REFERENCE GUIDE

AGRICULTURAL TRACK ELASTOMERIC COATED WHEELS

CATERPILLAR® / CHALLENGER®
35-45-55 (ROWCROP)

CHALLENGER®
65-70-75-85-95 (TILLAGE)

CAMSO

ROAD FREE COMPANY

TABLE OF CONTENTS

INTRODUCTION AND TERMINOLOGY

Camso is the best of Camoplast and Solideal. To keep moving foward while staying true to our history, we're now the Road Free company.

Introduction

Farming operations across the country are unique. Working closely with track tractor and combines owners, Camso has created an extensive line of tracks to fit virtually any application. This guide is intended to help you better understand the complete line of tracks for tractors and provide helpful recommendations for the best use of each type.

All tractor tracks are built by Camso in Emporia, Kansas using an exclusive manufacturing process that keeps each component in place, resulting in a stronger track.

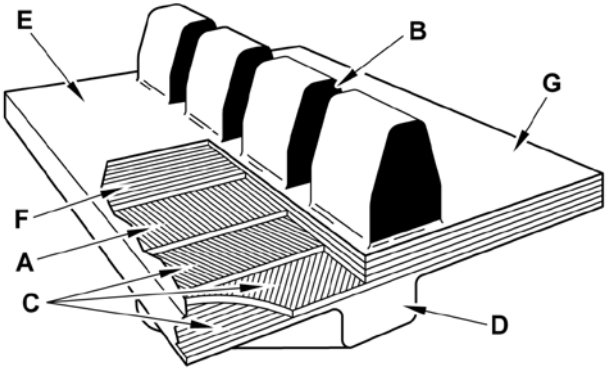
To choose the best track for your operation, carefully consider your applications:

- Cropping patterns
- Typical field conditions, soil types and terrain
- Implements used
- Amount of road travel

With knowledge of your local conditions and applications, your Camso dealer can help you use this guide to find the best track for your operation.

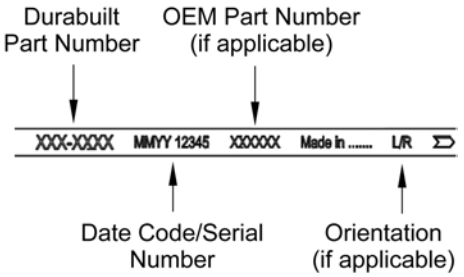
Camso Track Terminology

Camso tracks are constructed using a combination of natural and synthetic rubber in combination with steel reinforcing plies and continuous wound main cables. The main cables give the track tension strength. The bias and reinforcement plies protect the main cables, provide internal track alignment, and further increase lateral stiffness to better distribute loads across the track width. The treadbars are designed with specific shapes, with each shape giving a distinct performance advantage in specific applications.

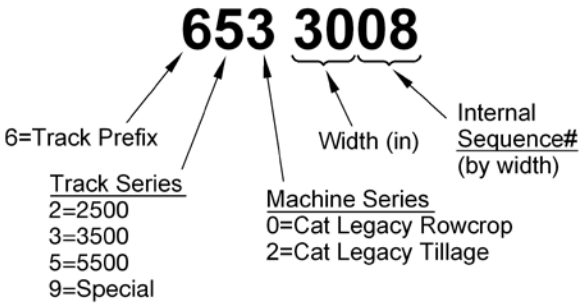


A: Main cable
B: Guide lug
C: Outer diameter (OD) bias plies
(for cable protection and alignment)
D: Tread bar
E: Inside diameter (ID) track surface
F: Inside diameter (ID) bias ply (for cable protection)
G: Carcass

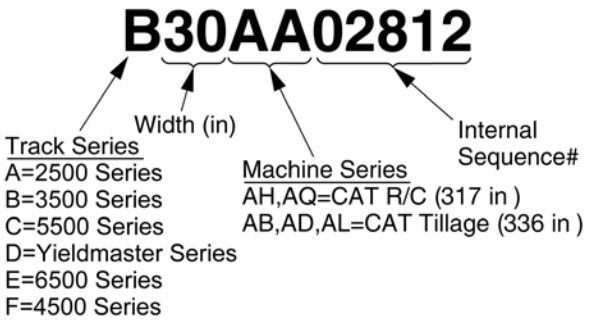
Track Identification (Edge of Track)



Track Part Number Format (Old)



Track Part Number Format (New)



TRACK MACHINE OPERATIONAL GUIDELINES

New Track Break-In

Track guide lugs, especially on new machines, will benefit from correct break-in procedures. Correct break-in helps reduce the initial amount of guide and midroller wear. Track components undergo a polishing-in process during the break-in period. During this time, any rubber flash is worn from wheel edges and much smoother steel to rubber guide interface is developed. New rubber surfaces benefit from contact with the soil, which acts as a dry lubricant, to facilitate smooth break-in and minimize guide lug scuffing. Tracks should be operated in dry soil as soon as possible. Track alignment should be checked frequently and must be correct. Significant amounts of operation, especially high speed roading before introduction into dry soil can cause guide lug damage and should be avoided.

Maintain Track Alignment

It is very important to periodically check track alignment, especially during break-in. However, alignment can change throughout the life of the machine due to track system or component wear. Misalignment, if left uncorrected, will cause heating and eventual destruction of one side of the guide lug, as well as cause damage to the midrollers and drive wheels.

The primary way to verify alignment is to check the temperature of the guide lugs during field operation or to observe the track guide lug condition. If there is significant difference in the temperatures between opposite sides of the track guide lugs, or if scuffing is seen on one side, then the track may be out of alignment.

Refer to the operator's manual for methods to correct misalignment.

Correct Operational Techniques

Tracks can pull more - so reduce loads at low speeds

Tracks deliver much less slip in high torque, low speed operations. Follow the operator's manual guidelines and stay above the minimum speed for full load operation. Never exceed the maximum ballasted weight in order to gain more traction in lower gears.

Use proper amounts of ballast

Ballast the tractor to achieve no less than 2-5% slip under heavy pull conditions. In addition, the best track performance comes from even weight distribution along the entire track length. Correct ballast will result in reduced treadbar wear, longer rolling component life, less compaction, and improved ride and turning performance.

Maintain correct track tension

In a friction drive system, proper track tension is critical to achieve maximum tractive performance. Inadequate tension can allow more material between the track and wheels, allow track to drive wheel slip, and increase the potential for untracking.

Keep material out of the track

Track systems are designed to allow for some amounts of material to pass between the drive wheel and track. However, uncompressable objects will cause very high localized track loading, which can result in chips, chunks, and tears in the track and undercarriage components. In addition, excessive material build-up inside the undercarriage can cause the tensioning system to run out of recoil. If recoil is used up, track tearing can occur. If a tractor becomes stuck, always dig out the undercarriage and pull the machine out backwards to avoid track damage.

Use care when crossing ditches or transitions

Track machines have certain maneuvers that should be approached with care. One example is during a transition from a sloped to a flat area, especially if transitioning at a diagonal. If dynamic turning is attempted during the transition, the risk is higher for untracking to occur. Operate at low speeds, and avoid turning, to minimize the risk of untracking in these situations.

CHALLENGER 35-55 SPECIFICATIONS AND SERVICE INFORMATION

General Facts

- Produced 1994-2001
- 175 - 225 HP
- 35,45,55 Series
- 60 in - 80 in (1994-1998)
- 60 in - 90 in Standard (1999-2001)
- 80 in - 120 in Wide Optional (1999-2001)

Track System Service Information

Alignment Adjusting Screw (Torque 41ft-lbs / 55 N-m)

- 10 mm internal hex. (early undercarriage)
- 17 mm external hex (later undercarriage) (torque 590 ft-lbs / 800 N-m)

Jam Nut (Torque 120 ft-lbs / 160 N-m)

- 30 mm external hex
  Front Idler and Drivewheel Bolts
  (Torque 590 ft-lbs / 800 N-m)

Camso detensioning tools and literature

CST-0100 Camso Detensioning Kit
CPB-0316 Removal / Installation Guide

Machine Serial Number Location
(SN Plate on frame under the hood)

Machine Specific Notes

Early machines had trouble with worn bushing in front idler adjustment mechanism. If guide lugs are worn on one side, and can't be aligned, this could be the problem.

When de-tensioning and tensioning the system, **it is critical that you use the air bleed to get all the air out of the system.** Also, it is important to be check the accumulator pre-charge pressure. Follow the instructions in Caterpillar D&A module SENR1739 to verify correct precharge pressure.

Note for 16 in Tracks

If changing from a wider track to 16 in, verify the front idlers have a "bevel" on the outside edge of the rubber. If they do not, do not install 16 in tracks until customer updates idlers. If this is not done, misalignment problems may result.

CAT ROWCROP (35-55) TRACK SELECTION

The track advantage of the Cat Rowcrop tractor pays off in virtually every farming application. Tracks reduce compaction and put morepower to the ground, improving performance.

