

ATRO

ENGINEERED SYSTEMS

FREIGHTLINER GUIDE

800.325.6114 • ATROBUSHING.COM



TORQUE RODS

OFFER A BETTER PRODUCT

Polyurethane is a Better Material



Impervious to Oil, Grease,
Rock Salt, Cleaning Solvents,
Hydraulic Fluids and Diesel Fuel
Rubber Deteriorates



Engineered to Function
Creates Longer Lasting Parts
Increase Fleet Uptime



2-5 Times Stronger
Tensile Strength
Elongation Properties
Tear Strength

ATRO's Bushings are Designed with Rotating Pins

BENEFITS OF THE ROTATING PIN

- Faster, easier installation
- One rod fits any clocking angle*
- Eliminates bushing wind-up**
- Reduces stress on ENTIRE suspension
- Longer life means less downtime & fewer rods to stock

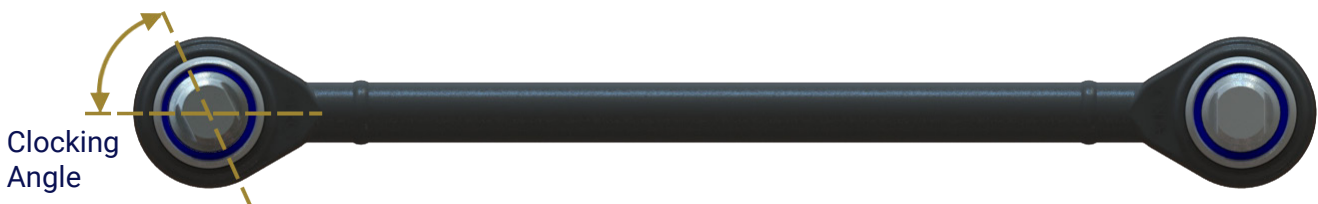


* Pin can rotate a complete 360° to accommodate any clocking position.

** Wind-up occurs when the bonded rubber bushing is stretched in one direction while fighting to return to a relaxed state. This causes failures as the bushing tears away from the pin.

These benefits apply to both ATRO standard torque rods and small eye torque rods!

The polyurethane in the bushing is not effected by contaminates such oil, grease, diesel fuel, hydraulic fluids, road salt, cleaning solvents, etc.



TORQUE RODS

TR46-41002

Torque Rod, Small Eye 24 5/16" c-c

Bushings:

TS38000/TS38000

Cross References

Freightliner: 16-18972-000, 681-326-72-16



TR46-41000

Torque Rod 24 3/16" c-c

Bushings:

TS38000/TS38000

Cross References

Freightliner: 16-15632-000,
16-16749-002



TR46-41175

Torque Rod 23 1/2" c-c

Bushings:

TS38000/TS38000

Cross References

Freightliner: 681-326-27-16



TR46-41316

Torque Rod, Small Eye 22 7/8" c-c

Bushings:

TS00-22500/ TS00-22500

Cross References

Freightliner: 16-16749-000,
681-326-6316



TR46-41716

Torque Rod, Small Eye 23 15/16" c-c

Bushings:

TS00-22500/ TS00-22500

Cross References

Freightliner: 16-15632-01,
16-18972-001, 16-16749-001,
681 326 67 16



ATRO Part #	Rod type	Length	Bushings	Cross Reference
TR46-41003	Small Eye Torque Rod	20 1/4" c-c	TS00-22500/ TS00-22500	16-16749-003
TR46-41016	Large Eye Torque Rod	24 7/16" c-c	TS38000/TT38000	680-326-00-16
TR46-41053	Small Eye Torque Rod	16 3/8" c-c	TS00-22500/TS00-22500	16-03053-000, 16-19568-000, 16-13053-000, 16-19505-000
TR46-41351	Small Eye Torque Rod	16 1/8" c-c	TS00-22500/TS00-22500	16-16141-000, 16-19351-000
TR46-41972	Small Eye Torque Rod	23 13/16" c-c	TS00-22500/TS00-22500	16-15632-001
TR46-43016	Small Eye Torque Rod	16 5/8" c-c	TS00-22500/TS00-22500	681-626-6016, 16-19505-000
TR46-46002	Twist Torque Rod	24 7/16" c-c	TS38000/TT38000	16-14149-002
TR46-46003	Twist Torque Rod	24 7/16" c-c	TS38000/TT38000	16-14149-003
TR46-46016	Small Eye Torque Rod	17" c-c	TS00-22500/TH00-22500	681-326-00-16
TR46-49002	Large Eye Torque Rod	23 1/4" c-c	TS46-22300/TS46-22300	16-15002-001, 16-15002-000
TR46-49004	Large Eye Torque Rod	26 3/8" c-c	TS46-22300/TS46-22300	16-15004-001, 16-15004-000
TR46-49998	Large Eye Torque Rod	24 7/16" c-c	TS46-22300/TS46-22300	16-14998-001, 16-14998-000
TR94-41458	Large Eye Torque Rod	22 3/8" c-c	TS38000/TS38000	35801-3458
TR94-41514	Large Eye Torque Rod	22 1/2" c-c	TH99-22101/TH99-22101	35801-3514, IPC947-271

