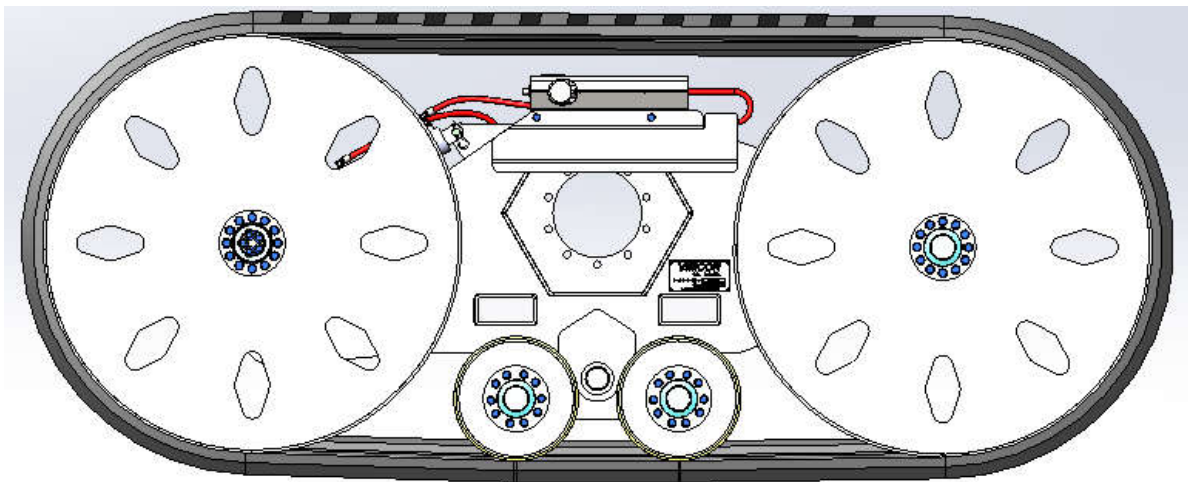


VIMCOR

TRACK SYSTEMS

TRACK OPERATION AND MAINTENANCE MANUAL

Including 55T-SM-V3, 35T-HM-V1 and 30T-HM-V1



VIMCOR TRACK SYSTEMS
<http://www.vimcor.com.au/>

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INTRODUCTION

Vimcor thanks you for purchasing one of our products.

The range of Vimcor Tracks has been developed to cater for the needs of the progressive farmer. Vimcor has drawn on its years of experience in the harvesting industry to build a range of tracks that have a superior build quality, for the farmer who only wants the best.

It is the responsibility of the user to understand the operation, safety, maintenance and lubrication before using the tracks. It is the user's responsibility to check and service the tracks as specified in this manual.

This manual will familiarise you with safety, assembly, operation, adjustments, maintenance and troubleshooting aspects of the equipment.

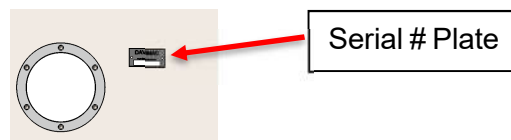
By reading this manual and following the recommendations within it, you will help to ensure safe and efficient operation, as well as years of satisfactory use from the equipment.

Models Covered in this Manual

- 55T-SM-V3
- 35T-HM-V1
- 30T-HM-V1

Vimcor Product Identification Number

The track system, PIN plates will display the model and manufacturing date on both LH and RH undercarriage system.



WARRANTY

Davimac Pty Ltd warrants against defects in materials or workmanship that result in failure during normal usage for three years from the date of delivery.

Davimac Pty Ltd reserves the right to inspect and decide whether material or workmanship was the cause of the fault or whether the fault was as a result of abuse, accident, misuse tampering, improper maintenance or servicing thus voiding the warranty. Wear is not covered by warranty

Warranty service must be undertaken by a dealer or service centre approved by Davimac Pty Ltd. Warranty service will be performed without charge to the purchaser if the warranty claim is valid. If the original purchaser sells or transfers this product to a third party, the warranty does not transfer to the third party in any way.

To process a warranty claim first contact the dealer who sold the unit and provide the serial number of your unit and details of the problem you are experiencing. The dealer will then contact Davimac Pty Ltd to get approval to assess your machine and to proceed with any warranted repairs.

Davimac Pty Ltd does not warrant rubber tracks supplied as these items are covered by the track manufacturer. Davimac Pty Ltd will facilitate the warranty process with the appropriate manufacturer, but the outcome will be a result of the track manufacturer's investigation.

Davimac Pty Ltd will provide replacement parts and repairs but does not cover additional costs incurred for travel and transport beyond work at the approved service location. Excluded from warranty are travel, transport and labour costs for repairs or replacement parts when the owner elects for these to occur at a location other than at an approved service location.

Davimac Pty Ltd reserves the right to make product design changes at any time without notice. They shall not be obligated or liable for the replacement of previously sold products that do not match design updates included in latest models.

Davimac Pty Ltd does not warrant faults relating to wheel nut tightness. It is the responsibility of the operator to check and maintain wheel nut torque regularly. (Refer to the Maintenance section of this manual for requirements).

Intended Use

The track is intended to be used on agricultural lands. Using the tracks on a rocky or hard surface (concrete or asphalt) will increase wear and reduce the life of the track and can also lead to breakages.

SAFETY

Safety is the responsibility of the operator to know how to operate and service the tracks.

Thoroughly read and understand the instructions in this manual before operating or servicing the tracks. Read all instructions noted on the safety decals.

Below are identified safety points. Identified safety risks can never be considered comprehensive, and the operator should always do a safety evaluation of the machine within the operating environment before operating the machine.

- Before doing any maintenance, do a safety evaluation.
- Do not attempt to do maintenance when tracks are in use.
- Do not attempt to remove or install tracks if the machine is not adequately and safely supported.
- Do not attempt to do maintenance if the equipment is not on a level surface.