Five track styles are available in 4 widths. These tracks nclude:

- Camso 2500 Series (General Ag)
- Camso 3500 Series (General Ag)
- Camso 4500 Series (Side Slope)
- Camso 5500 Series (High Roading/Extreme Tread)
- Camso 5500 Series (High Traction)

TRACK SERIES	TRACK DESCRIPTION	CAMSO P/N	TRACK WIDTH
2500	General Ag	A16AH03302	16 in (406 mm)
2500	General Ag	A18AH03303	18 in (457 mm)
2500	General Ag	A25AH03304	25 in (635 mm)
2500	General Ag	A30AH03305	30 in (762 mm)
3500	General Ag	630-1601	16 in (406 mm)
3500	General Ag	630-1801	18 in (457 mm)
3500	General Ag	630-2501	25 in (635 mm)
3500	General Ag	630-3009	30 in (762 mm)
4500	Side Slope	F25AQ02916	25 in (635 mm)
5500	High Roading/Extreme Tread	650-1602	16 in (406 mm)
5500	High Roading/Extreme Tread	650-1603	16 in (406 mm)
5500	High Roading/Extreme Tread	650-1842	18 in (457 mm)
5500	High Roading/Extreme Tread	650-1843	18 in (457 mm)
5500	High Roading/Extreme Tread	650-1802	18 in (457 mm)
5500	High Roading/Extreme Tread	650-2502	25 in (635 mm)
5500	High Traction	650-1841	18 in (457 mm)

The tracks are tensioned by a nitrogen accumulator and hydraulic cylinder. Track tension pressure should be maintained at 2750 psi (19,000 kPa). This creates a track tension of 13,500 lbs (6125 kg). High and low pressure alarms warn the operator of potential issues.

Correct track tension pressure should be maintained to reduce damage to the tracks. Refer to the Operation and Maintenance Manual (OMM) for procedures to properly maintain track tension.

CAT Rowcrop Models
[317 in (8051 mm) track circumference]:

Challenger 35	Challenger 45	Challenger 55

CARCASS THICKNESS	GUIDE LUGS	TREAD BARS	TREAD BARS HEIGHT*	TREAD BAR PITCH
1.14 in (29 mm)	36	96	2.1 in (53 mm)	6.8 in (173 mm)
1.14 in (29 mm)	36	96	2.1 in (53 mm)	6.8 in (173 mm)
1.14 in (29 mm)	36	72	2.1 in (53 mm)	9.0 in (229 mm)
1.26 in (32 mm)	36	72	2.1 in (53 mm)	9.0 in (229 mm)
1.22 in (31 mm)	36	96	2.6 in (66 mm)	6.8 in (173 mm)
1.22 in (31 mm)	36	96	2.6 in (66 mm)	6.8 in (173 mm)
1.26 in (32 mm)	48	72	2.6 in (66 mm)	9.0 in (229 mm)
1.37 in (35 mm)	48	72	2.6 in (66 mm)	9.0 in (229 mm)
1.34 in (34 mm)	48	72	2.6 in (66 mm)	9.0 in (229 mm)
1.5 in (39 mm)	48	48 (RH)	2.6 in (66 mm)	6.8 in (173 mm)
1.5 in (39 mm)	48	48 (LH)	2.6 in (66 mm)	6.8 in (173 mm)
1.5 in (39 mm)	48	48 (RH)	2.6 in (66 mm)	6.8 in (173 mm)
1.5 in (39 mm)	48	48 (LH)	2.6 in (66 mm)	6.8 in (173 mm)
1.5 in (39 mm)	48	96	2.6 in (66 mm)	6.8 in (173 mm)
1.61 in (41 mm)	48	96	2.6 in (66 mm)	6.8 in (173 mm)
1.5 in (39 mm)	48	72	2.6 in (66 mm)	9.0 in (229 mm)

** Nominal dimension-actual dimensions may vary within a tolerance.*

Camso 2500 Series (General Ag)

The Camso 2500 Series is a track with the basic features of the 3500 series but offered with reduced height treadbars, and is targeted for customers looking at lowest initial cost track replacement. This track performs well in light primary and secondary tillage applications. This track is an excellent track for use in the older, lower usage tractors.

This track utilizes the same premium rubber compounds and materials as the 3500 and 5500 Series. This track utilizes the standard main cable size and standard carcass construction.

AVAILABLE SIZES
16 in (406 mm)
18 in (457 mm)
25 in (635 mm)
30 in (762 mm)
TREAD BAR HEIGHT
2.1 in (53 mm)
TREAD BARS
72* or 96**
TREAD BAR TIP WIDTH
2.1 in (53 mm)
TREAD BAR PITCH
6.8 in* & 9.0 in**
(173 mm & 229 mm)
GUIDE LUGS
36
GUIDE LUG LENGTH
5.5 in (140 mm)
CARCASS THICKNESS
1.26 in (29 mm)***
1.45 in (32 mm)****

** 25 & 30 in tracks*
*** 16 & 18 in tracks*
**** 16, 18 & 25 in tracks*
***** 30 in tracks*

Camso 3500 Series (General Ag)

The Camso 3500 series tracks are based on the original OEM standard factory track design, with several improvements, and compare in many ways to the original Caterpillar tracks originally built by Camso for the OEM production line.

The Camso 3500 Series tracks provide excellent traction for primary and secondary tillage applications. This track features the larger main cable for increased track strength and thicker carcass construction for additional wear and puncture resistance when compared to the Camso 2500 Series. The tread height is increased on these tracks to improve ride, improve traction, and provide improved tread life.

AVAILABLE SIZES
16 in (406 mm)
18 in (457 mm)
25 in (635 mm)
30 in (762 mm)
TREAD BAR HEIGHT
2.6 in (66 mm)
TREAD BARS
72* or 96**
TREAD BAR TIP WIDTH
1.5 in (38 mm)
TREAD BAR PITCH
6.8 in* & 9.0 in**
(173 mm & 229 mm)
GUIDE LUGS
36* or 48**
GUIDE LUG LENGTH
5.5 in* & 4.8 in**
(140 mm & 122 in)
CARCASS THICKNESS
1.22 in (31 mm)
1.37 in (35 mm)

** 16 & 18 in tracks*
*** 25 & 30 in tracks*

Camso 4500 Series (Side Slope)

AVAILABLE SIZES
25 in (635 mm)
TREAD BAR HEIGHT
2.6 in (66 mm)
TREAD BARS
72
TREAD BAR TIP WIDTH
1.5 in (38 mm)
TREAD BAR PITCH
9.0 in (229 mm)
GUIDE LUGS
48
GUIDE LUG LENGTH
4.8 in (122 mm)
CARCASS THICKNESS
1.26 in (32 mm)

The Camso 4500 Series Side Slope tracks are designed specifically to increase guide lug life of track tractors operating on steep side slopes. The track provides the features of the Camso 4500 Series (General Ag) tracks but has the longer guide lugs of the Camso 6500 Series tracks for improved detracking resistance and increased wear area. The longer guide lugs provide greater life and side load resistance on steep side slopes, improving overall track life and decreasing your cost of operation in these adverse conditions.

In many cases, customers have had to use the heavy duty Camso 5500 Series tracks in side slope applications for the longer guide lugs and improved side load capabilities. The new Camso 4500 Series provides the side slope capability of the Camso 5500 or 6500 Series tracks with the features, benefits, and price point of the Camso 3500/4500 Series (General Ag) tracks.

Camso 5500 Series (High Roading/Extreme Tread)

AVAILABLE SIZES
16 in (406 mm)*
18 in (457 mm)**
25 in (635 mm)
TREAD BAR HEIGHT
2.6 in (66 mm)
TREAD BARS
48 or 96
TREAD BAR TIP WIDTH
2.25 in (57 mm)
TREAD BAR PITCH
6.8 in (173 mm)
GUIDE LUGS
48
GUIDE LUG LENGTH
4.8 in (122 mm)
CARCASS THICKNESS
1.5 in (39 mm)
1.61 in (41 mm)

** 16 in tracks, Diagonal Tread*

*** 18 in tracks available in both chevron and diagonal tread patterns*

The Camso 5500 Series tracks are the top of the line heavy duty track offered by Camso. This track is based on the Extreme Service Caterpillar track design originally built by Camso for the OEM production line, but also includes several new features.

The Camso 5500 Series can be used in most applications such as heavy drawbar applications and low speed primary and secondary tillage applications. This includes demanding applications such as bed work, abrasive soils, side slopes, high roading, and scraper applications. This track features the large main cable and additional carcass thickness for added wear resistance in tough conditions. The treadbars are thicker, resulting in more rubber on the ground, improving tread wear during roading and hard soil conditions.

Camso 5500 Series (High Traction)

AVAILABLE SIZES
18 in (457 mm)
TREAD BAR HEIGHT
2.6 in (66 mm)
TREAD BARS
72
TREAD BAR TIP WIDTH
1.5 in (38 mm)
TREAD BAR PITCH
9.0 in (229 mm)
GUIDE LUGS
48
GUIDE LUG LENGTH
4.8 in (122 mm)
CARCASS THICKNESS
1.5 in (39 mm)

The Camso 5500 High Traction Series tracks provide the carcass strength and durability of the Camso 5500 Series tracks with the added traction in soft field conditions and mud clean out of the Camso 3500 Series tracks.

The Camso 5500 High Traction Series tracks is recommended to be used in applications such as heavy drawbar applications that require traction in soft field conditions and the optimum tread cleanout in sticky conditions. This track features the large main cable and increased carcass thickness, the treadbars are tapered and have a greater pitch improving traction in wet/soft field conditions and optimum tread cleanout in muddy or sticky field conditions. Although this track has improved traction in wet conditions, the tradeoff is that this track will have a rougher ride, increased vibration and, increased tread wear compared to the Camso 5500 Series tracks.