CARRIER BEARINGS

CR00-67661

Carrier Bearing Assembly, Self-Aligning
Bearing Angular Allowance: +/-10 degrees
Series 1810

Cross References

Dana-Spicer: 10094142

Meritor: CB210661-1XSA

Dimensions:

ASSEMBLY:

Height: 7-5/8"

Width: 3-3/4"

Length: 10"

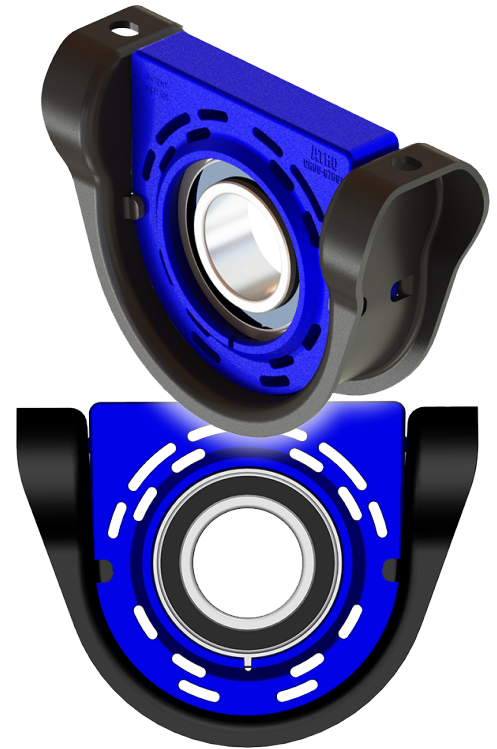
BEARING:

Bearing ID: 60mm

Center Height: 3-3/8"

Bolt Holes: 8 5/8" c-c

Bolt Size: 1/2"



FEATURES & BENEFITS

Polyurethane

- ◆ Chemically Resistant
- ◆ Vibration Absorbing

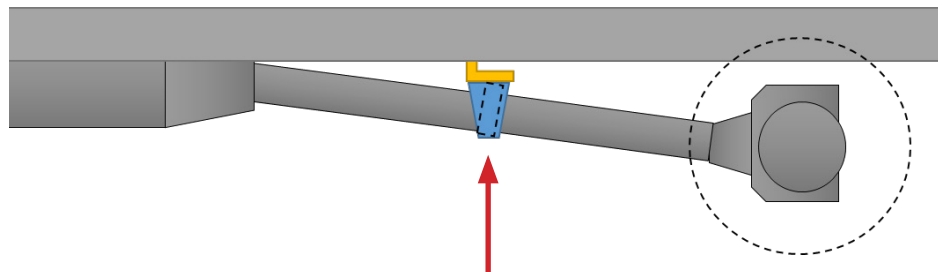
Patented Pivoting Bearing

- ◆ $\pm 10^\circ$ of Articulation
- ◆ Sealed
 - Prevents Contamination
 - Retains Lubricant

Heavy Duty Steel Housing

- ◆ 7 Gauge Steel

Importance of the Self-Aligning Feature



With the ATRO self-aligning carrier bearing assembly, there is no need to shim because the center is allowed to pivot + or - 10 degrees.*

This saves money and time on the installation ... less parts plus no need to be as precise due to the range of articulation provided by the new carrier bearing.

* Proper driveline angle must be maintained.

