terra 85 Gripping Properties

SUIT YOURSELF!
DESIGN YOUR PERFECT TRACK WITH OUR CUSTOMISED OPTIONS
CUSTOMISATION

The vertical edge of the Terra 85 design provides excellent forward drive and control when braking or working on slopes while its wide plate gives great flotation qualities.

Terra 85 Flotation Properties

TERRA85

MULTI-TERRAIN

All Tracks can be customised See pages 26-27

Terra85 is the ultimate all-terrain, all-season track. Featuring a double grouzer track plate, grip and flotation are assured. The low profile also means less vibration and a smoother ride.

- **Low profile design reduces vibration and results in less operator fatigue**
- **Arguably the best multi-terrain tracks on the market**
- **Use all year round**
- **Special heat treatment for cold weather durability.**

Machine Climate Ground Cond Grip Flotation Link 28mm 24mm

TERRA95

MULTI-TERRAIN

All Tracks can be customised See pages 26-27

Terra95 is the undisputed class leading heavy duty, all-terrain, all-season track. Heavy plate section and our 28mm durable links ensure long service life when fitted to the latest high horsepower, heavy Forwarders and Harvesters.

- **Arguably the best multi-terrain tracks on the market**
- **Particularly suited to medium and large harvesters and forwarders, 14t payload upwards**
- **Low profile design reduces vibration resulting in less operator fatigue**
- **All-season use; assured Winter and Summer performance**
- **Durable and hard wearing, even on rocky terrain**
- **Suitable for scarifying and Skidder operations.**

Machine Climate Ground Cond Grip Flotation Link 28mm

FX

HEAVY DUTY MULTI-TERRAIN

All Tracks can be customised See pages 26-27

FX is a development of the heavy duty Terra95 and each track pad has 25mm EXT on both sides. These tracks are built for endurance and are suited to the heaviest Forwarders working on the toughest terrain. Double Rocky spikes on each track pad are secure and extremely long lasting compared to standard spikes, even on stoney ground. FX tracks are the informed choice for the professional forester looking for maximum productivity from their heavy weight forwarder.

- **Durable design and components for the most arduous terrain**
- **Confidence with supreme grip and flotation.**

Machine Climate Ground Cond Grip Flotation Link 28mm

KEY: Harvester | Forwarder over 14 Tonne | Forwarder under 14 Tonne | Skidder | Multi-terrain | Demanding | Flotation | Temperate | Ice | Snow | Link sizes 28mm 24mm

GROUZER

DEMANDING TERRAIN

The Grouzer is a popular track with outstanding traction and climbing ability. This track is able to cope with almost any terrain and machine.
Clark Tracks, “Grouzers” are the choice of the professional looking to challenge the toughest terrain.

- **Single Grouzer section giving confidence and security in virtually all terrains**
- **All-season, all-terrain usage**
- **Exceptional climbing ability.**

All Tracks can be customised See pages 26-27

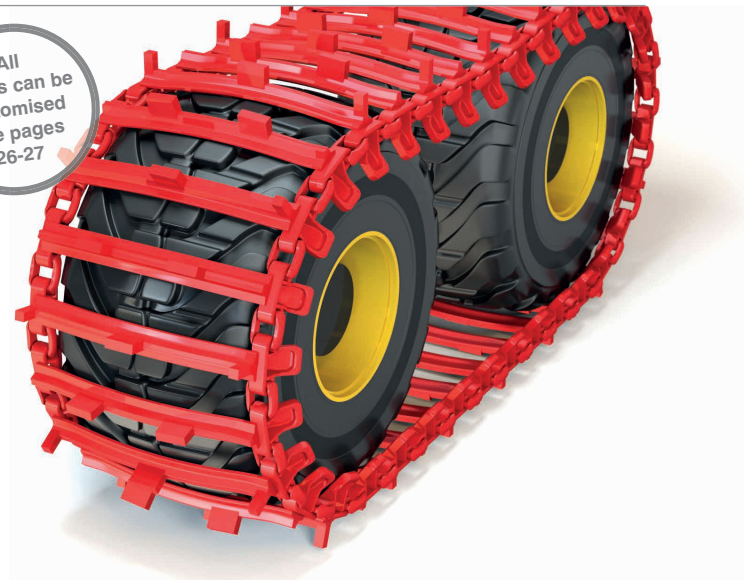
Machine Climate Ground Cond Grip Flotation Link 28mm 24mm

CS

CLIMBING SPECIAL

CS is a development of the popular Grouzer track. Traction is maximised through the addition of wide paddle spikes to the track pad and long shovel spikes to the edges. These tracks can take Harvesters and medium Forwarders further and more safely than before on demanding slopes. The pinnacle of climbing tracks.

- **Aggressive spike pattern for climbing**
- **Maximum traction**



All Tracks can be customised See pages 26-27

Machine Climate Ground Cond Grip EXTRA Flotation Link 28mm 24mm

CX

CLIMBING XTREME

CX is a further Grouzer development, featuring wide paddle spikes, doubled up on each track plate.
This track is best suited to Harvesters and medium to heavy Forwarders. They give peak performance for climbing with unsurpassed traction.

- **Aggressive spike pattern for climbing**
- **Maximum traction**

All Tracks can be customised See pages 26-27

Machine Climate Ground Cond Grip EXTRA Flotation Link 28mm 24mm

TXL

ULTIMATE FLOTATION

ULTIMATE FLOTATION

Ground Condition

Flotation

BEST TRACTION & LOWEST GROUND PRESSURE IN OUR RANGE

NEW WEBSITE

FIND YOUR PERFECT TRACK

CLARK TRACKS™
high performance for maximum work life

KEY: Harvester | Forwarder over 14 Tonne | Forwarder under 14 Tonne | Skidder | Multi-terrain | Demanding | Flotation | Temperate | Ice | Snow | Link sizes 28mm 24mm

TXL Gripping Properties

SUIT YOURSELF!
DESIGN YOUR PERFECT TRACK WITH OUR CUSTOMISED OPTIONS
CUSTOMISATION

TXL is the Ultra-Flotation track designed for the forest.
The 4 grouzers provide better traction than any other professional use flotation track ensuring you can keep moving forwards. Inside, a high single Grouzer provides good grip between the track and tyre, even in wet and boggy conditions. TXL can be specified in a variety of widths, typically 930mm or 1000mm for 710/45-26.5 Tyres.
Extended width TXL can be specified as either Symmetrical or, where clearances are tight, asymmetrical is possible.

TXL Flotation Properties

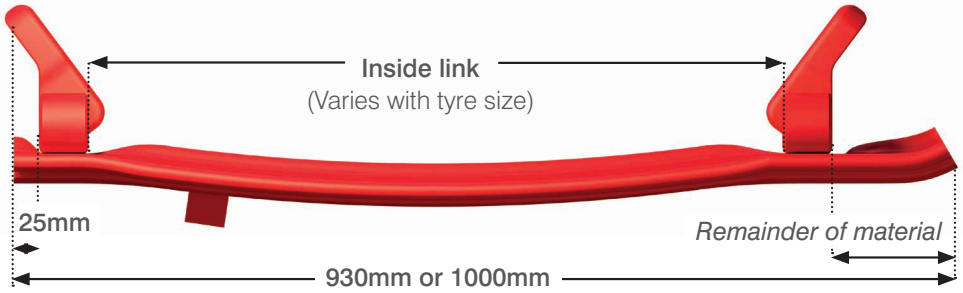
Standard Extended Specification for TXL

For Asymmetrical tracks, standard configuration is to have inside extension approximately (as wide as paw' or 25mm).
The inside link dimension varies with tyre size and tyre model.
Outside extension is the remainder of material to make either 930mm or 1000mm - the two standard pad widths.