Track Series vs. Application Matrix (Track Type)

	APPLICATION/OPERATION DESCRIPTION	2500	3500/4500	5500	5500 (High Traction)
Soil Types	Hard packed clay	Not recommended	Not recommended	Recommended	Not recommended
	Silt/Loam	OK to use	Recommended	OK to use	Recommended
	Sticky and wet ground conditions	Not recommended	OK to use	Not recommended	Recommended
	Gumbo	Not recommended	OK to use	Not recommended	Recommended
	Rocky/Abrasive	Not recommended	Not recommended	Recommended	Not Recommended
	Gravel	Not recommended	Not recommended	Recommended	Recommended
	Sandy	OK to use	OK to use	Recommended	Recommended
	Snow/Ice	OK to use	OK to use	Recommended	OK to use
Field Conditions	Minimal ground disturbance/Berming	OK to use	OK to use	OK to use	Not recommended
	Extreme cold	OK to use	Recommended	Not recommended	Not recommended
	In furrow applications	Not recommended	Not recommended	Recommended	Not recommended
	Short fields, applications requiring a lot of turning	Not recommended	Not recommended	Recommended	Recommended
	Flat land farming, slopes up to 10%	OK to use	Recommended	Recommended	Recommended
	Moderate side slope applications, slopes from 10 to 25%	Use 48 Guide Lugs	Use 48 Guide Lugs	Use 48 Guide Lugs	Use 48 Guide Lugs
	Severe side slope applications, slopes greater than 25%	Use 48 Guide Lugs	Use 48 Guide Lugs	Use 48 Guide Lugs	Use 48 Guide Lugs
Road Travel	Small amount of roading, most field and travel distances within 5 mile radius	Recommended	Recommended	Recommended	Recommended
	Moderate amount of roading, most field and travel distances between 5 and 10 mile radius	OK to use	OK to use	Recommended	OK to use
	High amount of roading, typically travel in excess of 10 miles	Not recommended	OK to use	Recommended	OK to use
Crop Types	Wheat/Cereal grains	OK to use	Recommended	Recommended	Recommended
	Corn/Sorghum	OK to use	Recommended	Recommended	Recommended
	Soybeans	OK to use	Recommended	Recommended	Recommended
	Alfalfa/Grasses/Switchgrass	OK to use	Recommended	OK to use	Recommended
	Cotton	Not recommended	OK to use	Recommended	OK to use
	Sunflowers	Not recommended	OK to use	Recommended	OK to use
	Rice	Not recommended	Recommended	OK to use	Recommended
	Sugarcane	Not recommended	OK to use	Recommended	OK to use
	Sugar beets	OK to use	OK to use	Recommended	Recommended
	Vegetables	OK to use	OK to use	Recommended	OK to use

Track Series vs. Application Matrix (Track Type) (Cont'd)

	APPLICATION/OPERATION DESCRIPTION	2500	3500/4500	5500	5500 (High Traction)
Applications	Primary tillage (deep ripping, chisel plow, etc.)	Not recommended	OK to use	Recommended	Recommended
	Secondary tillage (field cultivator, disk, roller, etc.)	OK to use	Recommended	Recommended	Recommended
	Fully mounted roll over plow	Not recommended	Not recommended	Recommended	Recommended
	Row crop planter	OK to use	Recommended	Recommended	Recommended
	Air seeder	OK to use	Recommended	Recommended	Recommended
	Manure tank	Not recommended	OK to use	Recommended	OK to use
	Grain cart	OK to use	Recommended	Recommended	Recommended
	Tile plow	Not recommended	Not recommended	Recommended	Recommended
	Spraying	Recommended	Recommended	OK to use	Recommended
	Hay baling	Recommended	Recommended	OK to use	Recommended
	Stalk chopper/Brush hog	OK to use	OK to use	Recommended	OK to use
	Vegetable bedder	OK to use	OK to use	Recommended	OK to use
	Front blade – Silage	Not recommended	Not recommended	Recommended	Recommended
	Forage harvester	OK to use	Recommended	OK to use	Recommended
	Snow grooming	OK to use	Recommended	OK to use	Recommended
	Agricultural scraper	Not recommended	Not recommended	Recommended	OK to use
	Commercial scraper	Not recommended	Not recommended	Recommended	Not recommended
	Forestry	Not recommended	Not recommended	Recommended	Not recommended
	Non-agricultural applications	Not recommended	Not recommended	Recommended	Not recommended

Track Series vs. Application Matrix (Track Width)

IMPORTANT: Camso offers and highly recommends using wide midrollers for use with 25 in and 30 in tracks in order to maximize tread and midroller life. Always consider updating to wide midrollers when 25 in or 30 in wide tracks are installed.

	APPLICATION/OPERATION DESCRIPTION	16 in (406 mm)	18 in (457 mm)	25 in & 30 in (635 mm & 762 mm)
Field Conditions	Minimal ground disturbance/Berming	OK to use	OK to use	Recommended
	Extreme cold	OK to use	OK to use	OK to use
	In furrow applications	OK to use	Recommended	Not recommended
	Short fields, applications requiring a lot of turning	OK to use	OK to use	OK to use
	Flat land farming, slopes up to 10%	OK to use	OK to use	OK to use
	Moderate side slope applications, slopes from 10 to 25%	OK to use	OK to use	Recommended
	Severe side slope applications, slopes greater than 25%	Not recommended	Not recommended	Recommended
Road Travel	Small amount of roading, most field and travel distances within 5 mile radius	OK to use	OK to use	OK to use
	Moderate amount of roading, most field and travel distances between 5 and 10 mile radius	OK to use	OK to use	OK to use
	High amount of roading, typically travel in excess of 10 miles	OK to use	OK to use	OK to use
Applications	Primary tillage (deep ripping, chisel plow, etc.)	Not recommended	OK to use	Recommended
	Secondary tillage (field cultivator, disk, roller, etc.)	Not recommended	OK to use	OK to use
	Fully mounted roll over plow	Not recommended	OK to use	Recommended
	Row crop planter	OK to use	OK to use	OK to use
	Air seeder	Not recommended	OK to use	Recommended
	Manure tank	Not recommended	OK to use	OK to use
	Grain cart	Not recommended	OK to use	OK to use
	Tile plow	Not recommended	OK to use	Recommended
	Spraying	OK to use	OK to use	OK to use
	Hay baling	OK to use	OK to use	OK to use
	Stalk chopper/Brush hog	OK to use	OK to use	OK to use
	Vegetable bedder	OK to use	OK to use	OK to use
	Front blade – Silage	Not recommended	OK to use	Recommended
	Forage harvestor	OK to use	OK to use	OK to use
	Snow grooming	Not recommended	OK to use	Recommended
	Agricultural scraper	Not recommended	OK to use	25 in only
	Commercial scraper	Not recommended	OK to use	25 in only
	Forestry	Not recommended	OK to use	OK to use
	Non-agricultural applications	Not recommended	OK to use	25 in only

Track Cross Reference Replacement List

SIMILAR CAT P/N	WIDTH	TREAD-BARS	TREAD BAR HEIGHT	GUIDE LUGS	CARCASS THICKNESS	RECOMMENDED CAMSO SERIES TRACK	CAMSO DIFFERENCES
1R-1109	16 in	96	2.1 in (53 mm)	36	1.1 in (29 mm)	A16AH03302	Lowest initial cost track - suggested for use in lower annual usage situations
1R-1354	16 in	96	2.6 in (66 mm)	36	1.2 in (31 mm)	630-1601	36 guide lugs, large cable, 96 treads
1R-1337	16 in	48 (RH)	2.6 in (66 mm)	48	1.5 in (38 mm)	650-1602	Diagonal tread, large cable, added ID layer
1R-1337	16 in	48 (LH)	2.6 in (66 mm)	48	1.5 in (38 mm)	650-1603	Diagonal tread, large cable, added ID layer
1R-1354	16 in	72	2.6 in (66 mm)	48	1.5 in (38 mm)	650-1645	Large cable, 2 added ID layers
N/A	18 in	96	2.1 in (53 mm)	36	1.1 in (29 mm)	A18AH03303	Lowest initial cost track - suggested for use in lower annual usage situations
1R-1110	18 in	96	2.6 in (66 mm)	36	1.2 in (31 mm)	630-1801	Large cable, 96 treads, additional ID Layer
1R-1336	18 in	96	2.6 in (66 mm)	48	1.5 in (38 mm)	650-1802	Large cable, added ID Layer, added breaker ply layer
1R-1110	18 in	72	2.6 in (66 mm)	48	1.5 in (38 mm)	650-1841	48 guide lugs, Large cable, added ID rubber layer, added ID reinforcement layer
1R-1336	18 in	48 (RH)	2.6 in (66 mm)	48	1.5 in (38 mm)	650-1842	Diagonal Tread, large cable, added ID Layer, additional breaker ply layer
1R-1336	18 in	48 (LH)	2.6 in (66 mm)	48	1.5 in (38 mm)	650-1843	Diagonal Tread, large cable, added ID rubber layer, added ID reinforcement layer
N/A	25 in	72	2.1 in (53 mm)	36	1.1 in (29 mm)	A25AH03304	Lowest initial cost track - suggested for use in lower annual usage situations
1R-1283	25 in	72	2.6 in (66 mm)	48	1.3 in (32 mm)	630-2501	Same track
1R-1308	25 in	96	2.6 in (66 mm)	48	1.6 in (41 mm)	650-2502	Large cable
1R-1283	25 in	72	2.6 in (66 mm)	48	1.6 in (41 mm)	650-2517	Large cable
N/A	30 in	72	2.1 in (53 mm)	36	1.3 in (32 mm)	A30AH03305	Lowest initial cost track - suggested for use in lower annual usage situations
1R-1378	30 in	72	2.6 in (66 mm)	48	1.4 in (35 mm)	630-3009	Same track

Earlier to Current Camso P/N Cross Reference

OLD CAMSO P/N	TRACK WIDTH	TRACK DESCRIPTION	NEW CAMSO P/N
620-1606	16 in	2500 Series (96 Tread)	A16AH03302
620-1805	18 in	2500 Series (96 Tread)	A18AH03303
620-2500	25 in	2500 Series (72 Tread)	A25AH03304
620-3069	30 in	2500 Series (72 Tread)	A30AH03305

CHALLENGER 65-95 SPECIFICATIONS AND SERVICE INFORMATION

General Facts

- Produced 1986-2002
- 270-410 HP
- 65,70,75,85,95 Series
- 88 in gage (1986-1993)
- 90 in gage (1993-2002)

Track System Service Information

Front Idler Bolts
(Torque 52 ft-lbs in sequence, then 848 ft-lbs final)

Camso Alignment Kits

CST-0400 Shim Kit
1 pc Shims (65,65B,75,early 65C, early 75C)
CST-0500 Shim Kit
2 pc Shims (Later C, D, E models)

Detensioning Hose Kit and Literature
CST-0200 Detensioning Kit
CPB-0317 Removal/Installation Guide

Machine Serial Number Location
(Frame Rail at base of steps)

Machine Specific Notes

65 (7YC) and 75 (4CJ), as well as 65C (2ZJ1-499) and 75C (4KK1-499) models require disassembly of front idler hub and spindle to realign tracks. Prepare to spend several hours installing and aligning new tracks.

