SAMPA 300T COMPLETE AIR SUSPENSION

PRODUCT HIGHLIGHTS





sampa.com



EXPERIENCE THE OEM QUALITY

Designed, tested, and approved by our world-class R&D center CAMP, Sampa 300T is ready to conquer the aftermarket with new advanced features...

- Durable with OEM equal or even better raw material
- Precise geometry for perfect fit in installation
- Exclusive enlarged air spring platform for easy and durable installation
- Welding with fully automatic robots provides production consistency
- Enhanced lifecycle with refined structure thanks to stress relieving
- Cataphoresis Coating provides high salt endurance up to 1000h

Rubber Bonded Metal Components

The Challenge

When curing thick rubber parts or parts with complex geometry, it is a challenge to maintain equal heat distribution throughout the structure. If this process is not carefully planned, the outer parts might get over-cured while trying to cure the inner parts. This faulty procedure causes deformation of the cross links, which in turn, leads to premature cracking and drying.

The Sampa Solution

When designing the mold, we determine the optimum number and location of points from which the rubber will be injected. To perfect the curing process, we use simulations that determine rubber flow patterns from these injection points. This guarantees equal heat distribution and enhances the durability of the part.





SAMPA 300T COMPLETE AIR SUSPENSION

501.188 Replaces: HT300TB15-001*



Manufactured with the best raw materials and the latest technology available, Sampa Complete Air Suspension offers you smoother rides and enhanced cargo safety. Equipped with one of Sampa's masterpiece air springs SP558050-KA and other components with exceptional quality means extended vehicle life as well as much less downtime and lower maintenance costs for fleets. This product will keep you going regardless of the road conditions you encounter.

The brand SAMPA® is a registered and protected trademark. Registration numbers are IR 1147491, IR 1153904, CTM 010528438, OAPI3201200019, TR 2002/19391, TR 2011/112926.

More than 50 years of experience with rubber compounds and metallurgy, combined with the significant scientific achievements of our Center for Advanced Materials and Parts - CAMP, allows us to develop materials, processes and technologies that set each Sampa product apart from the competition. As a manufacturing giant with a 100.000 m² integrated factory campus, we are able to offer quality with competitive prices worldwide.

SAMPA

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501.177

Beam, Balance Arm Axle Replaces: S-23790-2



Simple design for minimal maintenance

501.181

Plate, Air Spring

Replaces: C-20199-2

Verified materials tested against the toughest conditions

500.868

olt

Replaces: S-21140

Sampa Air Springs SP 558050-KA

Inner Rubber Layer

•Pressure maintenance •Perfect seal •Chemical resistance

Fabric

•Structural resilience •Ensured geometry

Sampa 300T Exclusive Air Spring Platform

- $\boldsymbol{\cdot}$ Enlarged and reinforced platform for easy and sturdy installation
- Even load-distributing design to extend air spring lifecycle

Rubber Coating

Materials bonding reinforced
Perfectly spaced plies guarantee even force distribution

Outer Rubber Layer

- Mechanical protective function
- •UV and chemical resistance prevent premature cracking
- •Energy dissipation puncture resistance



Benchmarking

OEM Competitor fails at 3,4 million cycles while Sampa Air Spring continues to perform even after 5 million cycles.



Force Amplitude - Cycle Graph

Cycle



Proving field testing is very expensive, time-consuming and doesn't allow for "in-service" inspection. To save time and offset delays in development, we supplement field testing with cost-effective mechanical testing in our hightech MTS test lab, capable of providing greater testing speed, control and repeatability.

We run a short burst of high-performing cycles to measure and fine tune damping characteristics and run millions of cycles for durability testing. The systems reach extremely

Advanced features include

- Reduced noise, vibration, and harshness
- Improved fuel consumption
- Improved tire life
- Better resale
- Less load shifting and damage







high velocities and forces for performance testing, and operate at very low velocities and forces for accurately measuring the impact of seal friction and gas charge.

MTS ensures precise alignment with original parts, so Sampa can bring safer, more durable and fuel-efficient products to market faster and at a lower cost.





Sampa Shock Absorbers 501.183

Dynamic benchmarking test results show Sampa Shock Absorbers perform equal to OEM competitors. As seen in this force vs displacement test, Sampa Shock Absorbers and the OEM competitor performance data overlap.

Sampa 501.183, OEM Competitor



Displacement (mm)

Advanced Features

- Silent
- Fast response with minimum lag
- High handling in poor road conditions





Increased Production Stability with Fully Automatic Robotic Welding Machines Fully automatic robotic welding machines eliminate human error and provide even welding throughout the complete suspension. One of the many key points that make Sampa 300T highly durable!