CR00-67825

Carrier Bearing Assembly
Series 1810

Cross References

Dana-Spicer: 210661-1X

Dimensions:

ASSEMBLY:

Height: 7 1/4"

Width: 3"

Length: 10"

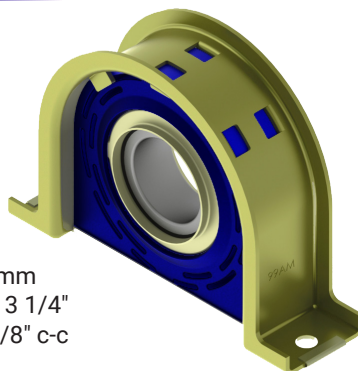
BEARING:

Bearing ID: 60mm

Center Height: 3 1/4"

Bolt Holes: 8 5/8" c-c

Bolt Size: 1/2"



CR00-67121

Carrier Bearing Assembly
Series 1710

Cross References

Dana-Spicer: 210121-1X

Dimensions:

ASSEMBLY:

Height: 9 1/4"

Width: 2 1/4"

Length: 10"

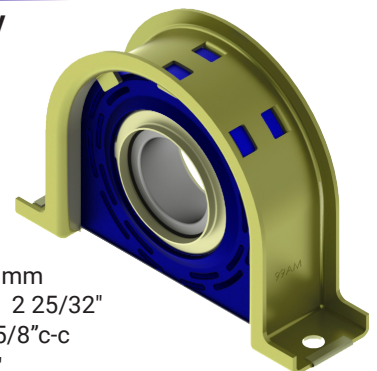
BEARING:

Bearing ID: 50mm

Center Height: 2 25/32"

Bolt Holes: 7 5/8" c-c

Bolt Size: 1/2"

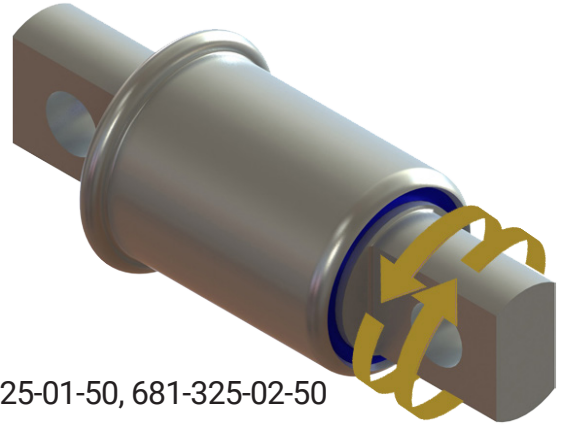


REAR SUSPENSION

PB46-26268

Pivot Bushing, Anti-Walk

OD: 2.5"
 Bolt Hole: 3/4"
 Bolt Holes: 5 21/32" c-c
 Qty Per Vehicle: 4



Cross References

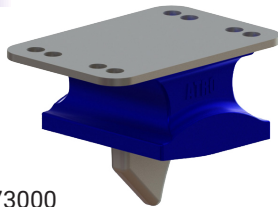
Freightliner: 16-13962-000, 16-16412-000, 16-18035-000, 681-325-01-50, 681-325-02-50
 Model: FAS II Airliner

Fixed pin rubber bushing rotates in the leaf spring eye > Causes Spring Eye Wear
ATRO Pin rotates Higher tensile strength > Eliminates Spring Eye Wear
Inbound flange prevents bushing walkout

LP46-19773

Spring Pad

Height: 3 1/8"
 Width: 5 1/4"
 Length: 7 9/16"



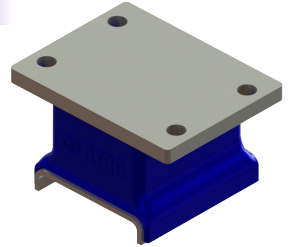
Cross References

Freightliner: A1615303000, A1615773000

LP46-24581

Spring Insulator Pad, Upper

Height: 3 1/8"
 Width: 5 1/8"
 Length: 7 9/16"



Cross References

Freightliner: 11-19581-000

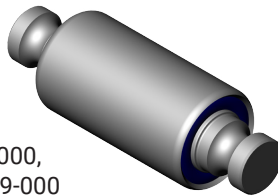
ATRO Part #	Part Description	Cross Reference
LP46-24807	Spring Insulator Pad, Lower	11-20807-000
LP46-24808	Spring Insulator Pad, Upper	11-20808-000