Track built before 1994 are known as “Bias ply” tracks vs. later tracks are known as “neutral steer”. Switching from a bias to a neutral track requires more than usual alignment shimming changes.

Always release air in air bag when removing tracks, and suspend the bogie assembly in order for the guide lugs to be slid under the midrollers when removing tracks.

Detension BOTH tracks at the same time. This is important as detensioning only one side can cause front axle to rotate and catch on center pin, damaging the pin or frame saddle.

30 in Tracks

30 in Tracks are NOT compatible with Challenger 65(7YC), 75 (4CJ), 65C(2ZJ1-499) and 75C(4KK1-499) Interference with tension cylinder will result.

Cast Slotted Drivewheels

Machines using CSD’s should only be equipped with tracks specifically designed for CSD’s. Always make sure to check the adjustment of the drivewheel cleaner/ scrapers. Have customer install scraper bars if not equipped or worn out.

CAT TILLAGE (65-95 SERIES) TRACK SELECTION

Every operation demands efficiency and reliability. In order to balance track life, flotation and compaction, Camso offers a range of tracks to customize your tractor to your operation.

Eight track styles are available in 4 widths.
These tracks include:

- Camso 2500 Series (General Ag)
- Camso 3500 Series (General Ag)
- Camso 4500 Series (Side Slope)
- Camso 3500 Series (Low Ground Disturbance)
- Camso 5500 Series (Cast Slotted Driver)
- Camso 5500 Series (General Ag)
- Camso 5500 Series (High Roading/Extreme Tread)
- Camso 5500 Series (High Traction)

TRACK SERIES	TRACK DESCRIPTION	CAMSO P/N	TRACK WIDTH	CARCASS THICKNESS	GUIDE LUGS	TREAD BARS	TREAD BAR HEIGHT*	TREAD BAR PITCH*
2500	General Ag	A25AB03311	25 in (635 mm)	1.3 in (34 mm)	36	74	2.3 in (58 mm)	9.3 in (236 mm)
2500	General Ag	A30AB03312	30 in (762 mm)	1.3 in (34 mm)	36	74	2.3 in (58 mm)	9.3 in (236 mm)
3500	General Ag	632-2529	25 in (635 mm)	1.4 in (36 mm)	36	74	2.6 in (66 mm)	9.3 in (236 mm)
3500	General Ag	632-2711	27.5 in (698 mm)	1.4 in (36 mm)	36	74	2.6 in (66 mm)	9.3 in (236 mm)
3500	General Ag	632-3048	30 in (762 mm)	1.4 in (36 mm)	36	74	2.6 in (66 mm)	9.3 in (236 mm)
4500	Side Slope	F27AL02917	27.5 in (698 mm)	1.3 in (34 mm)	48	74	2.6 in (66 mm)	9.3 in (236 mm)
4500	Side Slope	F30AL02918	30 in (762 mm)	1.3 in (34 mm)	48	74	2.6 in (40 mm)	9.3 in (236 mm)
3500	Low Ground Disturbance	632-2715	27.5 in (698 mm)	1.4 in (36 mm)	48	96	1.6 in (40 mm)	7.2 in (183 mm)
3500	Low Ground Disturbance	632-3057	30 in (762 mm)	1.4 in (36 mm)	48	96	1.6 in (66 mm)	7.2 in (183 mm)
5500	Cast Slotted Driver	652-2702	27.5 in (698 mm)	1.6 in (41 mm)	48	96	2.6 in (66 mm)	7.2 in (183 mm)
5500	Cast Slotted Driver	652-3004	30 in (762 mm)	1.6 in (41 mm)	48	96	2.6 in (66 mm)	7.2 in (183 mm)
5500	General Ag	652-2506	25 in (635 mm)	1.6 in (41 mm)	48	96	2.6 in (66 mm)	7.2 in (183 mm)
5500	General Ag	652-2713	27.5 in (698 mm)	1.6 in (41 mm)	48	96	2.6 in (66 mm)	7.2 in (183 mm)
5500	General Ag	652-3055	30 in (762 mm)	1.6 in (41 mm)	48	96	2.6 in (66 mm)	7.2 in (183 mm)
5500	High Roading/Extreme Tread	652-2714	27.5 in (698 mm)	1.6 in (41 mm)	48	96	2.6 in (66 mm)	7.2 in (183 mm)
5500	High Roading/Extreme Tread	652-3052	30 in (762 mm)	1.6 in (41 mm)	48	96	2.6 in (66 mm)	7.2 in (183 mm)
5500	High Traction	652-3049	30 in (762 mm)	1.6 in (41 mm)	48	74	2.6 in (66 mm)	9.3 in (236 mm)

NOTE: *30 in tracks cannot be used with the following Challenger Models: 65 A&B (SN Range: 7YC0001 - up), 75 (SN Range: 4CJ0001 - up), 65C SN Range: 2ZJ1 - 2ZJ0499), and 75C (SN Range 4KK0001 - 4KK0499). 30 in tracks do not provide adequate clearance between the tracks and the tractor frame for the tractors listed. 27.5 in width tracks should be used in place of the 30 in tracks.*

** Nominal dimension-actual dimensions may vary within a tolerance.*

The tracks are tensioned by a mechanical spring, or a combination of mechanical spring and nitrogen gas pressure. This creates a track tension of 17,000 lbs (7710 kg).

Correct track tension should be maintained to reduce damage to the tracks. Reference the tractor's Operation and Maintenance Manual (OMM) for procedures to properly maintain track tension.

CAT Tillage Models
[336 in (8534 mm) track circumference]:

65	65B	65C	65D	65E	70C	75C
75D	75E	85C	85D	85E	95E	

Camso 2500 Series (General Ag)

The Camso 2500 Series is a track with the basic features of the 3500 series but offered with fewer treadbars and at a reduced tread height, and is targeted for customers looking at lowest cost track replacement. This track performs well in light primary and secondary tillage applications. This track is an excellent track for use in the older, lower usage tractors.

This track utilizes the same premium rubber compounds and materials as the 3500 and 5500 Series. This track utilizes the standard main cable size and standard carcass construction.

AVAILABLE SIZES
25 in (635 mm)
30 in (762 mm)
TREAD BAR HEIGHT
2.3 in (58 mm)
TREAD BARS
74
TREAD BAR TIP WIDTH
1.6 in (40 mm)
TREAD BAR PITCH
9.3 in (236 mm)
GUIDE LUGS
36
GUIDE LUG LENGTH
5.0 in (127 mm)
CARCASS THICKNESS
1.3 in (34 mm)

Camso 3500 Series (General Ag)

The Camso 3500 series tracks are based on the original OEM standard factory track design, with several improvements, and compare in many ways to the original Caterpillar tracks originally built by Camso for the OEM production line.

The Camso 3500 Series tracks provide excellent traction for primary and secondary tillage applications. This track features the larger main cable for increased track strength and thicker carcass construction for additional wear and puncture resistance when compared to the Camso 2500 Series. The tread height is increased on these tracks to improve ride, improve traction, and provide improved tread life.

SPECIAL NOTE*: For customers who have used Caterpillar 1R1075 tracks in the past, this track offers the same tread design (with 2 additional treadbars), as well as all the features and benefits, while also including an improved carcass design.*

AVAILABLE SIZES
25 in (635 mm)
27.5 in (698 mm)
30 in (762 mm)
TREAD BAR HEIGHT
2.6 in (66 mm)
TREAD BARS
74
TREAD BAR TIP WIDTH
1.5 in (38 mm)
TREAD BAR PITCH
9.3 in (236 mm)
GUIDE LUGS
36
GUIDE LUG LENGTH
6.2 in (157 mm)
CARCASS THICKNESS
1.4 in (36 mm)

Camso 3500 Series (Low Ground Disturbance)

The Camso 3500 LGD Series tracks were designed specifically for customers desiring a very low profile, tight pitch track, with maximum dispersion of ground pressure. The LGD track is optimized for use where maximum distribution of weight is desired with the minimum amount of surface disturbance.

The Camso 3500 LGD Series tracks feature short, wide treadbars to provide maximum distribution of weight and minimal ground disturbance. These features result in reduced cleanout ability and lower tractive properties.

AVAILABLE SIZES
27.5 in (698 mm)
30 in (762 mm)
TREAD BAR HEIGHT
1.6 in (40 mm)
TREAD BARS
96
TREAD BAR TIP WIDTH
2.8 in (71 mm)
TREAD BAR PITCH
7.2 in (183 mm)
GUIDE LUGS
48
GUIDE LUG LENGTH
5.0 in (127 mm)
CARCASS THICKNESS
1.4 in (36 mm)

Camso 4500 Series (Side Slope)

Designed to increase guide lug life of track tractors operating on steep sideslopes, this track provides the features of the Camso 3500 series but with additional guide lugs for improved detracking resistance and increased wear area. The Camso 4500 SS Series Tracks provide the side slope capability of a Camso 5500/6500 track but with the features and price point of a Camso 4500 series track.