GENERAL INFORMATION

Technical Description

The Vimcor track system allows machines to move on muddy and soft soils which have limited carrying capacity. The wide supporting surface of the track system also reduces soil compaction. Vimcor track systems are mounted on an axle frame. Certain equipment requires a special axle to be installed before track system installation. Please contact your dealer for more information. Vimcor track systems are designed to maximise the performance and productivity of your pull-behind applications with:

- Even weight distribution to easily and safely handle uneven terrain
- Excellent flotation to minimise soil disturbance (40 - 70% less ground pressure than tires)
- Maximum reliability to assure you get the job done anytime, anywhere

Vimcor track systems use rubber tracks, specifically designed for pull-behind applications to provide:

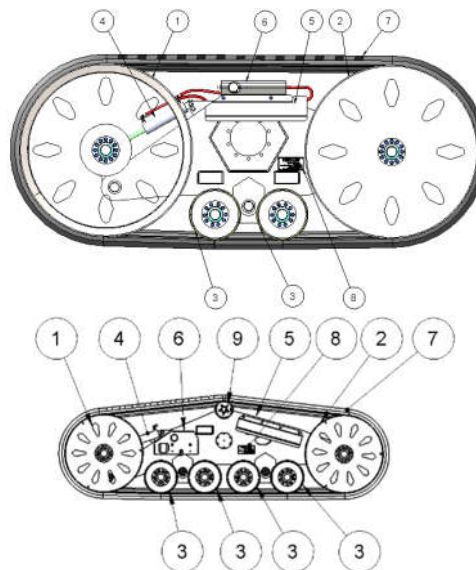
- Reduced vibration during transport
- Lower turning resistance
- Minimal soil disturbance
- Long life

Besides the above-listed characteristics, Vimcor rubber track systems introduce other advantages:

- Reduced power absorption on soft soils
- Minimal possibility of rubber track de-tracking from the undercarriage
- Adequate roading speed
- Limited soil damage, soil even during the end of field manoeuvres
- Reduced risk of self-sinking in the mud in case of slipping

Track System Components

1. Front Idlers
2. Rear Idlers
3. Mid rollers
4. Tensioner
5. Track Frame
6. Tensioner Regulator
7. Rubber Track
8. Serial number plate
9. Top idler wheel



Frame

The main frame consists of a weldment which hangs the more midroll frames. The front and rear Idlers are connected to the frame.

Axles

Precision machined axles from 80mm shaft for mid rollers and 115mm shaft for front and rear rollers. They feature tapered bearings and mechanical seals for extreme working conditions.

Idlers and Midrollers

The idlers have the function of guiding the rubber track by acting on the lateral surfaces of the guide lugs. Inner sides of idlers are subject to wear but can be rotated to extend life. The mid rollers distribute the majority of the machine weight to the ground. They are mounted on pivoting arms connected to the frame reducing vibration and shock loads.

Tensioning system

The tensioning system is located between the two front idlers. A hydraulic cylinder provides the tension force. The tension regulator keeps the pressure in the hydraulic cylinder constant. Provisions are made to compress the cylinder allowing for removal of idlers and track assemblies during maintenance and servicing.

Rubber track

The rubber tracks are manufactured with high-quality rubber and high strength steel cabling inside for superior durability and reliability. The tread layout ensures good flotation, excellent life, and self-cleaning characteristics.

Track Break-in Procedures

Guide lug wear is reduced when correct break-in procedures are followed. During the break-in period, rolling components undergo a polishing-in process to achieve smooth steel to rubber interface with the guide lug. Rubber uses dust and dirt as a dry lubricant during break-in and operation to minimise heat and reduce rubber stickiness. New tracks should be exposed to dry and dusty soil conditions as soon as possible. Operation without dust or soil in the system, especially during high-speed roading, generates high levels of damaging heat. If roading must be done, a dry lubricant such as soil, talc, graphite should be applied to the guide lugs every 30 minutes during roading until field operation resumes.


Tracks will continue to condition for the first 150 hours.

NEW SYSTEMS REQUIRING EXTENDED TRANSPORT SHOULD BE CARRIED ON A FLATBED AND NOT ROADED DO NOT ROAD A NEW SYSTEM WITHOUT FIRST CHECKING ALIGNMENT AND INTRODUCING THE TRACKS TO DIRT OR DRY LUBRICANT

Transport Limitations

Vimcor track systems are designed for field use and field operational speeds. High-speed transport, especially with loaded implements, is not recommended and may result in track damage due to heat. If extended transport is required between operating locations, the following speed and duration limits should be observed:

Operating Condition	Transport Speed (Maximum)	Transport Duration (Maximum)
Empty	25 km/h	30 min.
Loaded	15 km/h	15 min.

	<p style="text-align: center;">WARNING</p> <p>Exceeding speed limitations may result in equipment and property damage, injury, death and void warranty coverage.</p>
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If additional distances are required, a 30 minute cooldown period is recommended before transport is resumed. Absolute speed and duration levels may vary, depending on system type and ambient conditions. Limitations as listed, help avoid system heat build-up that could cause a reduction in track life.

Do not use on a hard surface (concrete or asphalt) when total equipment loaded is more than 30% of the rated track load.

Pre-start checklist

1. Check wheel nuts are tight.
2. Check for grease leaks.
3. Check that no foreign objects are in tracks.
4. Check that track tension hydraulic pressure is correct 131 Bar or 1900PSI.

Turning Radius Limitations

Vimcor track system operates best when running straight or in gentle turns. If a track system is pivoted or spot turned, the opportunity exists for soil and dirt to be ingested into the system. Even though the track system has a tension recoil system, if the tension recoil is exceeded, high loads in the frame and track can be generated, which may cause track or system damage. Vimcor recommends that sharp turns (less than 24m inside track radius) be avoided, both infield, and also on hard ground or pavement, to avoid high stresses due to debris ingestion, potential untracking situation, high twisting and side loads, and significant ground scrubbing of track treads, especially if such a turn is attempted with a fully loaded system.

If it is observed that the bottom surface of track kinks while turning, it is important to increase the turning radius. Failure to increase the turning radius will lead to premature wear of track and track system.