STEER AXLE SUSPENSION

SP46-11023

Spring Eye Bushing

Length: 6.70"
 OD: 2 1/4"



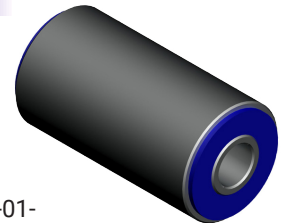
Cross References

Freightliner: 16-14603-000, 16-17770-000,
 16-18023-000, 16-17194-000, 16-21919-000

SP46-52800

Spring Eye Bushing

Length: 4"
 ID: 20mm
 OD: 2 1/4"



Cross References

Freightliner: A6803220150, 680-322-01-50, 16-17769-000

ATRO Part #	Part Description	Cross Reference
MS46-19215	Bump Stop, Front Axle	16-15215-000
SK46-10000	Spring Eye Shackle Kit	16-11890-001, 16-12373-000, 16-13470-000, 16-12302-000, 16-12399-000, A16-12301-000, 16-11890-000
SK46-10800	Spring Eye Shackle Kit	680-322-00-20, 680-322-03-01, 680-322-01-05
SK46-10900	Spring Eye Shackle Kit	680-322-01-05
SK46-11200	Spring Eye Shackle Kit	16-12373-000, A16-01005-002, 16-12399-000, 16-13470-000
SP46-11373	Spring Eye Bushing	16-12373-000, 16-12399-000, 16-13470-000
SP46-11473	Spring Eye Bushing	16-16473-000
SP46-11508	Spring Eye Bushing	16-20508-000, 16-22182-000

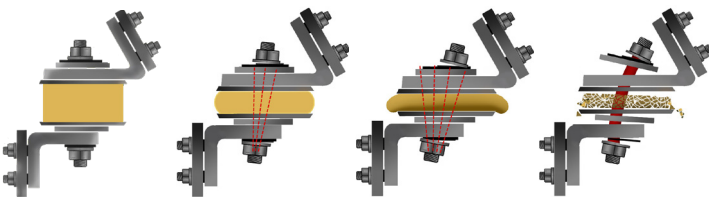
HIGH TEMP MOUNTS

Why use ATRO's High Temp Engine Mounts?

EGR/SCR Systems increase underhood temperatures.

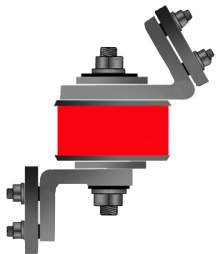
ATRO's High Temp Polyurethane is the **ONLY** solution in the Industry for Underhood conditions.

Watch what happens when a standard engine mount is exposed to excessive heat.



ATRO's High Temp Polyurethane benefits:

- Tested at 300 degrees continuous temperature
- Higher tensile strength
- Improved vibration isolation
- Resistant to chemical attack



ATRO's High Temperature Engine Mount Line for heavy duty vehicles

ATRO developed polymers that withstand extreme heat in the 300°F range and have replaced the rubber or polyurethane materials that can fail at 200°F. ATRO's material maintains its physical properties throughout the load, heat and stress.

Many ATRO's Parts are available in Kits!

MM46-62000-HT

Engine Mount Kit (Rear), HT

Contains:

- (2) MM46-62051-HT
- (2) MM46-62301-HT
- (2) Bolts - 3/4-16 x 4.5" Grade 8
- (4) Washers
- (2) Locknuts

Cross References

Freightliner: BCD 27330 1, BCD 27330 2, BCD 28805 1



MM46-62002-HT

Engine Mount Kit, Front, HT

Contains:

- (1) MM46-62451-HT
- (1) MM46-62651-HT

Cross References

Freightliner: BCD 26704-1, BCD 27651 1, BCD 27651 2, BCD 27651 3, BCD 289451



MM46-62004-HT

Engine Mount Kit w/Hardware (Front), HT

Contains:

- (1) MM46-62660-HT
- (1) MM46-62721-HT
- (2) 3/4" Bolts
- (2) 3/4" Locknuts
- (4) 3/4" Flat Washers