This track was introduced in 2011 per request of the market, to address a need of a track with Camso 3500 features, benefits, and price point, but with side slope capability previously only available with the Camso 5500 series.

AVAILABLE SIZES
27.5 in (698 mm)
30 in (762 mm)
TREAD BAR HEIGHT
2.6 in (66 mm)
TREAD BARS
74
TREAD BAR TIP WIDTH
1.5 in (38 mm)
TREAD BAR PITCH
9.3 in (236 mm)
GUIDE LUGS
48
GUIDE LUG LENGTH
5.0 in (127 mm)
CARCASS THICKNESS
1.3 in (34 mm)

Camso 5500 Series (Cast Slotted Driver)

AVAILABLE SIZES
27.5 in (699 mm)
30 in (762 mm)
TREAD BAR HEIGHT
2.6 in (66 mm)
TREAD BARS
96
TREAD BAR TIP WIDTH
1.5 in (38 mm)
TREAD BAR PITCH
7.2 in (183 mm)
GUIDE LUGS
48
GUIDE LUG LENGTH
5.0 in (127 mm)
CARCASS THICKNESS
1.6 in (41 mm)

Camso 5500 series tracks were originally created for use with cast slotted drivewheels (CSD's), and have filled that role successfully for many years. However, analysis has shown that worn CSD's will accelerate damage to the inside of a track due to higher point loading from uneven sprocket tooth wear. This internal damage can reduce track life overall as a result.

Modification of the track construction has been shown to extend the life of Camso 5500 CSD tracks, especially with worn cast slotted drivewheels.

The Camso 5500 CSD Series tracks are the only tracks recommended for use with tractors equipped with cast slotted drivewheels.

To achieve maximum life from the Camso 5500 CSD Series tracks, Cast Slotted Drivers should be replaced if worn and the cast slotted drivewheel scrapers must be maintained and adjusted regularly. Please follow instructions in the OMM for proper adjustment procedures.

SPECIAL NOTE*: For maximum track life, Camso recommends upgrading to 1R1184 and 1R1185 chevron style rubber drivewheels (inboard brakes) or 1R1247 and 1R1248 (older outboard brake machines) to replace the older worn cast slotted drivewheels. The listed rubber drivewheel designs use the latest compounds to provide the tractive benefits of the cast slotted drivewheels in nearly all farming applications, while significantly reducing track inner wear and tear caused by CSD's.*

Camso 5500 Series (General Ag)

AVAILABLE SIZES
25 in (635 mm)
27.5 in (699 mm)
30 in (762 mm)
TREAD BAR HEIGHT
2.6 in (66 mm)
TREAD BARS
96
TREAD BAR TIP WIDTH
1.5 in (38 mm)
TREAD BAR PITCH
7.2 in (183 mm)
GUIDE LUGS
48
GUIDE LUG LENGTH
5.0 in (127 mm)
CARCASS THICKNESS
1.6 in (41 mm)

Originally, the Camso 5500 Series tracks for CAT Challenger 65-95 models were designed to be used with the optional cast slotted drivewheel or the standard rubber drivewheel. As a result, the more aggressive nature of the cast slotted drivewheel required a much heavier inside carcass design, which added cost to the track also being used on machines with rubber drivewheels.

Camso now offers a 5500 RD series track specifically designed for rubber drivewheels. Although this track still carries the same major features as the earlier Camso 5500 series (additional ID reinforcement, larger main cable, 96 tread design), it now provides a more cost effective carcass solution optimized for the less demanding requirements of rubber drivewheels.

Camso 5500 Series (High Roading/Extreme Tread)

AVAILABLE SIZES
27.5 in (699 mm)
30 in (762 mm)
TREAD BAR HEIGHT
2.6 in (66 mm)
TREAD BARS
96
TREAD BAR TIP WIDTH
1.9 in (48 mm)
TREAD BAR PITCH
7.2 in (183 mm)
GUIDE LUGS
48
GUIDE LUG LENGTH
5.0 in (127 mm)
CARCASS THICKNESS
1.6 in (41 mm)

Camso now offers the ultimate Agricultural track – the 5500 HR series. This track is equipped with a mongo 2.6 in tall x 1.9 in wide tread design, which provides an impressive 34% rubber volume increase over the other Camso 5500 series tracks. The Camso 5500 HR track offers even more benefits – including a larger main cable, a heavier inner carcass design, and tapered treadbar edges for more even wear on the wider track widths.

This track provides customers the maximum life in applications that have high roading requirements.

SPECIAL NOTE*: For customers who have used Caterpillar 1R335 and 1R1355 tracks in the past, this track offers the same tread design, features and benefits, while also including a much improved carcass design.*

Camso 5500 Series (High Traction)

AVAILABLE SIZES
30 in (762 mm)
TREAD BAR HEIGHT
2.6 in (66 mm)
TREAD BARS
74
TREAD BAR TIP WIDTH
1.5 in (38 mm)
TREAD BAR PITCH
9.3 in (236 mm)
GUIDE LUGS
48
GUIDE LUG LENGTH
5.0 in (127 mm)
CARCASS THICKNESS
1.6 in (41 mm)

The Camso 5500 High Traction Series tracks provide the carcass strength and durability of the Camso 5500 Series tracks with the added traction in soft field conditions and mud clean out of the Camso 3500 Series tracks.

The Camso 5500 High Traction Series tracks is recommended to be used in applications such as heavy drawbar applications that require traction in soft field conditions and the optimum tread cleanout in sticky conditions. This track features the large main cable and increased carcass thickness, the treadbars are tapered and have a greater pitch improving traction in wet/soft field conditions and optimum tread cleanout in muddy or sticky field conditions. Although this track has improved traction in wet conditions, the tradeoff is that this track will have a rougher ride, increased vibration and, increased tread wear compared to the Camso 5500 Series tracks.

SPECIAL NOTE*: For customers who have used Caterpillar 1R1232 tracks in the past, this track offers the same tread design, features and benefits, while also including a much improved carcass design.*

Track Series vs. Application Matrix (Track Type)

	APPLICATION/ OPERATION DESCRIPTION	2500	3500	4500 SS	3500 LGD	5500 CSD	5500 RD	5500 HR	5500 HT
Soil Types	Hard packed clay	Not recommended	Not recommended	Not recommended	OK to use	Recommended	Recommended	Recommended	Not recommended
	Silt/Loam	OK to use	Recommended	Recommended	OK to use	OK to use	OK to use	OK to use	Recommended
	Sticky and wet ground conditions	OK to use	OK to use	OK to use	Not recommended	OK to use	OK to use	OK to use	Recommended
	Gumbo	OK to use	OK to use	OK to use	Not recommended	OK to use	OK to use	OK to use	Recommended
	Rocky/Abrasive	Not recommended	Not recommended	Not recommended	Not recommended	Recommended	Recommended	Recommended	OK to use
	Gravel	Not recommended	Not recommended	Not recommended	Not recommended	Recommended	Recommended	Recommended	OK to use
	Sandy	OK to use	OK to use	OK to use	Not recommended	OK to use	OK to use	OK to use	Recommended
	Snow/Ice	OK to use	OK to use	OK to use	Not recommended	OK to use	OK to use	OK to use	OK to use
Tractor Configuration	Cast slotted drivewheels	Not recommended	Not recommended	Not recommended	Not recommended	Recommended	Not recommended	Not recommended	Not recommended
	Rubberized drivewheels	OK to use	OK to use	OK to use	OK to use	Not recommended	OK to use	OK to use	OK to use
Field Conditions	Minimal ground disturbance/ Berming	OK to use	OK to use	OK to use	Recommended	OK to use	OK to use	Not recommended	OK to use
	Extreme cold	OK to use	Recommended	OK to use	Not recommended	OK to use	OK to use	OK to use	OK to use
	Short fields, applications requiring a lot of turning	Not recommended	Not recommended	OK to use	Not recommended	Recommended	Recommended	Recommended	Recommended
	Flat land farming, slopes up to 10%	OK to use	Recommended	Recommended	OK to use	Recommended	OK to use	OK to use	Recommended
	Moderate side slope applications, slopes from 10 to 25%	OK to use	Recommended	Recommended	Not recommended	Recommended	Recommended	Recommended	Recommended
	Severe side slope applications, slopes greater than 25%	Not recommended	Not recommended	Recommended	Not recommended	Recommended	Recommended	Recommended	Recommended

Track Series vs. Application Matrix (Track Type) (Cont'd)

	APPLICATION/ OPERATION DESCRIPTION	2500	3500	4500 SS	3500 LGD	5500 CSD	5500 RD	5500 HR	5500 HT
Road Travel	Small amount of roading, most field and travel distances within 5 mile radius	Recommended	Recommended	Recommended	Recommended	Recommended	Recommended	Recommended	Recommended
	Moderate amount of roading, most field and travel distances between 5 and 10 mile radius	OK to use	Recommended	Recommended	OK to use	Recommended	Recommended	Recommended	Recommended
	High amount of roading, typically travel in excess of 10 miles	Not recommended	OK to use	OK to use	Not recommended	OK to use	OK to use	Recommended	OK to use
Crop Types	Wheat/Cereal grains	OK to use	Recommended	Recommended	OK to use	Recommended	Recommended	Recommended	Recommended
	Corn/Sorghum	OK to use	Recommended	Recommended	OK to use	Recommended	Recommended	Recommended	Recommended
	Soybeans	OK to use	Recommended	Recommended	OK to use	Recommended	Recommended	Recommended	Recommended
	Alfalfa/Grasses/ Switchgrass	OK to use	OK to use	OK to use	Recommended	OK to use	OK to use	OK to use	OK to use
	Cotton	Not recommended	OK to use	OK to use	Not recommended	Recommended	Recommended	Recommended	OK to use
	Sun flowers	Not recommended	OK to use	OK to use	Not recommended	Recommended	Recommended	Recommended	OK to use
	Rice	Not recommended	Recommended	OK to use	Not recommended	OK to use	OK to use	Not recommended	Recommended
	Sugarcane	Not recommended	OK to use	OK to use	Not recommended	Recommended	Recommended	OK to use	Recommended
	Sugar beets	OK to use	OK to use	OK to use	Not recommended	OK to use	OK to use	OK to use	OK to use
	Vegetables	OK to use	OK to use	OK to use	Not recommended	OK to use	OK to use	OK to use	OK to use