ROUTINE MAINTENANCE AND LUBRICATION

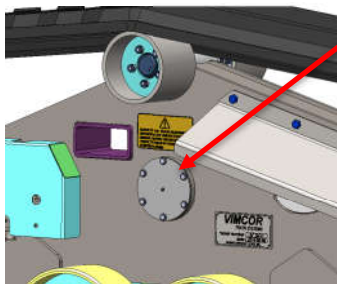
Maintenance intervals

Use the pulling machine hour meter to determine servicing intervals. Perform service on items after every 100 hours of work and annually. Recommended service should always occur on the interval that occurs first. Under extremely dusty or wet operating conditions, more frequent lubrication may be needed.

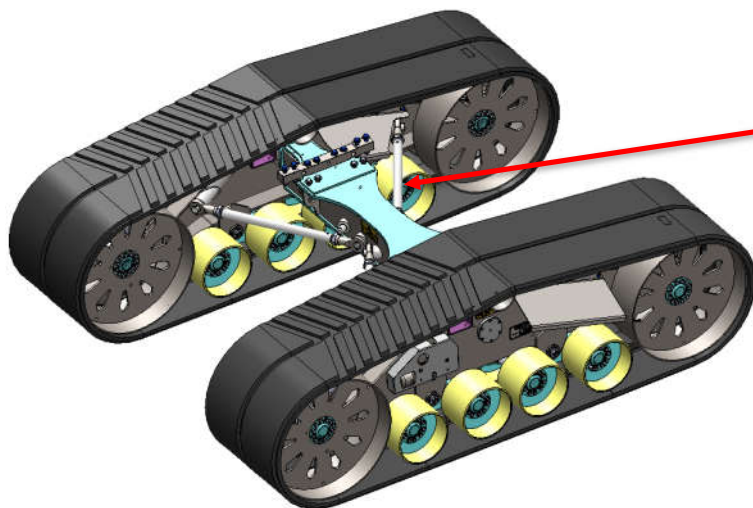
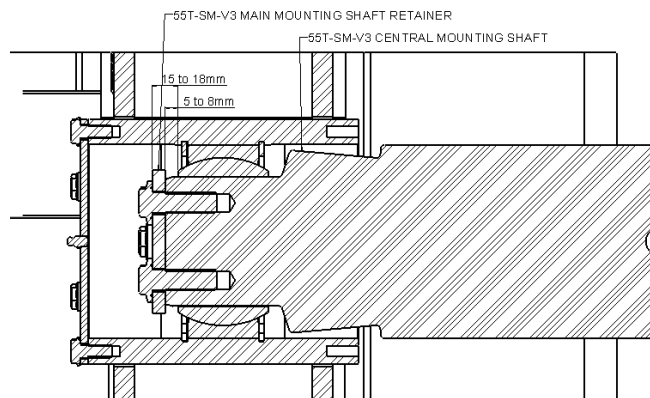
TRACK ADJUSTMENT

Prevent damage to the centre bearing

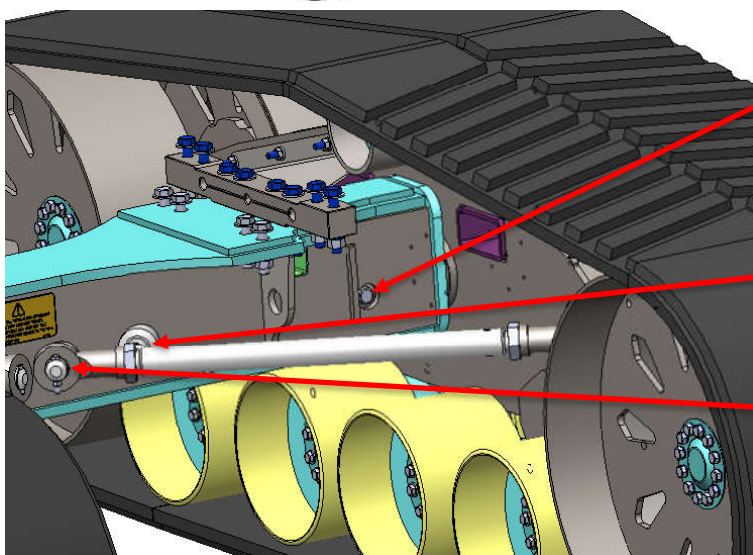
To prevent damage to the centre bearing during operation of the equipment, the following sizes are to be adhered to when adjusting tracks in and out as well as when tracks are being adjusted to be parallel to one another. After adjusting the sizes need to be verified with the equipment on level ground.



The section is taken through this area



Stabilising arms are used to adjust tracks parallel



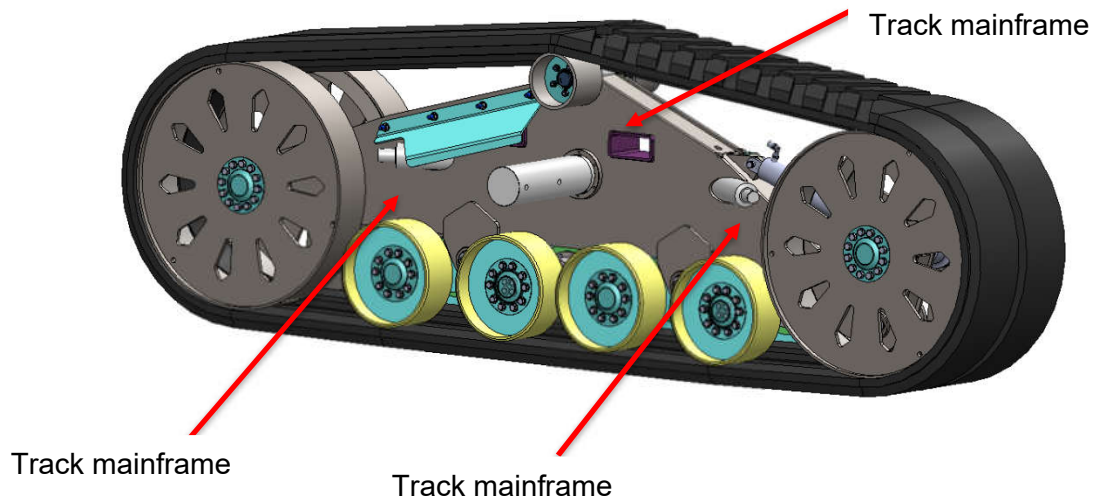
Remove the bolt and pull or push track and shaft in or out to adjust between 3m and 2.56m centres. Replace bolt after adjustment and check above mentioned sizes.