Cross References

Freightliner: J21246-60, J21247-21, LOR J21246 60, LOR J21247 21



MM46-62005-HT

Engine Mount Kit w/Hardware (Front), HT

Contains:

- (1) MM46-62451-HT
- (1) MM46-62651-HT
- (2) BOLT, 3/4"-16 X 4 1/2", GR 8
- (2) 3/4" Locknuts
- (4) 3/4" Flat Washers

Cross References

Freightliner: BCD 26704-1, BCD 276511, BCD 27651 2, BCD 27651 3, BCD 28945-1



HIGH TEMP MOUNTS

MM46-62006-HT

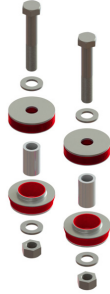
Engine Mount Kit w/Hardware (Front), HT

Contains:

- (2) MM46-62003-HT
- (2) Spacer Sleeve
- (2) Bolts
- (2) Locknuts
- (4) Flat Washers

Cross References

Freightliner: 01-15047-000, LOR SSB33 1001 7, LOR SSB33 1001 8, SSB3310017, SSB3310018, 13371-45



MM46-62417-HT

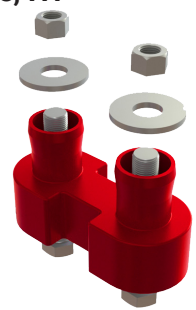
Engine Mount Kit (Rear), w/Hardware, HT

Contains:

- (1) MM46-62416-HT
- (2) 5/8" Bolts
- (2) 5/8" Locknuts
- (2) Washers

Cross References

Freightliner: J209413, J20941 36, J209414, J209415 120, J2094167, LOR J20941 7, LOR J2094416



ATRO Part #	Part Description	Cross Reference
MM46-62051-HT	Engine Mount, Lower (Rear), HT	BCD28805 1
MM46-62120-HT	Motor Mount, (Upper) HT	J20120 14
MM46-62222-HT	Engine Mount, HT	CB1122 2
MM46-62301-HT	Engine Mount, Upper (Rear), HT	BCD27330 1
MM46-62416-HT	Engine Mount (Rear), HT	J20941 13, J20941 36, J20941 4, J20941 5, J20941 67
MM46-62418-HT	Engine Mount Kit (Rear), w/Hardware, HT	Kit - (2) MM46-62417-HT
MM46-62451-HT	Engine Mount, Lower (Front), HT	BCD28945 1
MM46-62613-HT	Engine Mount Kit (Front), HT	J21246 13
MM46-62650-HT	Engine Mount, HT	CBA24 650 50A
MM46-62651-HT	Engine Mount, Upper (Front), HT	BCD27651 1, BCD27651 2
MM46-62660-HT	Engine Mount, Upper (Front), HT	J21246 60
MM46-62721-HT	Engine Mount, Lower (Front), HT	J21247 21
MM46-62948-HT	Engine Mount, Lower, HT	A17-13975-000
MS46-66791-HT	Engine Mount, HT	LOR J19791 1

EM46-69100-HT

Exhaust Mount, HT

- Length: 1.44"
- ID: .397"
- OD Large: 1.25"
- OD Small: .95"

Cross References

Freightliner: CBA12 100



EM46-69212-HT

Exhaust Mount, HT

- Length: 1.25"
- ID: .5"
- OD Large: 1.75"
- OD Small: 1.25"

Cross References

Freightliner: CB1121 2



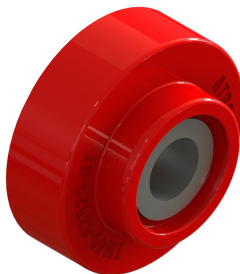
TM46-63529-HT

Transmission Mount, Auxiliary

- Height: 1.625"
- ID: .938"
- OD Large: 3.5"
- OD Small: 2.22"

Cross References

Freightliner: CBC 35 2 9



TM46-63664-HT

Transmission Mount, Auxiliary

- Height: .94"
- ID: .532"
- OD Large: 1.938"
- OD Small: 1.33"

Cross References

Freightliner: J6256 64



ATRO Part #	Part Description	Cross Reference
MS46-69123	Insulator, Sandwich Mount*	J11729 123
MS46-69300	Radiator Isolator*	CBA20300
RM46-63273	Radiator Mount*	CB2202 73
RM46-63471	Radiator Isolator*	BCD 28721-1, BCD 28847-1, BCD 28721 1