Diagrams show typical configurations of TXL available with a 710/45-26.5 tyre.

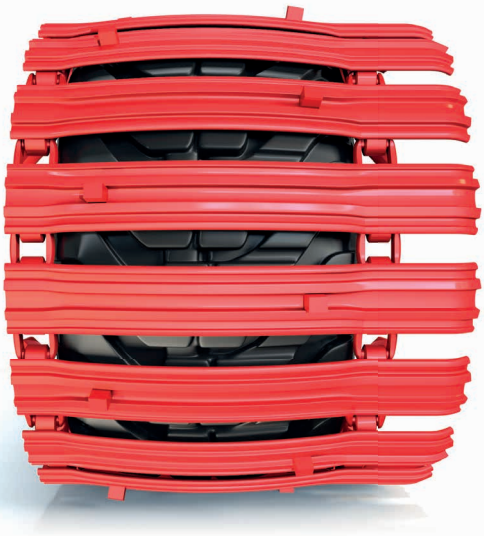
Not to scale, for illustration purposes only.

Other tyre sizes may appear different or not be available compared to diagrams.



• Symmetrical 1000mm

• Symmetrical 930mm



• Asymmetrical 1000mm

• Asymmetrical 930mm

UPGRADE

Half-on-link option for Asymmetrical tracks

To save space where space is tight, ie against the cab or engine block, Half-on-link is an option.

TXL

TXL tracks are in a class all of their own when it comes to ULTRA FLOTATION. Studies have proven that TXL offers the best traction and lowest ground pressure of any track.

All Tracks can be customised See pages 26-27

- Advanced flotation track that offers excellent traction
- Close spaced, extra wide tracks for maximum flotation
- Suitable for all weights of machines
- Suitable for forest roads (without side slip spikes) and sensitive soils
- Available with extra width where machine design permits
- Clark Tracks lowest ground pressure track.
  (caution advised to be aware for snow or mud packing).

Machine | Climate | Ground Cond | Grip | Flotation | Link 28mm 24mm

TXCL

MULTI-TERRAIN FLOTATION

All Tracks can be customised See pages 26-27

TXCL takes the advantages of the legendary TXL and combines them with the traction of the Terra85 track.

- Improved traction and climbing compared to TXL
- Better cleaning when used in some mud and snow conditions
  (caution advised to be aware for snow or mud packing).

Machine | Climate | Ground Cond | Grip | Flotation | Link 28mm 24mm

TXFX

HEAVY DUTY FLOTATION

All Tracks can be customised See pages 26-27

TXFX takes TXCL to the heaviest machines. Featuring FX and TXL track pads, even the heaviest machines can work on sites featuring soft, muddy terrain and then climb moderate slopes.

- Improved traction and climbing for heavy forwarders compared to TXL
- Better cleaning when used in some mud and snow conditions
  (caution advised to be aware for snow or mud packing).

Machine | Climate | Ground Cond | Grip | Flotation | Link 28mm 24mm

TXGL

DEMANDING FLOTATION

All Tracks can be customised See pages 26-27

TXL and Grouzer combined to get forest machines through the wettest, marshiest ground, then climb demanding slopes with ease.

- Maximised traction and climbing compared to TXL
- Better cleaning when used in some mud and snow conditions (caution advised to be aware for snow or mud packing).

Machine | Climate | Ground Cond | Grip | Flotation | Link 28mm 24mm

All Tracks can be customised See pages 26-27

FL15

ADVANCED FLOTATION

Flotation, FL15 is a high-flotation track suited to Harvesters and light to medium Forwarders.
The low ground pressure and good grip help maintain productivity in wet and marshy conditions.

- **Wide, close spaced flotation plate design offers low ground pressure**
- **Tried and proven 'U' shape plate ensures excellent traction.**

Machine Climate Ground Cond Grip Flotation Link 28mm 24mm

All Tracks can be customised See pages 26-27

FL16

ADVANCED FLOTATION

Flotation, FL16 is the high flotation track suited to larger harvesters and medium to heavy forwarders. Strong, tough and durable, the FL16 is the clear choice for heavier machines in wet and marshy conditions.

- **Wide, close spaced flotation plate design offers low ground pressure**
- **Tried and proven 'U' shape plate ensures excellent traction.**

Machine Climate Ground Cond Grip Flotation Link 28mm 24mm

KEY: Harvester | Forwarder over 14 Tonne | Forwarder under 14 Tonne | Skidder | Multi-terrain | Demanding | Flotation | Temperate | Ice | Snow | Link sizes 28mm 24mm

SFL15

SUPER FLOTATION

All Tracks can be customised See pages 26-27

The SFL15 track is an extended variant of the FL15. Featuring upturned edges, these tracks are perfect for thinning and working on brash mats. In addition, the end profiles enable easier steering which is extremely beneficial in thinning operations. Suitable for Harvesters and Forwarders up to 14t payload.

- Symmetrical upturned edges
- Upturned edges protect roots and doesn't cut brash
- Easier steering.

Machine | Climate | Ground Cond | Grip | Flotation | Link 28mm 24mm

SFL16

SUPER FLOTATION

All Tracks can be customised See pages 26-27

The SFL16 track is a special variant of the FL16. Featuring upturned edges, these tracks are perfect for thinning and working on brash mats. In addition, the end profiles enable easier steering which is extremely beneficial in thinning operations.

- Symmetrical upturned edges
- Upturned edges protect roots and doesn't cut brash
- Easier steering.

Machine | Climate | Ground Cond | Grip | Flotation | Link 28mm 24mm

ATF

ALL-TERRAIN FLOTATION

All Tracks can be customised See pages 26-27

Designed for use in wet marshy conditions and also snow and ice. A special link system is utilised to enable better cleaning and ejection of snow and mud. Wide and upturned edges give flotation whilst a pinched mid-section generates traction.

- Wet, marshy, snow and ice performance
- Broad, upturned edges for flotation and easy steering.

Machine | Climate | Ground Cond | Grip | Flotation | Link 24mm

CLARK TRACKS™
high performance for maximum work life

KEY

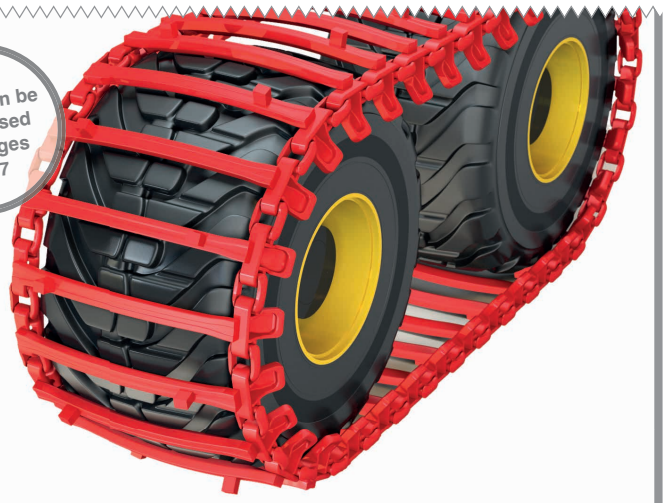
Harvester | Forwarder over 14 Tonne | Forwarder under 14 Tonne | Skidder | Multi-terrain | Demanding | Flotation | Temperate | Ice | Snow | 28mm 24mm Link sizes

ROCKY

SNOW AND ICE

Rocky tracks feature a wide spaced square section track plate design. This gives superior grip and traction to large machines working in demanding, steep and rocky conditions.