3 for stabiliser position

2,56m position for stabiliser

Check Track Alignment

Measure the inside distance from the front and the rear on the track mainframes as noted below. Mainframes must be parallel to within 3mm from each other to prevent unnecessary track wear. The track mainframe to implement chassis must be parallel to within 6mm. A suitable location for measurement is noted by arrows, in the diagram below.



Track System

Inspect track system for material build-up on frames and wheels. Clean material from the undercarriage.

Idlers and mid rollers

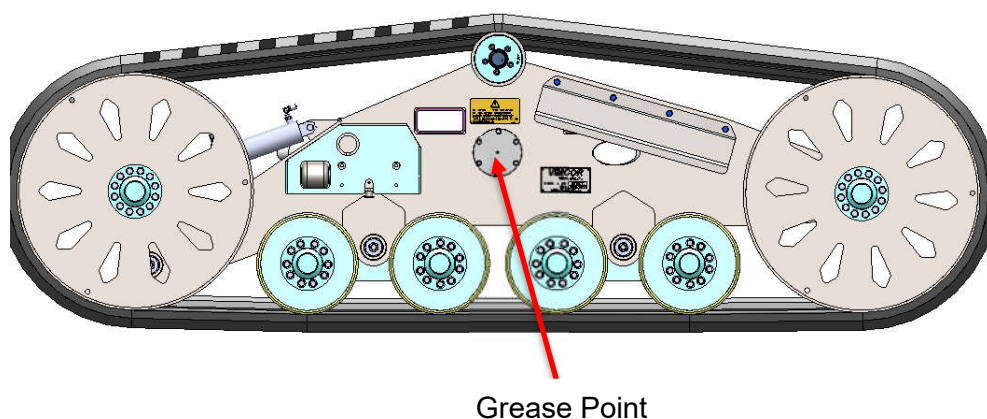
Check the general condition of the idlers and mid rollers, in particular on the inner guide surface of the wheels. Excessive wear in these areas can be caused by debris ingestion or continuous hillside work.

Hub bearings

Remove tension from track and check for play on hub bearings by moving the idler wheels and mid rollers one at a time. If excessive play is present check bearings and replace if required. If bearings are good, fasten the crown nut.

Apply grease to grease points

Grease point indicated with arrows on the diagram below.



Rubber track guide lugs

Guide lugs keep the track on the track system. Proper alignment of the track is essential to improving overall life and decreasing operating costs. If the track is misaligned or operating on a side slope, guide lug wear or damage may occur. Also, guide lug damage may occur if proper break-in procedures are not followed or system is operated outside the maximum speed recommendations listed in this manual. Monitoring guide lugs condition will alert the operator to an issue and generally, if corrected early can prevent the loss of performance or durability.

Track carcass

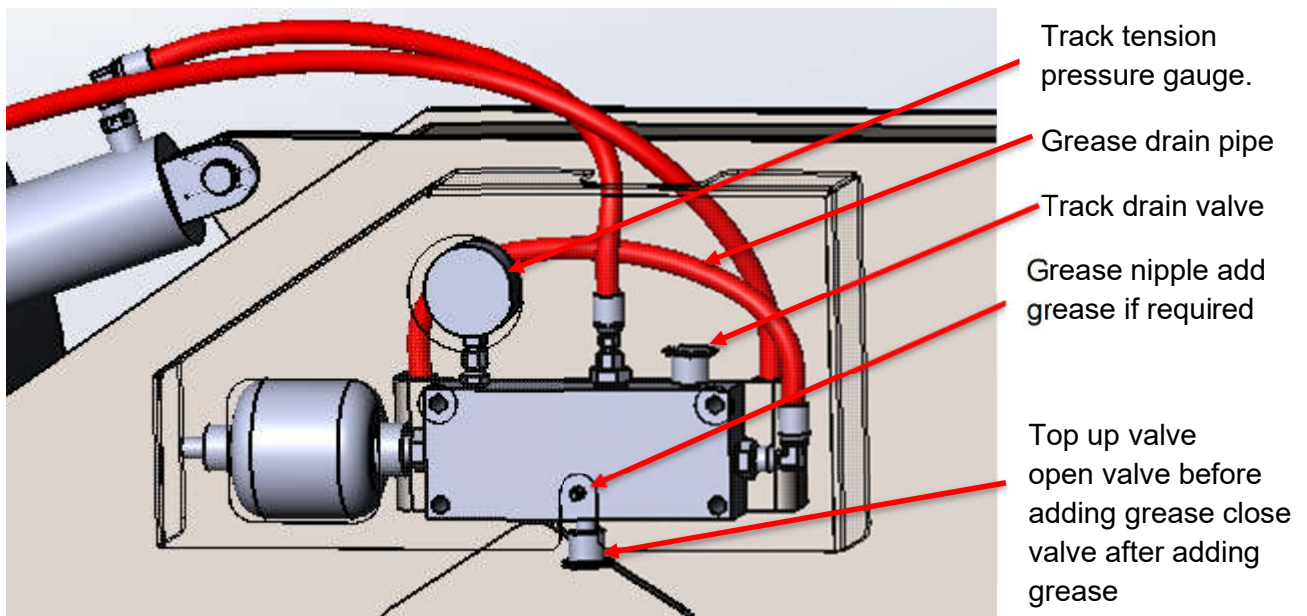
Inspect track surface to remove embedded stones or debris. This contamination can work its way into the track and damage the steel cable. The steel wire may come out from the track carcass without affecting the performance of the track. Remove loose wires by cutting them at the rubber surface.

Track tread

Muddy soils usually cause limited wear, while roading long distances can bring about accelerated tread wear. Due to the crown of the road, and deflection in the system, the tread closest to the machine will tend to wear faster than the tread on the outer portion of the track. Adhere to speed and weight limitations published in this document.