Track Series vs. Application Matrix (Track Type) (Cont'd)

	APPLICATION/ OPERATION DESCRIPTION	2500	3500	4500 SS	3500 LGD	5500 CSD	5500 RD	5500 HR	5500 HT
Applications	Primary tillage (deep ripping, chisel plow, etc.)	OK to use	Recommended	Recommended	Not recommended	Recommended	Recommended	Recommended	Recommended
	Secondary tillage (field cultivator, disk, roller, etc.)	OK to use	Recommended	Recommended	OK to use	Recommended	Recommended	Recommended	Recommended
	Fully mounted roll over plow	Not recommended	Not recommended	Not recommended	Not recommended	Recommended	Recommended	Recommended	Recommended
	Row crop planter	OK to use	Recommended	OK to use	OK to use	OK to use	OK to use	OK to use	OK to use
	Air seeder	OK to use	Recommended	OK to use	OK to use	OK to use	OK to use	OK to use	OK to use
	Manure tank	Not recommended	OK to use	OK to use	OK to use	OK to use	OK to use	Recommended	OK to use
	Grain cart	OK to use	Recommended	OK to use	OK to use	OK to use	OK to use	OK to use	Recommended
	Tile plow	Not recommended	Not recommended	Not recommended	Not recommended	Recommended	Recommended	Recommended	Not recommended
	Spraying	Recommended	Recommended	OK to use	Recommended	OK to use	OK to use	OK to use	OK to use
	Hay baling	OK to use	OK to use	OK to use	Recommended	OK to use	OK to use	OK to use	OK to use
	Stalk chopper/Brush hog	OK to use	OK to use	OK to use	OK to use	Recommended	Recommended	Recommended	OK to use
	Front blade – Silage	Not recommended	Not recommended	Not recommended	Not recommended	Recommended	Recommended	Recommended	OK to use
	Forage harvestor	OK to use	Recommended	OK to use	OK to use	OK to use	OK to use	OK to use	OK to use
	Snow grooming	OK to use	Recommended	OK to use	Not recommended	OK to use	OK to use	OK to use	OK to use
	Agricultural scraper	Not recommended	Not recommended	Not recommended	Not recommended	Recommended	Recommended	Recommended	OK to use
	Commerical scraper	Not recommended	Not recommended	Not recommended	Not recommended	Recommended	Recommended	Recommended	Not recommended
	Forestry	Not recommended	Not recommended	Not recommended	Not recommended	Recommended	Recommended	Recommended	Not recommended
	Non-agricultural applications	Not recommended	Not recommended	Not recommended	Not recommended	Recommended	Recommended	Recommended	Not recommended

Track Series vs. Application Matrix (Track Width)

	APPLICATION/OPERATION DESCRIPTION	25 in (635 mm)	27.5 in (699 mm)	30 in (762 mm)
Field Conditions	Minimal ground disturbance/Berming	OK to use	OK to use	OK to use
	Extreme Cold	OK to use	OK to use	OK to use
	Short fields, applications requiring a lot of turning	OK to use	OK to use	OK to use
	Flat land farming, slopes up to 10%	OK to use	OK to use	OK to use
	Moderate side slope applications, slopes from 10 to 25%	OK to use	Recommended	Recommended
	Severe side slope applications, slopes greater than 25%	Not recommended	Recommended	Recommended
Road Travel	Small amount of roading, most field and travel distances within 5 mile radius	OK to use	OK to use	OK to use
	Moderate amount of roading, most field and travel distances between 5 and 10 mile radius	OK to use	OK to use	OK to use
	High amount of roading, typically travel in excess of 10 miles	OK to use	OK to use	OK to use
Applications	Primary tillage (deep ripping, chisel plow, etc.)	OK to use	OK to use	Recommended
	Secondary tillage (field cultivator, disk, roller, etc.)	OK to use	OK to use	OK to use
	Fully mounted roll over plow	OK to use	Recommended	Recommended
	Row crop planter	OK to use	OK to use	OK to use
	Air seeder	OK to use	Recommended	Recommended
	Manure tank	OK to use	Recommended	Recommended
	Grain cart	OK to use	OK to use	OK to use
	Tile plow	OK to use	Recommended	Recommended
	Spraying	OK to use	OK to use	OK to use
	Hay baling	OK to use	OK to use	OK to use
	Stalk chopper/Brush hog	OK to use	OK to use	OK to use
	Front blade – Silage	OK to use	Recommended	Recommended
	Forage harvestor	OK to use	OK to use	OK to use
	Snow grooming	OK to use	OK to use	Recommended
	Agricultural scraper	OK to use	Recommended	Recommended
	Commerical scraper	Not recommended	Recommended	Recommended
	Forestry	Not recommended	Recommended	Recommended
	Non-agricultural applications	Not recommended	Recommended	Recommended

Challenger Tillage Legacy (CH65-95) Original OEM to Camso Part Number Cross Reference

CAT P/N	TRACK WIDTH	TRACK DESCRIPTION	DRIVEWHEEL TYPE	RECOMMENDED CAMSO SERIES TRACK	CHANGES OR DIFFERENCES IN CAMSO SERIES
1R0838	25 in	General Ag	Rubber	632-2529	Upgraded w/ 2 more treadbars (74 total vs 72) - if low usage suggest 2500 series
1R1075	30 in	General Ag	Rubber	632-3048	Upgraded w/ 2 more treadbars (74 total vs 72) - if low usage suggest 2500 series
1R1076	30 in	Spec App / LGD	Rubber	632-3057	No design differences
1R1084	27.5 in	General Ag	Rubber	632-2711	Upgraded w/ 2 more treadbars (74 total vs 72)
1R1085	27.5 in	Spec App / LGD	Rubber	632-2715	No differences
1R1097	25 in	General Ag	Rubber	632-2529	Upgraded w/ 2 more treadbars (74 total vs 72) - if low usage suggest 2500 series
1R1098	25 in	Spec App / LGD Ag usage	Rubber	632-2715	Move to 27.5 in width (632-2715) - same configuration but has 48 vs 36 guide lugs
1R1101	35 in	General Ag LH offset	Rubber	632-3048 632-3503	Upgraded w/ 2 more treadbars (74 vs 72) - Note: replace with 30 in width if farming
1R1102	35 in	General Ag RH offset	Rubber	632-3048 632-3504	Upgraded w/ 2 more treadbars (74 vs 72) - Note: replace with 30 in width if farming
1R1103	35 in	Spec App / LGD LH	Rubber	632-3057 632-3511	No differences. Note: replace with 30 in width if farming
1R1104	35 in	Spec App / LGD RH	Rubber	632-3057 632-3512	No differences. Note: replace with 30 in width if farming
1R1134	30 in	General Ag - ID Ply	Rubber	632-3048	Camso does not include inner 90
1R1150	27.5 in	General Ag - w/IP Ply	Rubber	632-2711	Minus inner 90 but upgraded w/ 2 more treadbars (74 vs 72)
1R1186	27.5 in	General Ag w/ 48 GL	Rubber	F27AL02917	Sideslope Track - Upgraded w/ 2 more treadbars (74 total vs 72) and improved carcass/guides
1R1187	30 in	General Ag - 48 GL	Rubber	F30AL02918	Upgraded w/ 2 more treadbars (74 vs 72) and improved carcass/guides
1R1232	30 in	General Ag - IP	Rubber	652-3049	Upgraded w/ 2 more treadbars (74 vs 72) and 5.3mm HD main cable
			CSD(Cast)	652-3004	Upgraded w/ 22 more treadbars (96 vs 72), and 5.3mm HD main cable
1R1295	35 in	General Ag - IP LH	Rubber	632-3048 632-3503	w/o extra ID rubber. Upgraded w/ 2 more treadbars (74 vs 72) - Note: replace with 30 in width if farming
1R1296	35 in	General Ag - IP RH	Rubber	632-3048 632-3504	w/o extra ID rubber. Upgraded w/ 2 more treadbars (74 vs 72) - Note: replace with 30 in width if farming
1R1297	27.5 in	General Ag /48 GL - IP	Rubber	652-2713	If Wide pitch desired -->652-3049. Otherwise 632-2712 which is minus IP
			CSD(Cast)	652-2702	652-2702 is CSD track specific - but also adds 22 more treadbars (96 vs 72)
1R1298	30 in	Spec App - 48 GL & IP	Rubber	632-3057	Does not include ID 90 or additional rubber layers
1R1335	30 in	Extr Service - 48 GL	Rubber	652-3052	Includes larger main cable and adds inner carcass reinforcement
1R1355	30 in	Extr Service - 48 GL & IP	Rubber	652-3052	Includes larger main cable and adds inner carcass reinforcement
1R1361	25 in	Spec App / LGD - IP	Rubber	652-2506	No exact equivalent - use 652-2506 (also has 96 TB but they are 1.5 in tip width vs 2.8 in)