- **Square section track plate for optimum traction in rocky terrain**
- **Heavy duty for use on large machines**
- **Exceptional climbing ability.**



All Tracks can be customised See pages 26-27

Machine | Climate | Ground Cond | Grip ●●●●● | Flotation ●●○○○ | Link 28mm 24mm

SINGLE TRACK

GSG

ULTIMATE CLIMBING

Grouzer Super Grip (GSG) is the single wheel track that delivers maximum climbing capability for 6-wheeled machines. GSG give exceptional traction and require less maintenance than tyre chains.

- **Maximum grip and low maintenance.**

All Tracks can be customised See pages 26-27

Machine | Climate | Ground Cond | Grip ●●●●● | Flotation ●●○○○ | Link 24mm

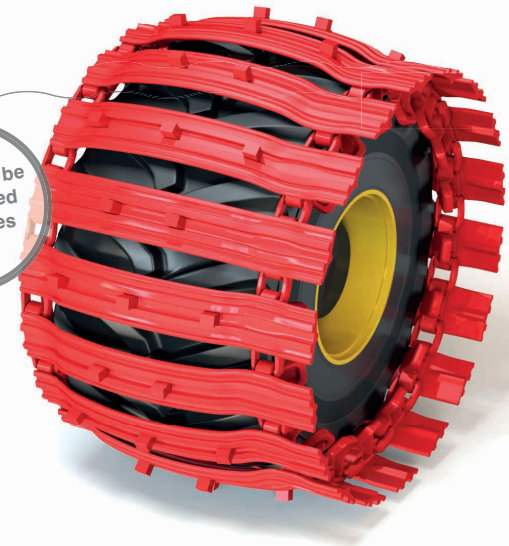
SINGLE TRACK

TXSG

SUPER GRIP FLOTATION

TXSG is the solution for 6 wheeled harvesters looking to maximise productivity on the safest and most sensitive forest areas. TXSG increases the machine footprint and reduces ground pressure considerably as well as increasing stability.

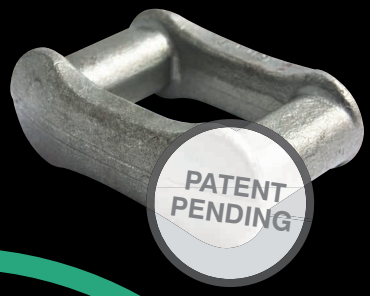
- **Additional Flotation on soft or sensitive soils.**



All Tracks can be customised See pages 26-27

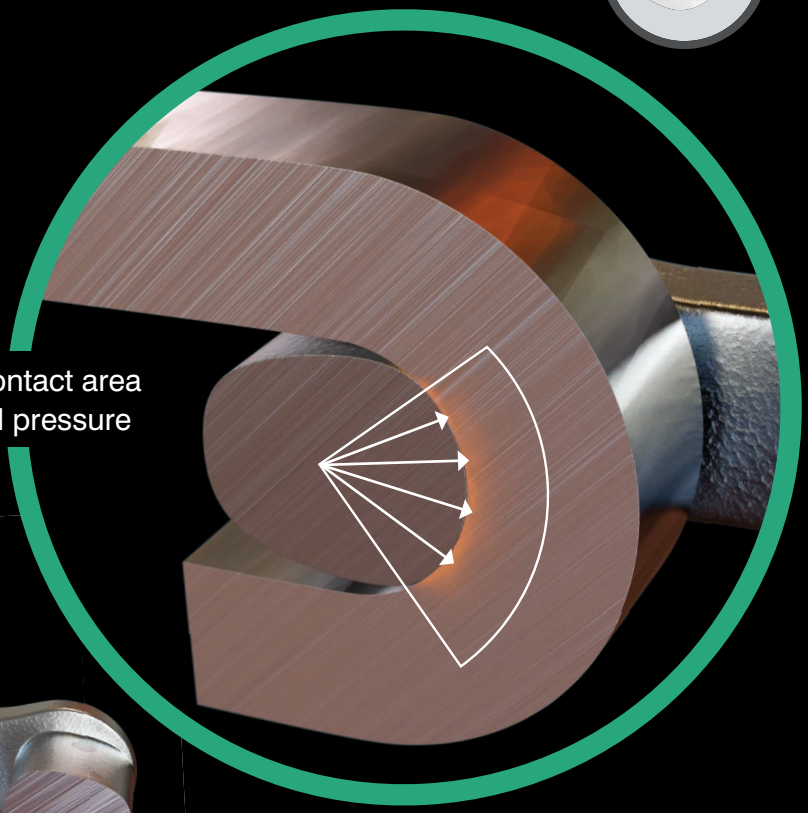
Machine | Climate | Ground Cond | Grip ●●●○○ | Flotation ●●●●● | Link 24mm

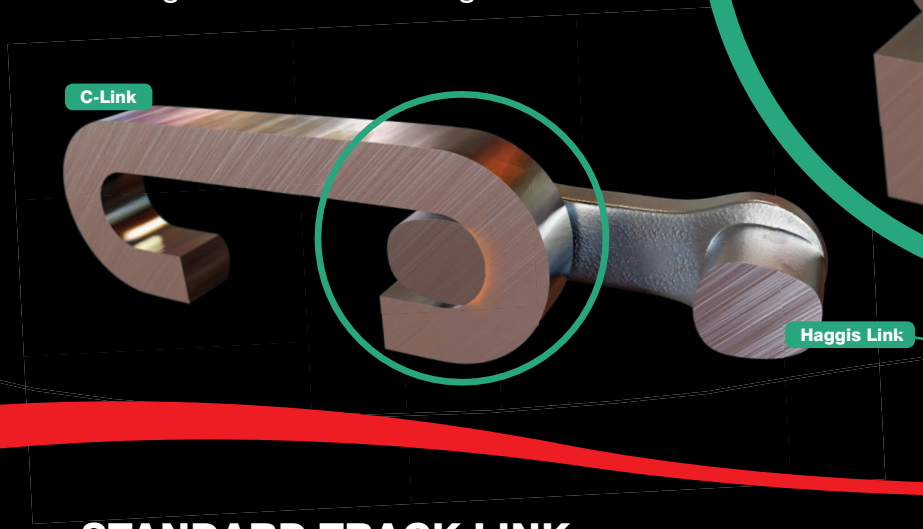
Haggis Ultra Link
TRACK LIFE EXTENDER



HAGGIS LINK INSTALLED

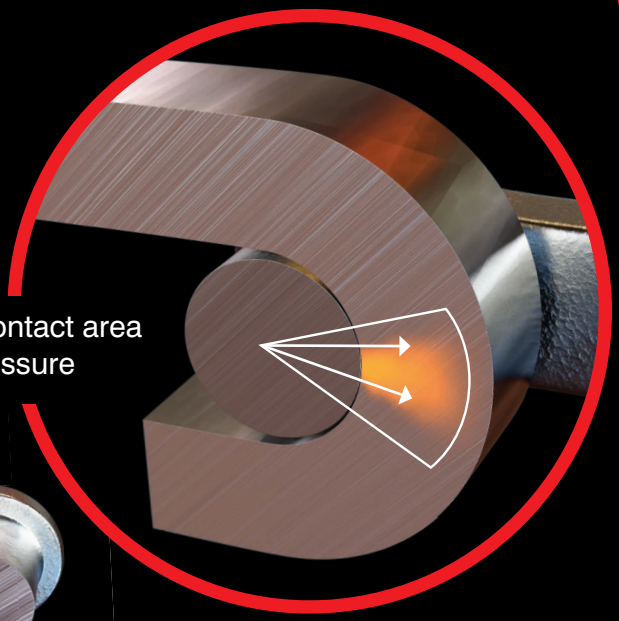
- Bearing surfaces matched
- Maximum contact area
- Reduced contact pressure
- Reduced wear
- Protects C-Link from premature wear
- Less maintenance and downtime as less re-tensioning and adjustments are required
- Specially designed side flanges inhibit link twisting.