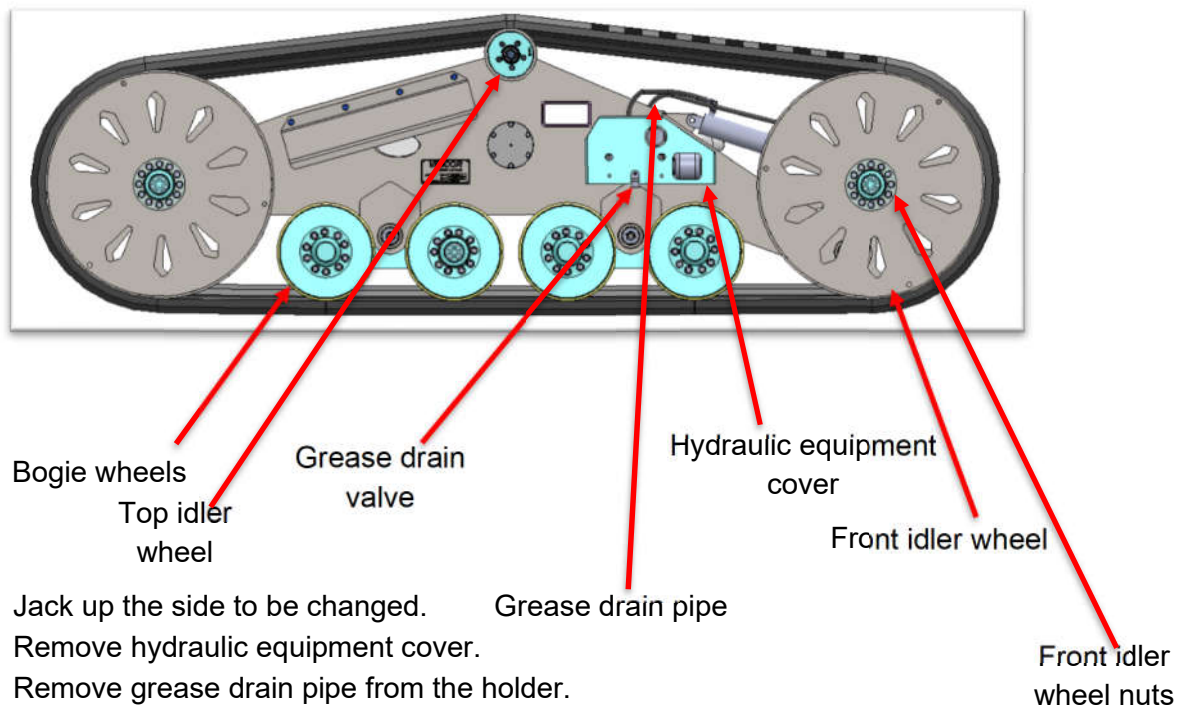
Adjusting track tension pressure

Track Pressure	psi	kPa
Gauge Pressure	1900	13100



The track must be on a level area when the pressure is checked.


Removing or replacing track



- Jack up the side to be changed.
- Remove hydraulic equipment cover.
- Remove grease drain pipe from the holder.
- Open grease drain valve.
- Push front idler wheel backwards until the hydraulic cylinder is completely compressed.
- Remove all outer idler, top idler wheel and bogie wheel nuts and remove outer wheels.
- Remove the old track.
- Fit new track.
- Replace all outer idler and bogie wheels and fasten nuts.
- Close grease drain valve.
- Replace drain pipe to holder.
- Pump grease in thru the grease nipple until the desired pressure is reached 2900 PSI.
- Replace hydraulic equipment cover.
- Ensure that all bolts are fastened completely.
- Check pressure and bolts after 10 Hours.


TRACK SYSTEM INSTALLATION

The Vimcor track systems are mounted on an axle frame. Certain equipment requires a special axle to be installed before track system installation. Contact your dealer for more information and to determine if the track system can be installed on your implement.

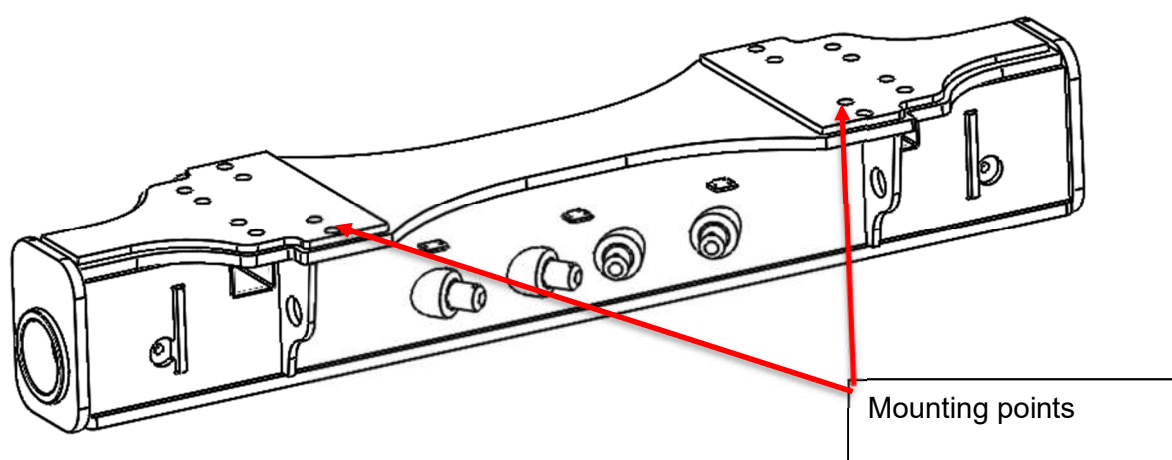
	<p style="text-align: center;">WARNING</p> <p>Danger of crushing. Use suitable lifting devices (capacity at least 4100Kg), wear safety equipment and observe the safety rules. If using a fork lift use for handling operations, be careful not to damage the rubber track. Metal chains or cables are not recommended</p>
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Shaft Mounted Track System Installation (55T-SM-V1)

1. Clean the implement thoroughly before proceeding with the installation. Removal of dirt and debris makes access to the frame and attaching fasteners easier.
2. Move the implement to a hard, level surface to ensure a stable work area to support the implement during the track system installation.
3. Raise and support implement such that it is safe to work under.