Earlier to Current Camso P/N Cross Reference

OLD CAMSO P/N	TRACK WIDTH	TRACK DESCRIPTION	NEW CAMSO P/N	CHANGES OR DIFFERENCES IN CAMSO SERIES
622-2515	25 in	2500 Series (74 Tread)	A25AB03311	Upgraded with more treadbars and increased tread height
622-3007	30 in	2500 Series (74 Tread)	A30AB03312	Upgraded with more treadbars and increased tread height
632-2505	25 in	3500 Series (68 Tread)	632-2529	Upgraded w/ 6 more treadbars (74 vs 68)
632-2701	27.5 in	3500 Series (68 Tread)	632-2711	Upgraded w/ 6 more treadbars (74 vs 68)
632-2712	27.5 in	3500 Series (74 Tread)	F27AL02917	Improved Guide Lug Design
632-3003	30 in	3500 Series (68 Tread)	632-3048	Upgraded w/ 6 more treadbars (74 vs 68)
632-3054	30 in	3500 Series (74 Tread)	F30AL02918	Improved Guide Lug Design
632-3500	35 in	3500 Series (68 Tread)	632-3503	Upgraded w/ 6 more treadbars (74 vs 68)*
632-3501	35 in	3500 Series (68 Tread)	632-3504	Upgraded w/ 6 more treadbars (74 vs 68)*
652-3008	30 in	5500 Series (68 Tread)	652-3049	Upgraded w/ 6 more treadbars (74 vs 68) - Track is used in Europe

** Replace with 30 in width if farming.*

NOTE*: 35 in tracks are normally used for snow applications. If on your farming machine, we recommend using 30 in tracks.*

IDLERS, MIDROLLERS AND DRIVEWHEELS REPLACEMENT CRITERIA

Idler Wheel

The idler wheels are the front wheels. The idler wheels are attached to the track tensioning system and provide the tension on the track. They also aid in adjustment of track alignment.

Idler Wheels should be replaced if:

- Rubber material is worn or missing
- Steel hub is cracked or damaged

MACHINE	DESCRIPTION	PART NUMBER
Rowcrop (35 - 55 Series)	Idler (Pre RC99)	1R-1204P
	Idler (RC99)	1R-1229P
Tillage (65 - 95 Series)	Idler (Tire)	1R-0868*
	Idler (Cushion)	1R-1364P

** Challenger 65, 65B, and 75 Series built prior to 1993 used a Pnuematic idler system. This part must be purchased from Caterpillar.*

NOTE*: Two idler wheels are required for each side of the machine. Idler wheels are not directional, so the same idler wheel will work for the inboard and outboard sides of the undercarriage.*

Midroller

Midrollers carry most of the weight for the tractor. Midrollers will wear over time and are susceptible to heat buildup from roading, track misalignment, and side hill applications.

MACHINE	DESCRIPTION	CAMSO P/N	ALTERNATE CAT P/N
Rowcrop (35 - 55 Series)	Narrow Midroller	4W-0232	1R1365
Rowcrop (35 - 55 Series)	Wide Midroller	4W-0236*	N/A
Tillage (65 - 95 Series)	Standard Midroller	4W-0240	9U3384

**For use with 25 in and 30 in track.*

Midrollers should be replaced if:

- Rubber material is missing/worn all the way across the width of the midroller.
- 1/3 of the rubber material is missing/worn all the way around the midroller.

- Rubber material is worn thin enough that material is sticking to the midroller.
- Steel hub is cracked or damaged
- Midroller is no longer round (flat spot worn into surface)

NOTE*: It is not recommended to continue to run midrollers with bare steel as track damage may occur.*

Drivewheel

Drivewheels provide the friction drive to the inside surface of the track to transfer the engine power to the ground. The friction surface is determined by the depth and sharpness of the chevrons or teeth in the drivewheel surface.

Drivewheels should be replaced if:

- Rubber material is missing or worn resulting in excessive drivewheel to track slippage.
- Steel hub is cracked or damaged

NOTE*: If drivewheel to track slippage is not corrected, track damage may occur.*

MACHINE	DESCRIPTION	PART NUMBER
Rowcrop (35 - 55 Series)	RH Drivewheel	1R-1230P
Rowcrop (35 - 55 Series)	LH Drivewheel	1R-1231P
Tillage (65 - 95 Series)	RH Drivewheel*	1R-1184P
Tillage (65 - 95 Series)	LH Drivewheel*	1R-1185P
Tillage (65, early 65B, early 75)	RH Drivewheel* (For machines with Outboard Brakes)	1R-1347P
Tillage (65, early 65B, early 75)	LH Drivewheel *(For machines with Outboard Brakes)	1R-1348P

** A LH and a RH drivewheel is required for each undercarriage, due to the directional nature of the chevron drivewheel tread pattern.*

NOTE*: For best performance and best track life, only wheels identified above should be used. Track damage may occur if other wheels are used.*

Air Suspension Maintenance (Tillage 65-95 Series)

For best machine ride and wear characteristics on the tracks, also check and maintain air bag pressure between 65 and 90 psi, with the usual setting around 75-80 psi. Low air pressure will cause poor turning performance and rough ride.

Tillage (65-95 Series) Drivewheel History

30 Degree Chevron

This was the first design of the drivewheels on the tillage tractors. The design of this drivewheel was a good general purpose configuration for Ag applications. However, it did not perform well in some very marginal farming conditions.

Diamond

This design provided an increase in the number of wiping edges, and when new, this configuration had improved performance over the 30 degree chevron style with improved cleanout However, the tractive performance would degrade in high slippage situations such as in scraper, gumbo, or certain other wet/slick crops (this was due to the shape and wear characteristics of the diamond design).

Cast Slotted Drivewheel (CSD)

This wheel was a short term solution for applications in which the diamond drivewheels did not perform well. This drivewheel provides numerous defined and sharp edges that give excellent friction drive capability. The material cleanout is also good as material will fall through the slots. However, there were some major trade-offs.

These wheels are aggressive to track inside surface, frequently resulting in damage prior to tread wear out. There is no “give” to the drivewheel teeth so any material is driven into the track. Also, these drivewheels require frequent maintenance by use of adjustable drivewheel scrapers, which must be used to prevent material buildup on the drivewheels. Only a few track sizes and styles are approved for use with these wheels.

60 Degree Chevron

Extensive development in the late 1990’s resulted in this design that is the currently available rubber drivewheel service part. The angle of slots and the total length of sharp edges were increased to optimize both new wheel performance, and maintain that performance throughout the life of the wheel. This drivewheel performs well in all applications with the benefit of requiring less maintenance (material sheds without need for scrapers, and much more “track friendly” on the inside of the track). This wheel also allows for the full range of track widths and styles to be used.

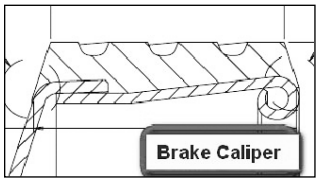
Drivewheel Part Number List

The table below lists the drivewheels available for service parts. Further details on the features and benefits of each wheel are included after the table.

PART NUMBER	DESCRIPTION	TRACTIVE SURFACE DESCRIPTION	MODELS USED ON	PARTS AVAILABILITY
1R-1347P	Right hand drivewheel for tractors with inboard brakes	Rubberized, 60 degree chevron	65A - All 65B - Built before SN 7YC2094 75 - Built before SN 4CJ0436	CAT dealers and Camso distributors
1R-1348P	Left hand drivewheel for tractors with outboard brakes			
1R-1184P	Right hand drivewheel for tractors with inboard brakes	Rubberized, 60 degree chevron	65B - Built after SN7YC2094 65C, 65D, 65E - All 75 - Built after 4CJ0436 75C, 75D, 75E - All 85D, 85E - All 95E - All	CAT dealers and Camso distributors
1R-1185P	Left hand drivewheel for tractors with inboard brakes			
109-6267*	Cast slotted drivewheel	Cast slotted	65B - Built after SN 7YC2094 65C, 65D, 65E - All 75 - Built after 4CJ0436 75C, 75D, 75E - All 85D, 85E - All 95E - All	CAT dealers

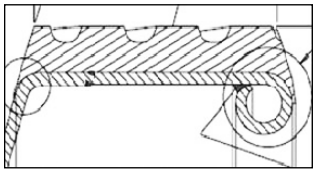
** Available from Caterpillar. However, not recommended for agricultural usage or in cold conditions. Can be used in commercial scraper applications.*

60 Degree Chevron – Special Versions by Tractor Model



1R-1347P & 1R-1348P

The early Cat Challengers used outboard brakes (brake calipers installed inside the inner drivewheels). The outboard brakes are susceptible to wear during operation, and as a result additional "glove guards" were installed over them for protection. This reduced clearance with the drivewheels could cause heat generation if any material built up on these guards. Thus, a special "increased clearance" drivewheel was developed which offsets the outer edge for additional clearance for the brake calipers.



1R-1184P & 1R-1185P

Once the brake design was moved inside the differential (later models) the additional clearance was not needed and a simplified design was used. This design uses a non-offset outer rim with a large rolled radius to give additional strength for use with heavy duty applications more often seen with the later, higher horsepower, machines. This design is also lower cost to produce, and offers a cost savings at the same time.

Drivewheel Selection Criteria

When deciding on which drivewheel to select, please review the following table. In most cases, the 60 degree chevron is the preferred wheel, because of its good overall performance and the resulting lower cost per hour (due to increased track life).