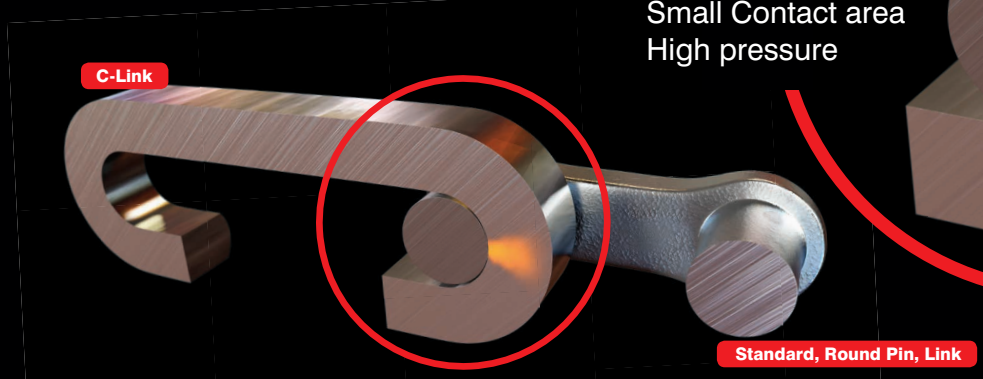




STANDARD TRACK LINK

- Contact surfaces mismatched
- Smaller contact area
- High pressure on contact surface
- High initial wear rate to C-Link & solid link
- Re-tensioning and adjustment frequently required during bedding in period.





UPGRADE TO THE HAGGIS LINK TODAY!

*NOT AVAILABLE ON ATF TRACKS

CS

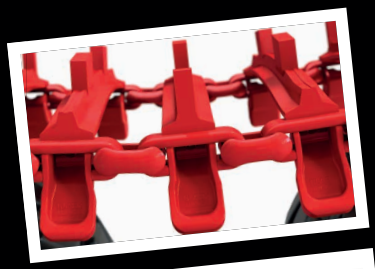
CLIMBING SPECIAL

UNSTOPPABLE CLIMBING

Ground Condition

Grip EXTRA

AGGRESSIVE SPIKE PATTERN FOR MAXIMUM CLIMBING TRACTION



NEW WEBSITE

FIND YOUR PERFECT TRACK

CLARK TRACKS™
high performance for maximum work life

KEY: Harvester | Forwarder over 14 Tonne | Forwarder under 14 Tonne | Skidder | Multi-terrain | Demanding | Flotation | Temperate | Ice | Snow | Link sizes 28mm 24mm

Spare Parts

Clark tracks carry a large stock of spare parts and can ship anywhere in the world at short notice.

e: **clarktracks@clarktracks.com** • t: **+44 (0) 1387 722370** • w: **www.clarktracks.com**

Track End Plate Links

Available to suit Clark 24mm or 28mm track repair links, end links can be welded onto the tracks of any make or model during refurbishment.

Track Joining Links

Available in 24mm and 28mm diameter sizes, Clark Track Joining Links are designed for ease of use. Forged from heat treated boron alloy steel for maximum hardness and strength, these links combine one bolt locking with smooth tyre friendly profiles.

The new 24mm and 28mm Links combine bolt head locking, for single spanner tightening, and a new tapered locking tongue design.

Fitting Staples

Fitting staples make track tensioning even easier. Used in line with the Quickie Track Tensioner, these devices hold the track in the correct position for fitting to the machine.

Track Repair Links

Forged links and track plate end links are available in a range of sizes for the repair of all types and sizes of tracks. They are manufactured from heat treated boron alloy steel for strength and hardness, resulting in a durable, hard wearing link.

Quickie Track Tensioner Tool QTT400

For fast, easy tensioning this tool fits most types of forest tracks. Adjustment is via a 3/4" drive ratchet and 38mm socket onto the end nut (not supplied).

Track Tensioner Tool QTT401

The QTT401 is a specially extended variant of the robust QTT400. The extended fork legs allow the tensioner to be engaged on the inside of the track links. This is beneficial where a QTT400 is not able to be used due to space constraints or where the track plates have been extended (e.g. TXL).

Track Tensioner Tool QTT402

For single wheel tracks (GSG tracks) the QTT402 features high strength pins to engage the tracks and tension with ease.

Nisula Tensioner

As an alternative to the QTT tensioner, there is also a conventional mid-mounted tensioner.

NEW

Hydraulic Tensioner – QTT500

The ultimate tool for fitting your Clark Tracks, our new QTT500 contains a rechargeable battery and hydraulic power to simplify the process. The hydraulics are incredibly powerful, exerting nearly 3t of closing force to enable effortless tensioning.

Anti-Skid Spikes

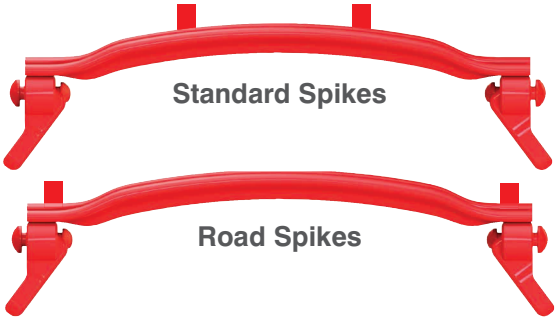
Anti-Skid spikes are designed to stop the forest machine sliding sideways when crossing side slopes. They are normally between 40mm and 50mm in height, depending on track model, one spike per plate alternating left and right from track plate to track plate.

Spikes are available in a range of sizes for welding to forest tracks. Manufactured from heat treated boron alloy steel which is easily welded, these spikes combine hardness with strength.

Welding instructions are available at **www.clarktracks.com**

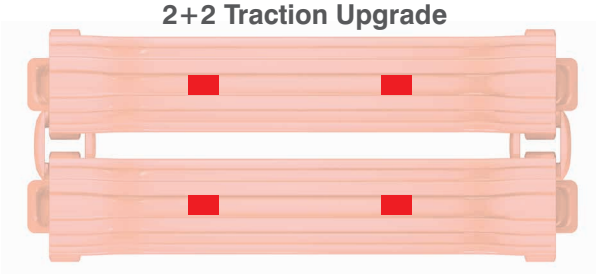
Depending on track model and expected usage, the following options may be available.

- **No spikes at all – for level ground and forest roads**
- **Two spikes per plate (one each side)**
- **Higher and lower height spikes (40mm, 50mm, 60mm and 70mm in stock)**
- **Spikes welded to different position on track plate**
- **Paddle Spikes – 75mm wide by 50mm high – for ultimate climbing**
- **Rocky Spikes – 75mm extra heavy duty spikes for Terra 95's.**
- **Road Spike – where the spike is at the outside of the plate, above the link.**