	<p style="text-align: center;">IMPORTANT</p> <p>Safety of the installation depends on the right operation in lifting and supporting the machine. Check the work area thoroughly and work in a level area. Respect safe operating practices, operate in conditions of enough light. Make sure the free spaces of the work area are suitable for the dimensions of the parts to be handled and for the lifting equipment manoeuvres. Be careful: risk of injury or death.</p>
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4. Install track fitment axle. Tighten mounting hardware. Use mounting point supplied on the axle.





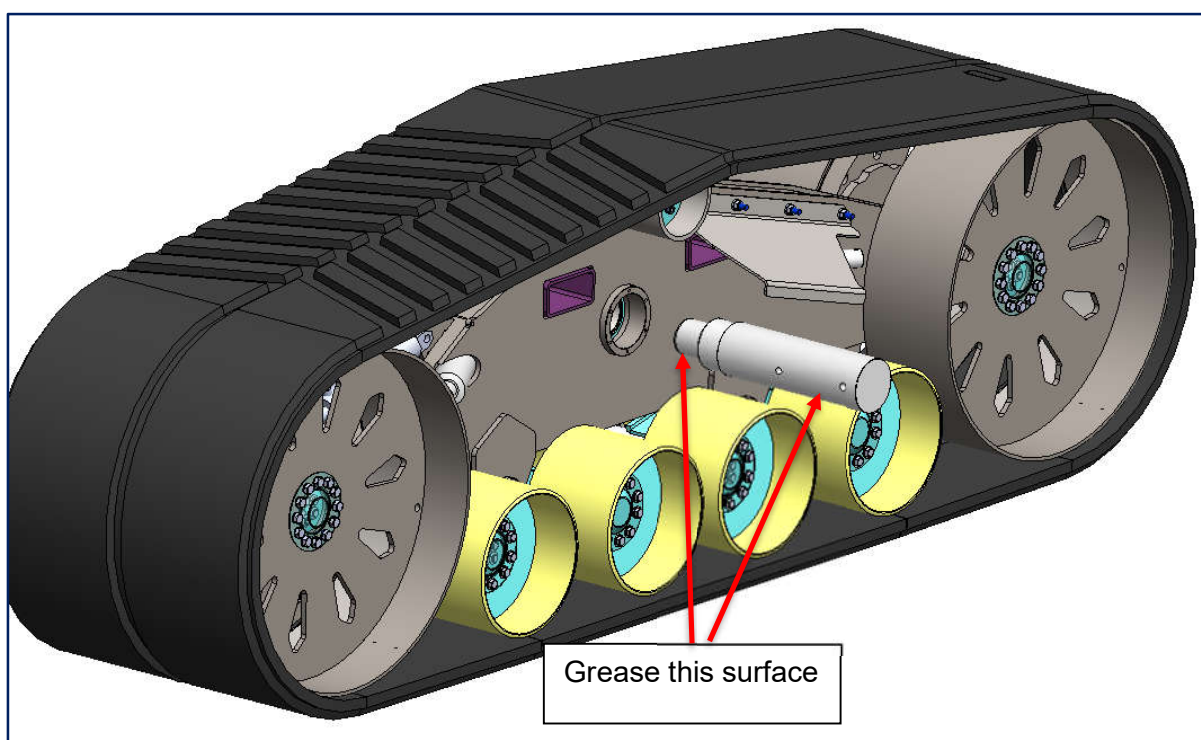
WARNING

Danger of crushing. Use suitable lifting devices (capacity at least 4100Kg), wear safety equipment and observe the safety rules. If using a fork lift use for handling operations, be careful not to damage the rubber track. Metal chains or cables are not recommended

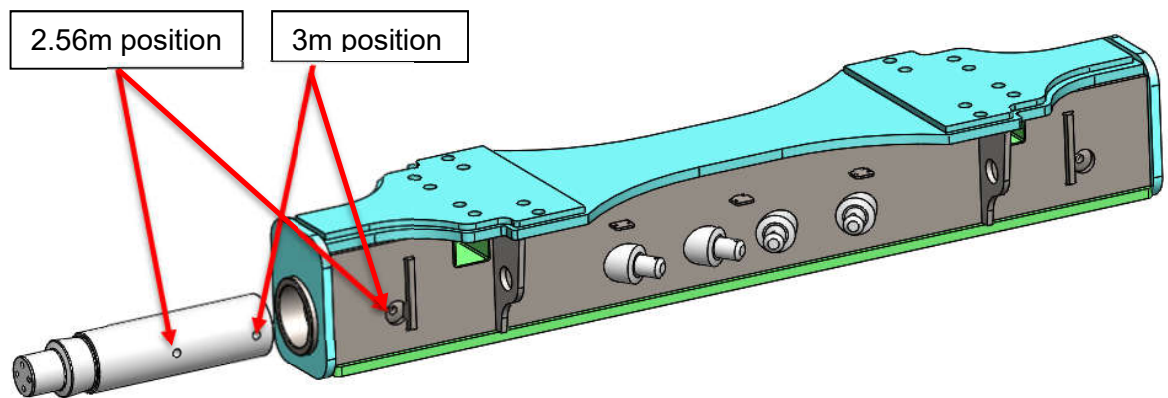


IMPORTANT


Should a motorized lifting device be used, assistance on ground during operation of handling, coupling and assembly is needed. Do not stand between lifting device and axle assembly when mounting axles to implement. Be careful: risk of injury or death.