Sampa 300T Complete Air Suspension

501.188

Complete Suspension, Balance Arm Axle



Sampa No. Replac Description Bracket, Balance Arm Axle C-2379 501.178 Roadside 501.179 Bracket, Balance Arm Axle C-2379 Curbside Plate, Air Spring Parts C-2019 501.180 Roadside 501.181 Plate, Air Spring Parts Curbside C-2019 SP 558050-KA Service & Complete Air Spring S-4771 501.183 Shock Absorber A-2012 C-3558 Rubber Bushing, Balance Arm Axle 075.075

Spare Parts

Sampa No.	Description	Replaces	Dimensions
501.186	Beam, Balance Arm Axle Roadside, Complete	-	9"x19,41"
501.176	Beam, Balance Arm Axle Roadside	S-20186-1	6,19"x20,03"
501.187	Beam, Balance Arm Axle Curbside, Complete	-	9"x19,41"
501.177	Beam, Balance Arm Axle Curbside	S-20186-2	6,19"x20,03"

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ces	Dimensions
90-1	9"x12,5"x9,29"
90-2	9"x12,5"x9,29"
99-1	ø12,01"x4,06"x8,12"
99-2	ø12,01"x4,06"x8,12"
1	ø11,31"x3/4"-16UNF 1/4"-18NPTx1/2"-13UNC Max :18,4-Min: 5,75
26	ø3,26"xø2,75"x11,71"x17,5"
8	ø1,24"xø152x171



Sampa 300T Complete Air Suspension

Sampa No.	Description	Replaces	Dimensions	Sampa No.	Description	Replaces	Dimensions
015.173	Plastic Washer	S-21099	ø2,36"xø7"x0,33"	500.550	Repair Kit, Balance Arm Axle New Type	S-24691 S	ø1,24"xø6"x6,73"
105.445	Machined Washer	S-20924	ø0,88"xø4"x1,45"	500.550A	Repair Kit, Balance Arm Axle Previous type	S-24691 S1	ø1,24"xø6"x6,73"
105.458	Machined Washer	S-20925	ø0,88"xø3,95"x1,49"	500.569	Repair Kit, Balance Arm Axle New Type	S-24691	ø1,24"xø6"x6,73"
500.551	Repair Kit, Balance Arm Axle New Type	S-24679	W 7/8"-9Gx9,8"	500.569A	Repair Kit, Balance Arm Axle Previous type	S-24691 S2	ø1,24"xø6"x6,73"
500.551A	Repair Kit, Balance Arm Axle Previous type	S-24679 S	W 7/8"-9Gx9,8"	501.185 • • • • • • • • • • • • • •	Repair Kit, Air Spring Parts	A-4903	W 1/2"-13/1,22"
500.357	Repair Kit, Balance Arm Axle New Type	S-24680	ø0,88"xø4"x1,45"x W 7/8"-9Gx9,8"	501.184	Repair Kit, Shock Absorber	A-20031	W 3/4" 10 /3,18"
500.357A	Repair Kit, Balance Arm Axle Previous type	S-24680 S	ø0,88"xø3,95"x1,49"x W 7/8"-9Gx9,8"	500.868	U Bolt, Balance Arm Axle With Nut and Washer	S-21140	W 7/8" 14Gx7,25"

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Specifications & General Dimensions

Capacity: 30,000 lbs. (13,600 kg)

Suitable Axle Data: 5-inch diameter round, 5/8-inch wall, 15- and 16.5-inch brakes

Benchmarking Parameters	SAMPA	IAM Competitor	OEM Competitor
Cataphoresis Coating	Yes	No	Yes
Salt Sprey Test	Up to 1000 h	Up to 480 h	Up to 1000 h
Stress Relieving*	Yes	No	Yes
Welded Frame Material	St 52 S355MC / ASTM A 1018 HSLAS-F Grade 50 Class 2	St 37 EN 10025-2:2004 S235JR / ASTM A 1011 SS Gr.33	St 52 S355MC / ASTM A 1018 HSLAS-F Grade 50 Class 2
Air Spring Fatigue Test Cycles	5M+	1M	Failed at 3.4 M

*Stress Relieving enables high-strength metal parts; a process exclusive to Sampa 300T









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Perform Quality

Sampa is proud to apply **9 quality systems** to ensure safe production, best products, and satisfied customers.

Our production facility is also awarded the prestigious **Ford Q1 Certification**, which is **OEM's standard** for exceptional quality and customer satisfaction.



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Ford Q1	Ford Preferred Quality Status	70
ISO 9001	Quality Management	rocor
IATF 16949	Automotive Quality Management	ichte
ISO 10002	Customer Satisfaction Management	
ISO 14001	Environmental Management	ume (
ISO 27001	Information Security Management	0.060
ISO 28001	Security Management for Supply Chain	¢
ISO 45001	Occupational Health & Safety Management	- Andrew
TUV 9001	Quality Management	Č



ADVANCED

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