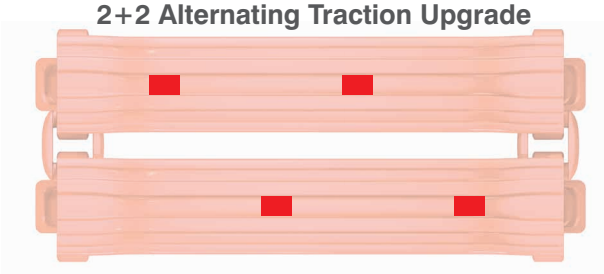


1+1 Standard

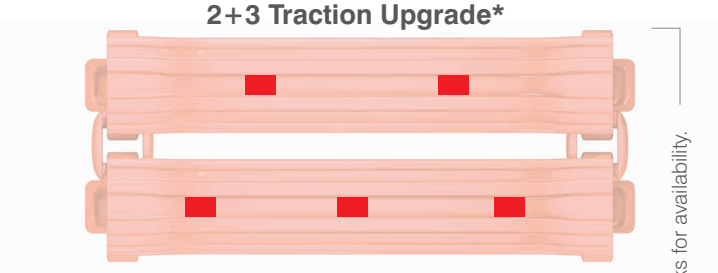
2+2 Traction Upgrade



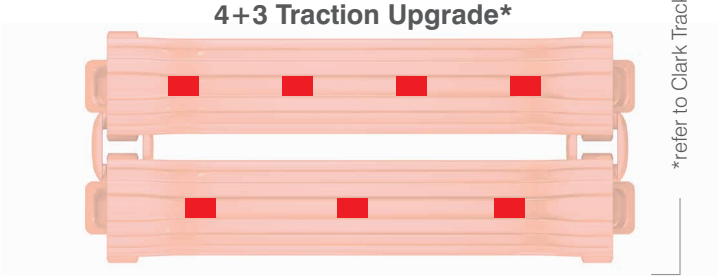
2+2 Alternating Traction Upgrade



2+3 Traction Upgrade*



4+3 Traction Upgrade*



*refer to Clark Tracks for availability.

Clark Tracks technical department will advise options and possibilities

Irongray Park, Dumfries, DG2 0HT, Scotland, UK
t: **+44 (0) 1387 722370** • e: **clarktracks@clarktracks.com**

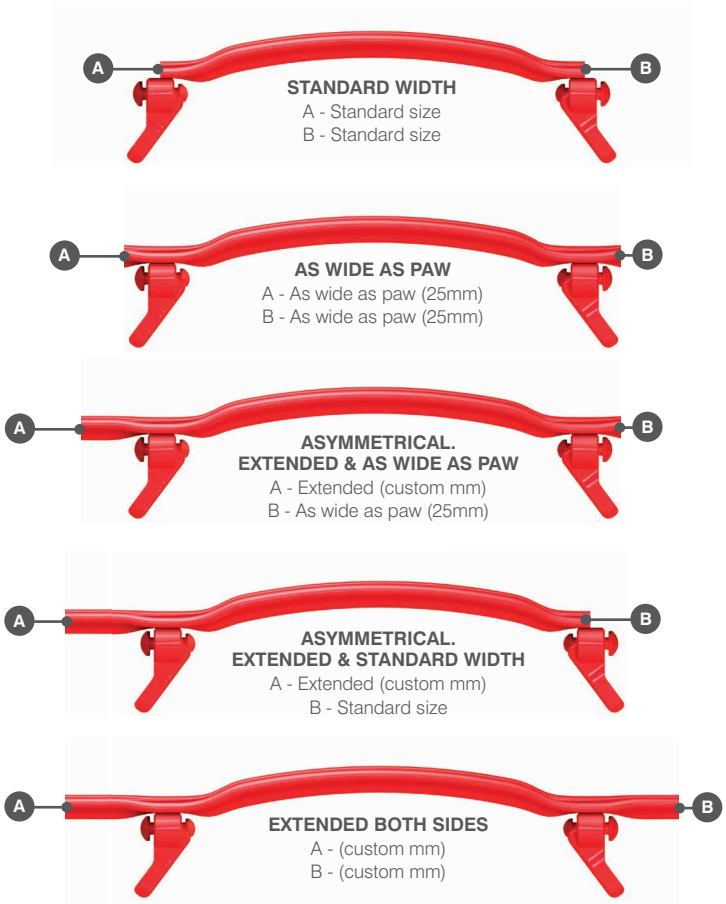
KEY: Harvester | Forwarder over 14 Tonne | Forwarder under 14 Tonne | Skidder | Multi-terrain | Demanding | Flotation | Temperate | Ice | Snow | 28mm 24mm Link sizes

Customised Tracks

Although we offer a wide range of products at Clark Tracks, we understand that there are a number of variables that affect your selection, such as ground and working conditions or machine type.

If you find that none of the tracks shown meet your needs fully, we can customise our existing track products to suit customer requirements or, where viable, will consider the design and manufacture of a specialist track.

Extra Track Plate Width



It is often possible for us to increase the overall width of the track by simply increasing the length of the track plate during manufacture. We therefore offer the following track plate options:

- **Extended both sides**
- **Extended more on one side than the other. Often done where there is little clearance between machine bodywork and tyre side wall**
- **Folded down track plate ends. It should be noted that this is not always possible.**

Extra width options are limited by track model and tooling constraints. Please email Clark Tracks technical department to discuss options and availability.

Asymmetrical Ⓐ & Ⓑ width sizes can be manufactured to suit you needs.

Spike Welding Procedure

When welding spikes onto the track plate, it is vitally important that the tracks are clean and dry and also at ambient temperature of at least 18°C. Pre-Heating to 200°C is also desirable.

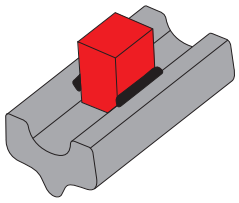
Recommended MIG wire electrode
ESAB AUTROD 13.12 (or similar)

Recommended welding electrode
ESAB OK74.78 (or similar)

Stage 1

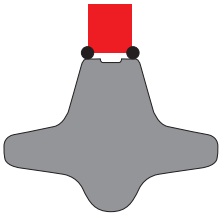
Start by tacking all spikes in place. Do not place spikes on the centre of the track pad, nor within 100mm of existing spikes.

To avoid overheating the track plate, work along and round the track as per stages 2 – 5 below.



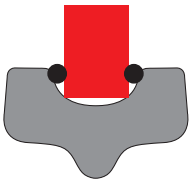
Stage 2

Work along length of track, welding only 1 side of the spike, no greater than 5mm fillet weld (Terra).



Stage 3

Work down other side of track, welding only 1 side of the spike, no greater than 5mm fillet weld (Terra).

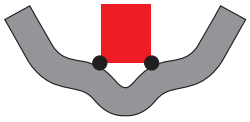


Stage 4

Work along the first side of the track (step 2), performing the second weld per spike.

Stage 5

Finish by working along the second side (as started in stage 3), completing the second weld per spike.



CLARK TRACKS™
high performance for maximum work life

Driving with Tracks

Tracks increase machine stability, offer increased traction and flotation. However, in order to obtain maximum advantages from using tracks, the following points should be duly observed:

- The correct track must be selected for each task, considering terrain, machine size and type, tyre type and size to which the tracks will be fitted, driver experience and working practices
- Tracks must be correctly fitted and tensioned
- Tracks should not hit or foul the machine bodywork
- Special note should be made of tracks which have worn anti-skid spikes. These spikes prevent lateral sliding of tracks, particularly on side slopes and should be replaced when worn.
- Tyres must be inflated to correct working pressure - usually maximum permitted tyre pressure **(SEE PAGE 30)**

Driving Speeds

The maximum driving speed with tracks should never exceed 12km/hr. This applies even on flat smooth surfaces or forest roads. Speeds should be considerably reduced in the forest and reduced further with a loaded forwarder and when operating on extreme terrain.

Track Interaction with Tyre

Through in depth research and development, Clark Tracks have designed tracks which achieve a fine balance – reduced track on tyre slippage while preventing severe tyre damage.

Every track plate has been manufactured to have an underside grouser bar, used to grip the tyre surface. Where this grouser bar is lubricated - as when driving in wet peat or clay conditions - or worn due to old age, slippage between track and tyre can occur. Tyre slippage can also be a problem on very large, high horsepower machines which are heavily loaded and working on steep, wet ground. Where the bar is too sharp or aggressive, tyre damage will occur.