DRIVEWHEEL DESIGN	Rubberized drivewheel, 60 degree chevron	Cast slotted drivewheels
ADVANTAGES	▪ Good traction in most conditions ▪ Rubber reduces material build up on wheels ▪ Rubber provides extra give to protect track surface ▪ Cost (rubberized drivewheels cost much less than the cast slotted drivewheels) ▪ Wide range of tracks are available	▪ Numerous sharp edges for excellent friction drive capability in all conditions ▪ Material cleanout is good, falls through the slots
DISADVANTAGES	▪ Rubber is not as durable as steel ▪ Edges can get worn down with slippage and degrade drive capability	▪ Ice and material build up on the drivewheels ▪ Cleaning bars (scrapers) necessary to reduce/prevent material build up ▪ Additional maintenance required to periodically adjust scrapers ▪ Very aggressive to the track surface, decreasing overall track life ▪ No rubber means no "give" in the wheel, increasing stresses to the track, decreasing track life ▪ Cost (Cast slotted drivewheel cost more than rubberized drivewheels) ▪ Only tracks specified for use with Cast Slotted Drivewheels should be used
APPLICATIONS	Most ag and scraper applications	▪ Gumbo ▪ Specialized crops (lettuce, tomatoes, etc.) ▪ Applications where the rubberized drivewheels have shown to be less effective

Cast Slotted Drivewheel Inspection and Maintenance

Although the cast slotted drivewheels will give track to drivewheel traction in the worst of conditions, this is somewhat at the expense of the track life. Two major issues may be encountered with CSD's that are not seen with rubber drivewheels, and are described below:

Aggressive ID track damage with worn wheels

CSD Worn/Sharp Tooth Edges and Resultant Track Damage

Cast slotted drivewheels will wear over time, especially in abrasive conditions. As the edge of the "teeth" become rounded in the leading edges and also at the tips due to wear, the cast slotted drivewheel will lose some tractive capability and also begin to cut into the inside of the track at the outer edge of the tooth. And if these wheels start to slip inside the track rapid inner carcass breakdown and damage can result. In these circumstances, or if the cast slotted drivewheels are worn out on the tooth edges, it is recommended that they be replaced with the latest rubberized wheels. Do not continue to use worn CSD's or track damage will result.

Track ID damage due to material buildup

Material Buildup on Cast Slotted Drivewheel

Resultant Internal Track Carcass Damage

As there is no rubber on the surface of the cast slotted drivewheel, dirt, mud, vegetation, ice, and other material can begin to build up on the surface of the "tooth". This material buildup causes localized track overload, and will cause inside surface damage to the track, typically resulting in either separation or tears, or both.

Use of drivewheel scrapers can significantly reduce this type of failure mode, However, the scrapers must be adjusted periodically due to wear in order to be effective (see following paragraphs).

NOTE*: Track internal damage due to worn cast slotted drivewheel teeth as well as lack of proper scraper adjustment causing material buildup are NOT considered warrantable failures.*

Adjustment of Cast Slotted Drivewheel Scraper Pads

Out of Adjustment Scraper Pads

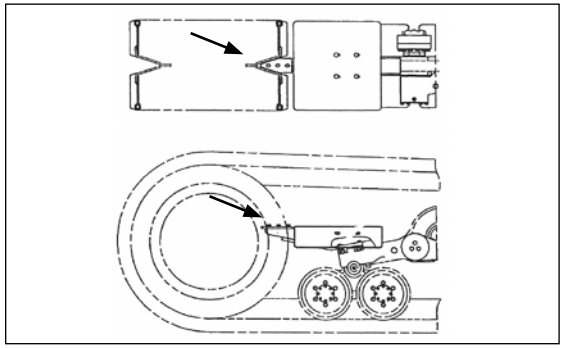
Initially check and adjust scrapers on a daily basis in order to maintain a clearance of 0.12 ± 0.04 in (3 ± 1 mm) between the driver and the scraper plate. Do not adjust them flush with the wheel due to movement of the guard as well as slight out of round tolerances, the scraper must have some clearance or else direct contact with the wheel may result. Note the amount of wear on a daily basis when new scrapers are installed as this will provide a record for estimating the time interval between adjustments. The adjustment can be made by loosening bolts and adjusting plate and scraper.

The time interval between adjustments will vary depending on the application for your tractor. Make sure that you integrate the interval for adjusting the scrapers into the routine maintenance schedule. This will help to maximize the life of the track.

NOTE*: When the scraper becomes worn on one side, flip the scraper to the other side. This will allow you to double the life of the new scraper.*

NOTE*: If you have UNEVEN wear on the scrapers, grind leading edge down straight or else localized material buildup can still occur.*

Drivewheel Cleaner Bar (Stinger) – All Drivewheels



In some applications, mud and debris can accumulate in the groove used by the track guide lugs between the drivewheels. Material in the groove can cause guide lug wear and damage and contribute to untracking in applications with high hitch loads such as three-point hitch mounted implements and pulling scrapers. The tip of the cleaner bar (stinger) is replaceable. The stinger should be monitored periodically. Dirt and debris buildup should be removed and the cleaner bar replaced if worn. The amount of wear and frequency for replacement will determine how often the cleaner bar will need to be replaced.

Tracks Approved for use with Cast Slotted Drivewheels

Camso 5500 tracks with additional inner diameter rubber and without inner bias protection are the only tracks specifically designed for use with the cast slotted drivers. The reason for this is that although the inner bias may assist in protection of the cables in many conditions, the destruction of this reinforcement layer by the CSD results in more rapid track ID degradation and separation. The additional rubber serves the purpose of the missing rubber on the drivewheel – to allow for "give" during material ingestion.

The following tracks are currently the only tracks recommended for use with cast slotted drivewheels.

PART NUMBER	DESCRIPTION	WIDTH
652-2702	Camso 5500 CSD	27.5 in
652-3004	Camso 5500 CSD	30 in

Camso Track Repair

For longest track life, parts of the track may need to be cut or trimmed in the following situations:

- Cables are exposed in the carcass – Cables should be trimmed to prevent damage to other components.
- Guide lugs are missing – bolt-on guide lugs kits are available from Camso to repair a few, or replacement of all, guide lugs.
- Loose treadbar – Loose portion of the treadbar should be cut off to prevent damage to other components.

Bolt On Guide Lugs

If guide lugs are worn, damaged, or missing; bolt-on guide lugs may increase the life of the tracks. Bolt-on guide lugs can be purchased from your local Camso distributor/ dealer. For additional information or for installation instructions on bolt on guide lugs, please review Camso document PIB 2011-T05 "Bolt On Guide Lug Instructions and Procedures."

Parts required for Tillage Tractor Bolt-on Guide Lugs:

TRACK TYPE	CAMSO GUIDE LUG PN	BOLT (2 / GUIDE LUG)	WASHER (4 / GUIDE LUG)	NUT (2 / GUIDE LUG)
36 guides	1R1288	7/16 in X 5 ½ in Grade 8 Bolt	7/16 in Grade 8 Washer	7/16 in Grade 8 Nut
48 guides	1R1289	7/16 in X 5 ½ in Grade 8 Bolt	7/16 in Grade 8 Washer	7/16 in Grade 8 Nut

Camso Track Replacement Criteria

For best performance, tracks should be replaced (or repaired in the case of guide lugs) when the following is noted:

- Tread bar height is less than 0.5 in (12 mm)
- Track to ground slippage consistently exceeds 10%
- Several (more than 3) treadbars are missing in a row
- Multiple (more than 5) guide lugs are missing consecutively
- Guide lugs have excessive wear (50% of guide lug is worn)
- De-tracking occurs due to worn or missing guide lugs
- The main cables have torn in the wheel path
- (Tear across the width of the carcass)
- Cables are showing on the inside surface of the track
- Drivewheel to track slippage is excessive due to missing ID rubber or rubber surface is glazed/hardened from drivewheels slipping.

NOTE: *If you have any concerns or questions regarding track damage, causes, and prevention, your Camso dealer should also have a copy you can review of CPB-460 "Service Conditions and Warranty Guidelines- AGRICULTURAL TRACKS including DRIVE WHEELS, IDLERS, MIDROLLERS".*

More Information

For further information on Camso Agricultural Track and undercarriage products, along with our CTL and MX construction track, ATV track kits, and snowmobile track product lines, please visit us on the World Wide Web at:

http://www.camso.co

Tread bar Wear Estimation Chart

Challenger 35, 34, 55
Challenger 65, 70, 75, 85, 95
VFS50, VFS70

CATEGORY		LGD	General Ag	General Ag	General Ag	General Ag
AVERAGE TREAD HEIGHT		VFS TRAILER 632-2507 632-3005	2500	2500	3500/4500	5500/6500
in	mm					
2.5	63.5				0%	0%
2.4	61.0				5%	5%
2.3	58.4		0%		10%	10%
2.2	55.9		6%		15%	15%
2.1	53.3		11%		20%	20%
2.0	50.8		17%	0%	25%	25%
1.9	48.3		22%	7%	30%	30%
1.8	45.7		28%	13%	35%	35%
1.7	43.2		33%	20%	40%	40%
1.6	40.6		39%	27%	45%	45%
1.5	38.1	0%	44%	33%	50%	50%
1.4	35.6	10%	50%	40%	55%	55%
1.3	33.0	20%	56%	47%	60%	60%
1.2	30.5	30%	61%	53%	65%	65%
1.1	27.9	40%	67%	60%	70%	70%
1.0	25.4	50%	72%	67%	75%	75%
0.9	22.9	60%	78%	73%	80%	80%
0.8	20.3	70%	83%	80%	85%	85%
0.7	17.8	80%	89%	87%	90%	90%
0.6	15.2	90%	94%	93%	95%	95%
0.5	12.7	100%	100%	100%	100%	100%
0.4	10.2	110%	105%	107%	105%	105%
0.3	7.6	120%	111%	113%	110%	110%

Visit our website for more information on our products and the location of the nearest distributor at **camso.co**

AUTHORIZED DEALER

CPB-0451 01-18