5. Apply a light amount of grease to the centre pivot pin.

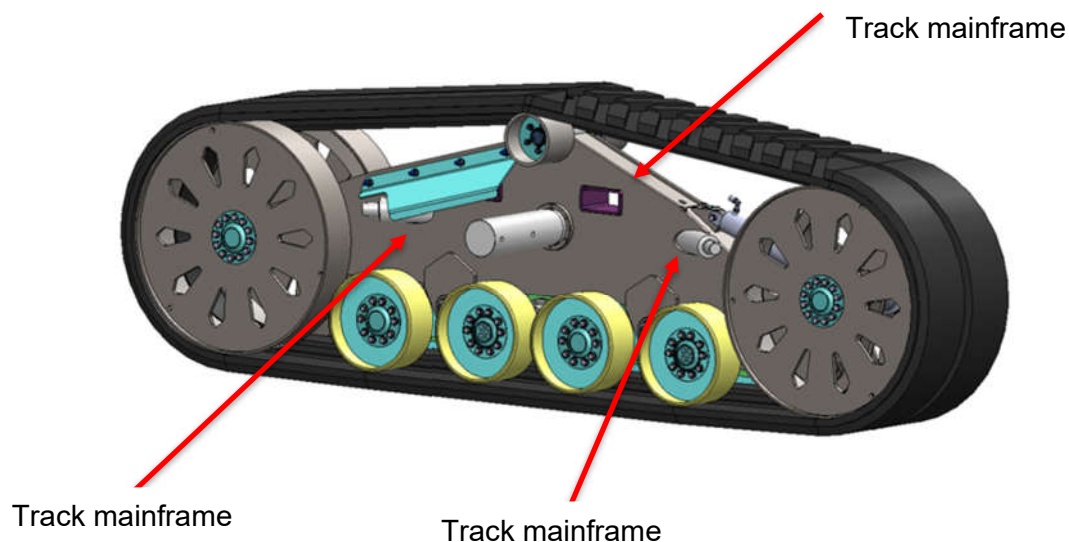


6. Slide the pivot pin into axle and fasten pin with bolt in the correct position.
7. Slide the undercarriage onto the pivot pin. NOTE: Care must be exercised to avoid damage the bearing during installation. Using a fork truck, lift the undercarriage assembly onto the centre pivot pin. Pressure gauge pointing out and track tension cylinder towards the front of the equipment. After the shaft retainer has been fastened in position refer to "prevent damage to the centre bearing" section to prevent damage to centre bearing.

	<p style="text-align: center;">WARNING</p> <p>Make sure undercarriage is installed with track tensioner assembly positioned to the front of implement. DO NOT install the track system with the tensioner positioned to the rear of the implement.</p>
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8. Repeat steps 5 through 7 for the other track assembly.
9. Remove jack stands and/or supports and lower implement to the ground.
10. Install the stabiliser bars to a no pre-load condition. Some slight play should be present at the rod ends. In special cases, some adjustment to the stabiliser bars may be required to achieve the desired front to rear parallelism dimension

Attach the two, front stabiliser bars and two, rear stabiliser bars to the mounting brackets on the axle and the brackets on undercarriage frame with the hardware provided in the kit.
11. Once installed, measure the inside distance from the front and the rear on the track mainframes as noted below. Mainframes must be parallel to within 3mm from each other to prevent unnecessary track wear. The track mainframe to implement chassis must be parallel to within 6mm. A suitable location for measurement is noted by arrows below the turnbuckle mounting points, in the diagram below.



12. Check and re-torque all wheel lug bolts as follows:

Bolt Dia	Class 4.6		Class 8.8		Class 10.9	
	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs
8	8	6	22	16	32	24
10	17	13	44	32	63	46
12	30	22	77	57	109	80
14	51	38	133	98	189	139
16	73	54	190	140	270	199
18	108	80	281	207	399	294
20	143	105	372	274	528	389
24	248	183	640	472	914	674
30	491	362	1314	969	1817	1340

Bolts should only be replaced with higher grade bolts. If replaced by a higher grade bolt then the original bolt torque should be applied.

Hub Mounted Track System Installation (35T-HM-V1 and 30T-HM-V1)

1. Clean the implement thoroughly before proceeding with the installation. Removal of dirt and debris makes access to the frame and attaching fasteners easier.
2. Move the implement to a hard, level surface to ensure a stable work area to support the implement during the track system installation.
3. Raise and support implement such that the rear tires are just off the ground.



IMPORTANT

Safety of the installation depends on the right operation in lifting and supporting the machine. Check the work area thoroughly and work in a level area. Respect safe operating practices, operate in conditions of enough light. Make sure the free spaces of the work area are suitable for the dimensions of the parts to be handled and for the lifting equipment manoeuvres. Be careful: risk of injury or death.

4. Remove the tire and rim assemblies.



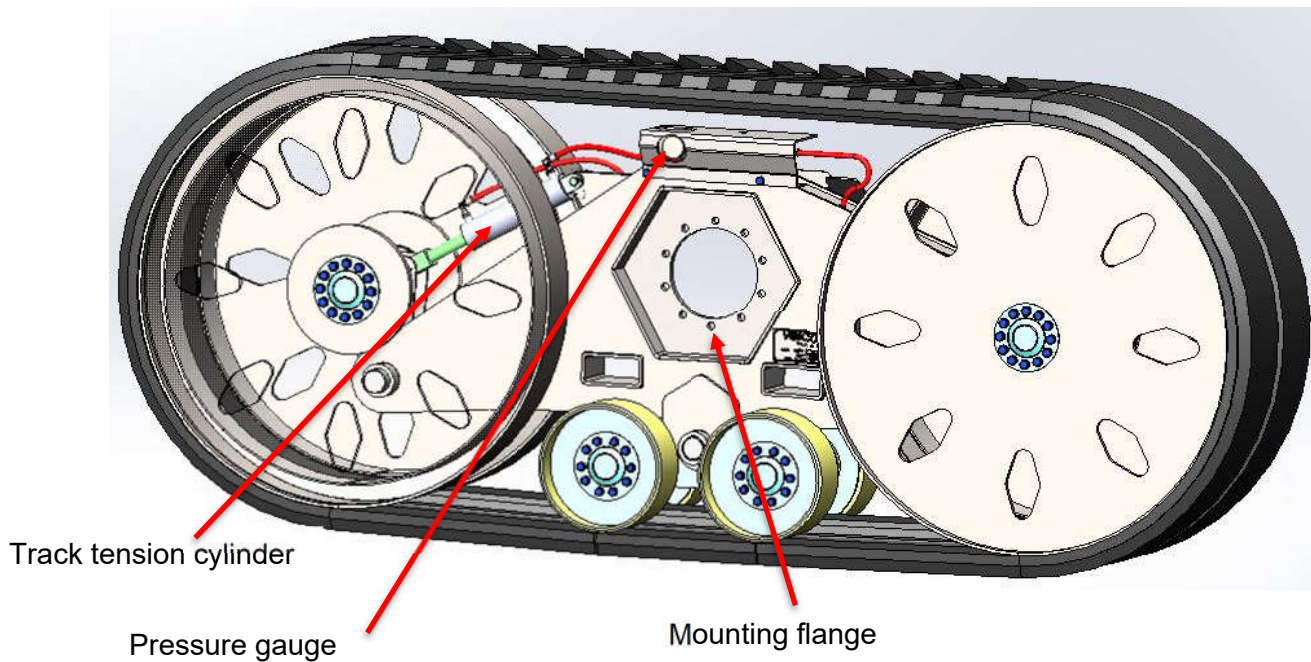
WARNING

Danger of crushing. Use suitable lifting devices (capacity at least 2250Kg), wear safety equipment and observe the safety rules. If using a fork lift use for handling operations, be careful not to damage the rubber track. Metal chains or cables are not recommended