As standard there is a 5 - 10mm gap between the paw and tyre (design range is between 2 and 20mm depending upon track design and tyre condition).

Tyre Suitability

Almost every tyre can be fitted with tracks, some are more suitable than others.

- **Tyres should be designed for use with tracks**
- **The ideal tyre has a smooth, less aggressive tread pattern, with slightly rounded shoulders**
- **The tyre should have steel reinforcement within the carcass and be of heavy ply rating**
- **The tyre must be fitted to the correct steel reinforced wheel rim for forestry use**
- **The tyre must be fitted with the correct recommended inner tube, where applicable.**
- **Radial tyres are generally unsuitable for tracks, the notable exception being the NOKIAN Forest Rider range of tyres**
- **Some tyre rubber compounds are not suited to steel tracks - if in doubt, please consult the tyre manufacturer**
- **Tracks can only be fitted to machines with fixed wheel centre bogeys**
- **Tracks cannot be fitted to machines with independent wheel suspension as found on some models of dump trucks.**

For further information on the Nokian and Trelleborg tyres, and their suitability with our products, please download the Tyre Suitability Guide from our web site.

Forest Rider

TRS LS-2

Twin 422

Twin 428

Forest King F

Forest King F2

T440

T480

Tyre Pressure (NOKIAN)

CROSS PLY			
Dimension	**Ply Rating**	**kPa**	**PSI**
600/50-22.5	16	430	62
600/50-22.5	20	550	80
700/45-22.5	16	390	57
710/40-22.5	16	430	62
710/40-24.5	20	550	80
600/55-26.5	16	460	67
600/55-26.5	20	550	80
650/60-26.5	12	280	41
650/60-26.5	20	550	80
650/65-26.5	20	550	80
700/50-26.5	20	550	80
710/45-26.5	16	460	67
710/45-26.5	20	550	80

Dimension	Ply Rating	kPa	PSI
750/55-26.5	20	550	80
780/55-26.5	20	550	80
800/40-26.5	20	500	73
600/65-34	14	290	42
700/55-34	14	280	41
700/70-34	16	280	41
RADIAL			
Dimension	**Ply Rating**	**kPa**	**PSI**
650/45R24.5		550	80
600/55R26.5		550	80
710/45R26.5		550	80
800/50R26.5		550	80
600/65R34		400	58
710/55R34		400	58

For information on Trelleborg tyre pressures, please visit our web site.

KEY: Harvester | Forwarder over 14 Tonne | Forwarder under 14 Tonne | Skidder | Multi-terrain | Demanding | Flotation | Temperate | Ice | Snow | Link sizes 28mm 24mm

Fitting your Tracks

This task should only be carried out by a trained operative.
Please carry out a risk assessment to ensure safety for yourself and others.

The tracks will be supplied in four sections, with two joined sections required for each side of the machine.

Tracks are manufactured in standard lengths for each tyre size and may be too long, requiring the removal of one full track plate section prior to fitting in order to obtain the correct tension. This is dependent upon whether the track is fitted to new or worn tyres and can also vary due to machine type and bogey design.

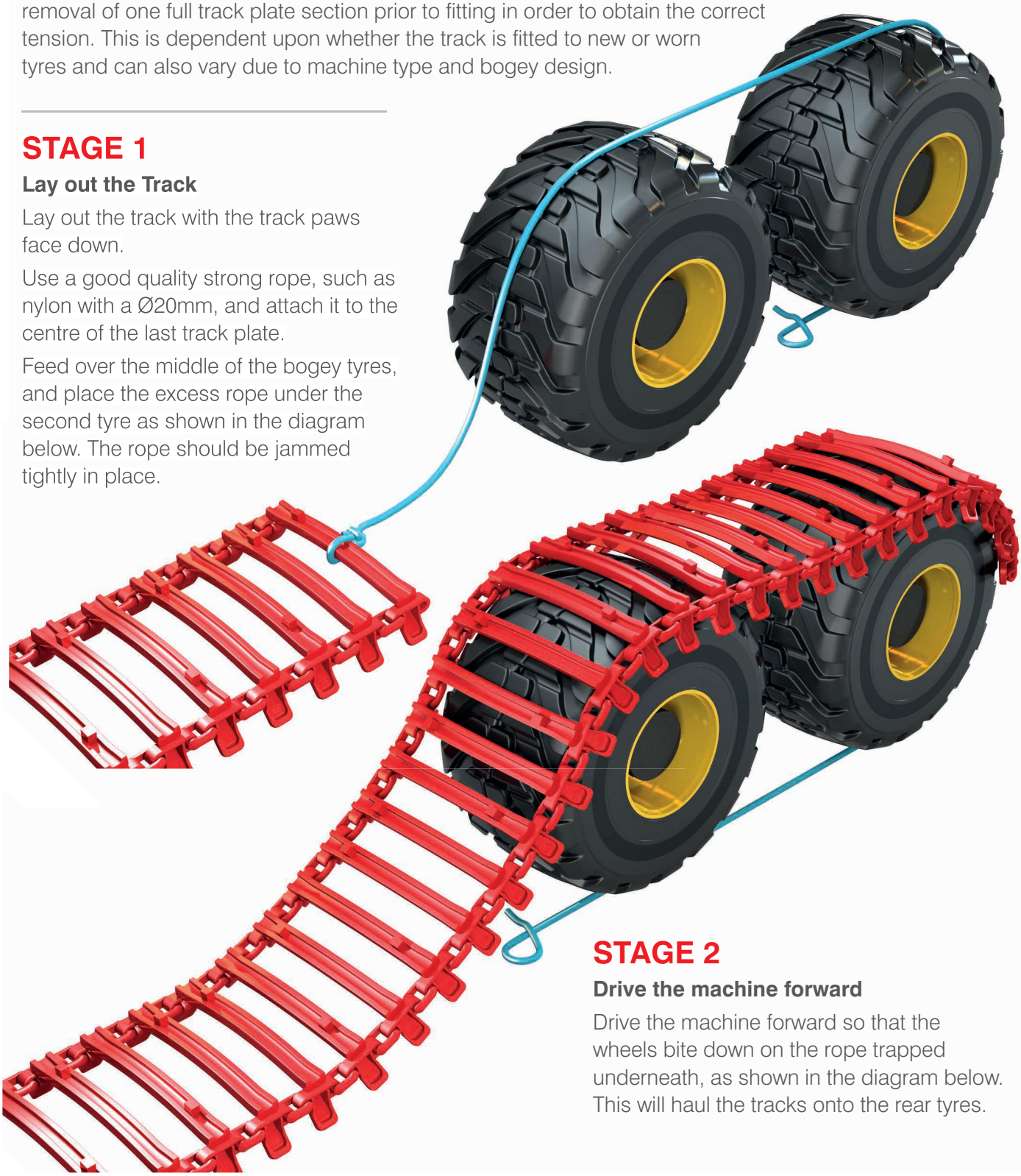
STAGE 1

Lay out the Track

Lay out the track with the track paws face down.

Use a good quality strong rope, such as nylon with a Ø20mm, and attach it to the centre of the last track plate.

Feed over the middle of the bogey tyres, and place the excess rope under the second tyre as shown in the diagram below. The rope should be jammed tightly in place.