IMPORTANT

Should a motorized lifting device be used, assistance on ground during operation of handling, coupling and assembly is needed. Do not stand between lifting device and axle assembly when mounting axles to implement. Be careful: risk of injury or death.





5. Slide the undercarriage onto the hub. Pressure gauge pointing out and track tension cylinder towards the front of the equipment.



WARNING

Make sure undercarriage is installed with track tensioner assembly positioned to the front of implement. DO NOT install the track system with the tensioner positioned to the rear of the implement.

6. Repeat steps 4 through 5 for the other side.
7. Remove jack stands and/or supports and lower implement to the ground.
8. Check and re-torque all wheel lug bolts as follows:

Bolt Dia	Class 4.6		Class 8.8 		Class 10.9 	
	Nm	ft-lbs	Nm	ft-lbs	Nm	ft-lbs
8	8	6	22	16	32	24
10	17	13	44	32	63	46
12	30	22	77	57	109	80
14	51	38	133	98	189	139
16	73	54	190	140	270	199
18	108	80	281	207	399	294
20	143	105	372	274	528	389
24	248	183	640	472	914	674
30	491	362	1314	969	1817	1340

Bolts should only be replaced with higher grade bolts. If replaced by a higher grade bolt then the original bolt torque should be applied.

TROUBLESHOOT

Troubleshoot		
Problem	Possible Cause	Possible Solution
Excessive mud build up on track , bogie and idler wheels	Turning radius to small for conditions. Working in muddy conditions	Increase turning radius. Wash mud out with high pressure water. Fit optional mud deflectors.
Track pressure to high.	Build up of mud on track, bogie and or idler wheels. To much grease in system.	Regularly clean mud out of system with high pressure water. Release grease out of system.
Track pressure to low.	Accumulator run out of gas. Leak on hose or hose fittings. Leak in ram. Pressure gauge faulty.	Refill accumulator. Check hoses for leaks and repair. Replace leaking ram. Test and replace gauge if required.
Track pressure fluctuating more than 200 psi when in use.	Accumulator run out of gas.	Refill accumulator.
Track kink when turning.	Turning to sharp.	Increase turning radius.
Fast tread wear and uneven tread wear.	Roading on hard surface (concrete or asphalt). Not following transport limitations in manual. Traveling on crowned roads. Tracks not aligned corectly.	Refer to transport limitations in manual. Minimize amount of roading. Avoid roading with added vertical loads. Avoid crowned roads. Reduce roading speeds. Refer to track system instalation.
Excessive tread wear	Dense soil clods, gravel or rocky materials. Hard and abrasive drive surface. Sharp objects in path.	Slow controlled speeds along with careful driving in harsher applications is a must. Obstacle avoidance is helpful and recommended
Luge bulging	Excessive heat and/or roading at high speeds and under heavy loads. Internal heat build-up can be caused by high ambient temperatures especially on black paved surfaces.	Minimize amount of roading. Avoid roading with added vertical loads. Avoid crowned roads. Reduce roading speeds.
Wire come thru surface of track	During normal flexing of the track in rare occurrence small single strands of wire may work its way to the surface.	Snip the loose wire at the surface of track. It is highly unlikely that this will negatively effect the performance or longevity of the track.

Troubleshoot		
Problem	Possible Cause	Possible Solution
Abnormal guide lugs worn/abraded on side lug face (wall). Chunky appearance	<p>Turning under heavy load. Wheels with sharp edges. Continuous hillside work.</p> <p>Track not lubricated with soil avoid road travel for the first 100 hours of use. Tracks not aligned correctly.</p>	<p>Rotate tracks side to side as appropriate. Inspect idler and bogie wheels for sharp edges. Replace if necessary. Minimize turns under heavy drawbar loads. Refer to break-in procedure.</p> <p>Refer to track system installation.</p>

HAZARD IDENTIFICATION & RISK ASSESSMENT

Each hazard is to be considered for its probability and consequence through the following ranges:

Probability (P)	Consequence (C)
5 Expected	5 Death or Dismemberment
4 Often	4 Permanent Disability
3 Sometimes	3 Lost Time Injury
2 Rarely	2 Medical treatment
1 Highly Unlikely	1 First Aid Injury

Level of risk is assessed by multiplying the values associated with each category together.

- 15-25: High-risk activities
- 5-10: Medium risk activities
- 1-5: Low-risk activities

Operation	P	C	Risk	Control Measures
Clearing debris from the track while in operation	5	5	HIGH	Do not inspect for debris or attempt to clear track while in operation
Performing maintenance without chocking machine or parked on a slope	3	5	HIGH	Do not perform maintenance unless the machine is on level ground and tracks are sufficiently chocked, the tractor is disabled and park brake engaged
Performing maintenance to tracks while in operation	5	5	HIGH	Do not attempt any interaction with tracks while in operation
Track changing by untrained personnel or using incorrect tools	3	5	HIGH	Operation is to be performed by trained personnel using correct tools and equipment
Installing tracks	5	5	HIGH	Machine to be supported in a safe and secure way.

ADDITIONAL INFORMATION.

Additional information on Vimcor track systems, tracks, and our other products may be found at <http://www.vimcor.com.au/> for any questions or corrections regarding this manual; please email us at admin@vimcor.com.au please include the Issue number as found in the footer.

Thank you on behalf of Vimcor for purchasing a Vimcor Track System