STAGE 2

Drive the machine forward

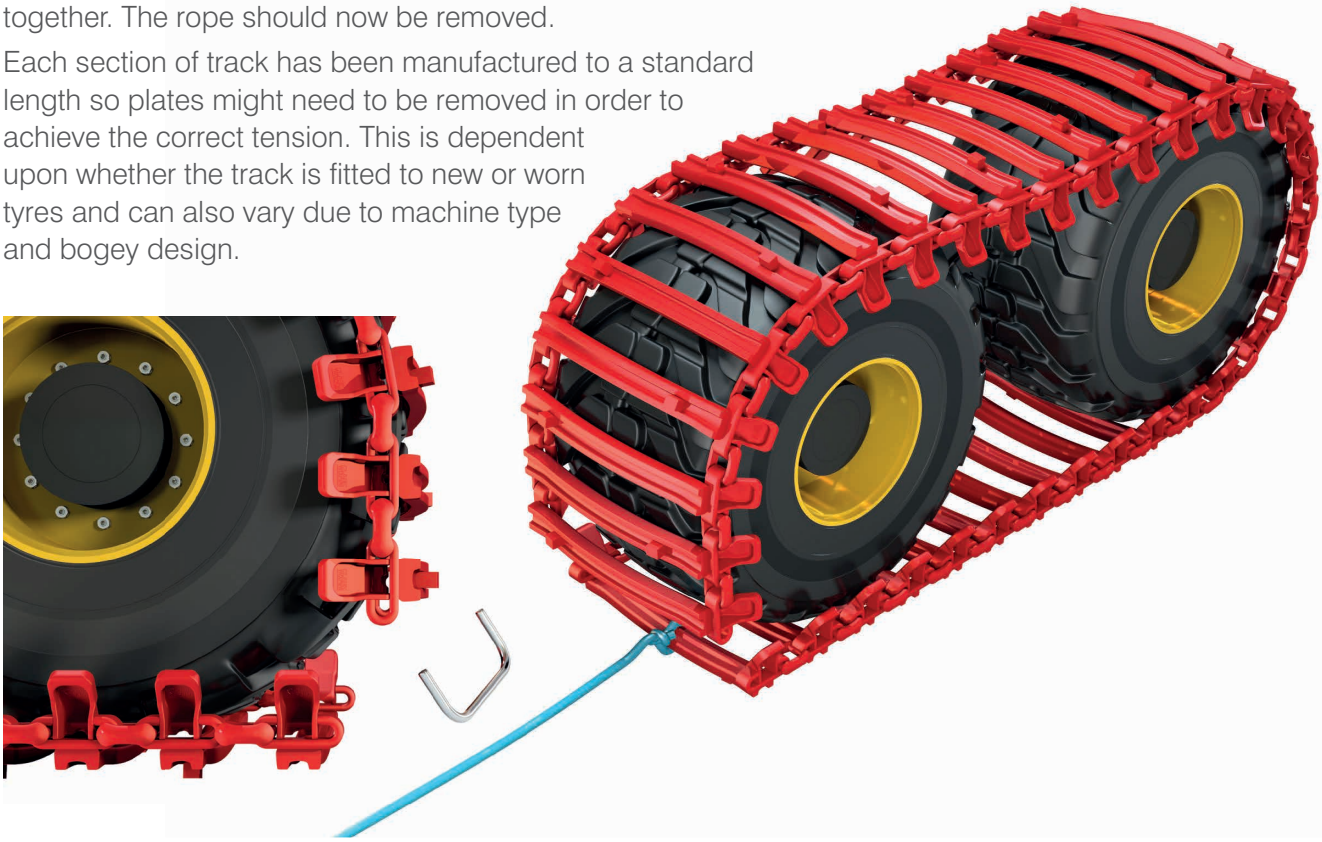
Drive the machine forward so that the wheels bite down on the rope trapped underneath, as shown in the diagram below. This will haul the tracks onto the rear tyres.

STAGE 3

Insert the two fitting staples

When the track is sitting fully on the machine as shown in the diagram, the two fitting staples (supplied with the track) can be inserted to hold the ends together. The rope should now be removed.

Each section of track has been manufactured to a standard length so plates might need to be removed in order to achieve the correct tension. This is dependent upon whether the track is fitted to new or worn tyres and can also vary due to machine type and bogey design.



STAGE 4

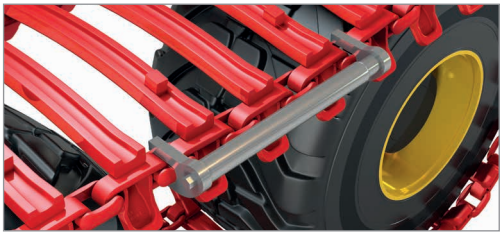
Drive the machine forward again

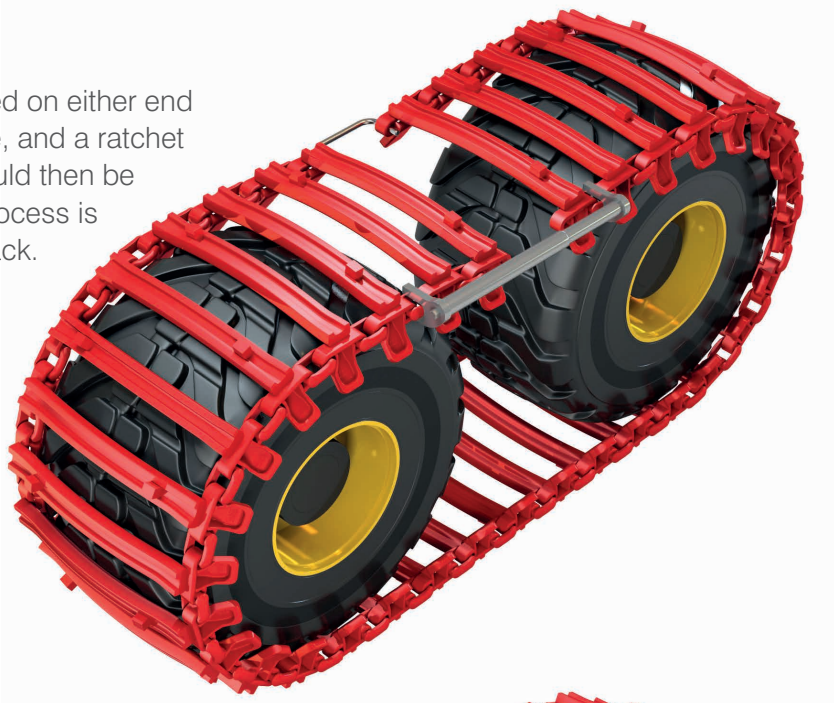
Drive the machine forward so that the stapled section is in the centre of the bogey.

STAGE 5

Place the Track Tensioner

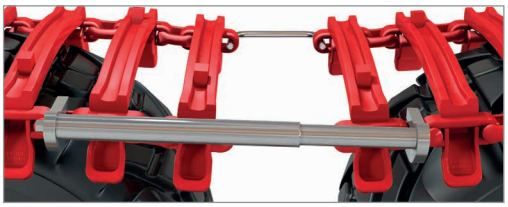
The track Tensioner should then by placed on either end of the track, on either the right or left side, and a ratchet used to tighten the track. The staple should then be replaced by the track joining link. This process is then repeated on the other side of the track.





PLEASE NOTE...

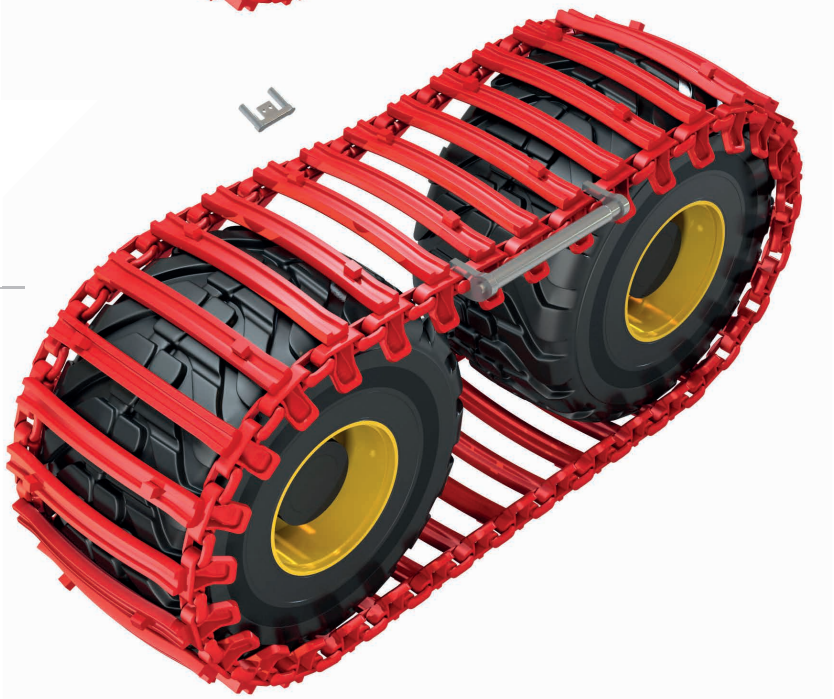
A 3/4" drive ratchet spanner and 38mm socket are required to operate the Tensioner. Ensure the Tensioner is correctly and safely fitted to the tracks prior to use.



STAGE 6

Fitting of track joining links

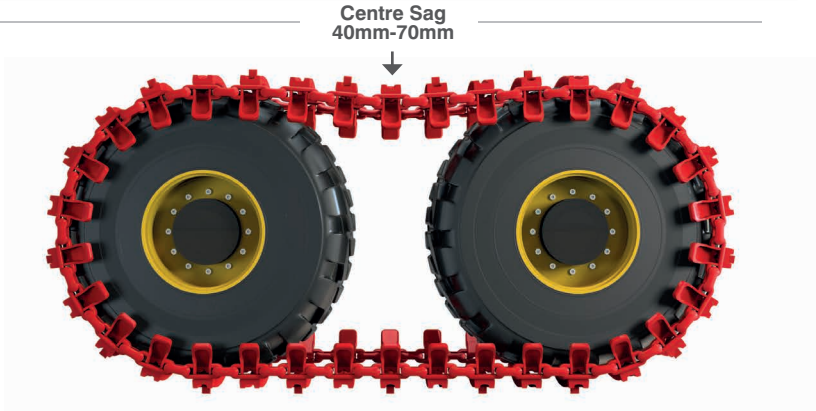
These links must be fitted with the smooth surface of the link facing towards the tyre, with the end plate fitted to the outside. Fitting these links the wrong way round can result in tyre damage with the link pins contacting the tyre side wall.



STAGE 7

Ensure correct track tension

Ensure correct track tension. Where tracks are run too slack, with excessive amount of centre sag, there are potential problem with tracks falling off. There is also a danger of tracks hitting and rubbing on bogey drive boxes and in extremely neglected cases, wearing grooves and holes in the drive box.



Machine Clearance

In order to avoid tracks hitting or fouling the machine bunk or bodywork (which can in extreme cases cause transmission problems), a minimum clearance gap of 50mm between track and machine should exist. The tracks should be properly tensioned at all times.

This clearance gap should be measured with:

- **The track pushed on the tyres towards the machine**
- **The bogey at maximum tilt angle – the worst possible scenario.**

Without this clearance there is a possibility of track/machine fouling when tracks wear, become slack or are run at faster than normal speeds.

PLEASE NOTE...

Many 8 wheel drive machines have less clearance at the front of the machine for tracks than at the back. When tracks are fitted to the front of the machine, ensure there is adequate clearance between tracks and machine bodywork such as:

- **Clearance from doors**
- **Air intakes**
- **Front blades**
- **Cab ladders**

This should be tested at all bogey tilt angles with tracks pushed towards the machine on the tyres.

When tracks are fitted to the rear of the machine, clearance is required between the tracks and the bunk frame. When bunk frames are repositioned, e.g. for different timber lengths, this can change track to frame clearances and must also be checked.

Some machines are fitted with hydraulic bogey lifting rams and may be unsuitable for use with tracks due to inadequate clearances.
Checks must be made prior to fitting tracks.

When space is restricted using the QTT400 tensioner, the QTT401 may provide a safe alternative.

Re-tensioning of tracks

When tracks are new, they will quickly slacken off over the first few days of use and will require re-tensioning. Re-tensioning involves the replacement of long track links with short track links and then the removal of one full track plate in order to maintain correct tension. This process should be done using the Clark Track "Quickie Tensioner" as shown in the Spare Parts section of this hand book and described in our fitting instructions.

This slackening of new tracks is not any form of material stretching, but simply a "bedding in" process due to the numerous components in the track link system.

It can be expected that the track will require re-tensioning frequently during the first week of work, with this task becoming less frequent as the tracks bed in. It can also be expected to have to remove one complete track plate within the first three or four weeks of work and perhaps a second track plate after three to six months of work. The amount of wear experienced by the track link system over its working life is dependent upon the abrasiveness of the terrain together with the load and tension experienced by the tracks - over-tensioned tracks will wear more quickly.

Tracks should be run with as low a tension possible providing that:

- **The tyres are not slipping and spinning inside the track**
- **The track is not falling off the tyres**
- **The track is not hitting the bodywork or any part of the machine**
- **The track is not causing any damage to the tyres.**

Tracks which are over-tensioned unnecessarily will stress axles and hub bearings as well as increase tyre and track wear.

Design & Quality

All Clark Forest Machine Tracks are designed and manufactured in our own dedicated track production factory by skilled engineers, trained in all aspects of track manufacture. This allows us to react quickly and economically to customer requirements and ensures that we have control of all aspects of manufacture and quality control.

All Clark Forest Machine Tracks go through checking and testing procedures which are well documented and recorded so that we can continue to improve, therefore providing the highest quality to the customer.

Every section of Clark Forest Machine Tracks has identification tags/badges attached which are stamped with a serial number allowing complete traceability.
(SEE PAGE 7)

Delivery

Each set of Clark Tracks are supplied in four quarter sections and comes complete with all necessary joining links. Tracks are normally packed on two open pallets for shipping with two sections rolled per pallet.

Repair & Support

All Clark Forest Machine Tracks are manufactured from heat treated boron alloy steel, which can be welded like any conventional high strength alloy steel.

- **The material must be clean and dry and prepared for welding.**
- **Preheating to approximately 200°C is desirable.**
- **Normal welding materials may be used for gas-shielded metal inert gas (MIG) welding.**

Please consult Clark Tracks Technical Support Department prior to commencing repairs.

We pride ourselves on the level of technical support and backup we can offer our dealers and customers both through information contained in this unique handbook and in the technical ability of our staff to solve problems.

We are also willing to talk directly with customers who require technical assistance even out of office hours. We are only a phone call away.

WARRANTY

For further information on our warranty terms and conditions, please contact us via email or telephone.

CLARK TRACKS™
high performance for maximum work life

Clark Tracks Ltd. Head Office
Irongray Park, Dumfries, DG2 0HT, Scotland, UK
Tel: +44 (0) 1387 722370 Fax: +44 (0) 1387 720978
Email: clarktracks@clarktracks.com
www.clarktracks.com

*Usage Note: User discretion should be taken as Clark Tracks cannot make exact recommendations due to the fact that working conditions, machine or tyre limitations and terrain can vary considerably. The ultimate decision of suitability of a track type for a specific application must lie with the owner/user of the machine. Our aim is to help customers make an informed decision. © Clark Tracks 2017

Designed and printed by: hoggettcreative.co.uk
CT084-ENG-GEN