* Not available in High Temp Polyurethane Formula

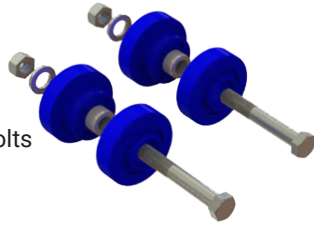
CAB AND UNDERHOOD

CM46-61001

Cab Mount Kit

Contains:

- (2) CM46-61890
- (2) CM46-61891
- (2) 3/4" x 5" Grade 8 Hex Head Bolts
- (2) 3/4" Flat Washers
- (2) 3/4" Locknuts



Cross References

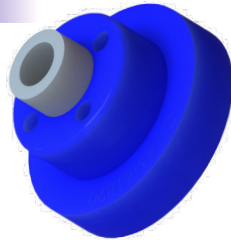
Freightliner: 681-891-00-01, 18-43636-000, 681-890-00-01

CM46-61890

Cab Mount (Upper)

Height: 2.6"

OD: 3.3"



Cross References

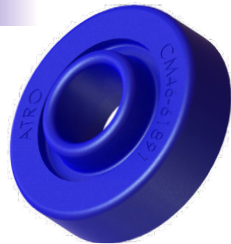
Freightliner: 681-890-00-01

CM46-61891

Cab Mount, Lower

ID: 1.25"

OD: 3.8"



Cross References

Freightliner: 681-891-00-01, 18-43637-000

HM46-64021

Grill Mount

Misc: 1/4" Thread

Cross References

Freightliner: 17-13021-000



HL46-64480

Hood Latch Kit

Contains:

- (1) HL46-64434
- (1) HL46-64435



Cross References

Freightliner: 17-12348-000, 17-12434-000 (catch), 17-12438-00 (no catch)

HL46-64434

Hood Latch Catch

Length: 5"



Cross References

Freightliner: 17-12434-000

HL46-64435

Hood Latch

Length: 11 1/4"



Cross References

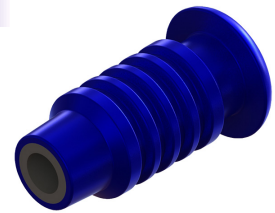
Freightliner: 17-12435-000

HM46-64975

Hood Hinge Bushing

Length: 3"

ID: .5"



Cross References

Freightliner: A17-13975-000

ATRO Part #	Part Description	Cross Reference
CM46-61384	Cab Mount Assembly	A1840099000, 18-45384-000
CM46-61769	Cab Mount Bushing	18-42727-000, 18-34678-000, 18-41005-000
CM46-61891	Cab Mount, Lower	18-43637-000, 681-891-00-01
CM46-61922	Cab Mount Bushing & Bracket Assembly	18-59922-000
CM94-61875	Cab Mount (Front)	LOR CB2204 146
HL46-64530	Hood Latch Kit, Left	A17-15553-000
HL46-64531	Hood Latch Kit, Right	A17-15553-001
HL46-64650	Hood Latch Kit, Left	17-12435-000, 17-12434-000
HL46-64651	Hood Latch Kit, Right	17-12435-001, 17-12434-001H
HM46-64177	Hood Bumper	J11729 177
HM46-64877	Hood Bumper	17-13877-000
HM94-64438	Hood Mount	67009-3438

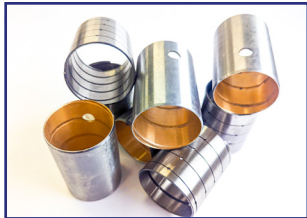
STEER KING

STEER KING™

by ATRO



SHOP-READY
BOX PREVENTS
CONTAMINATION



IMPROVED SPIRAL BUSHING
DURABILITY WITH ATRO'S
PROPRIETARY PROCESSES



SAVE TIME WITH
PRE-PACKED BEARINGS

No-Ream Steel Spiral



No-Ream Bronze



EXCLUSIVE
BI-DIRECTIONAL LIP SEALS
PREVENT AIRLOCK



IMPROVED LUBRICATION
USING ENGINEERED
GROOVES ON ALL KINGPINS



HEAVY DUTY END CAPS

ATRO Part #	King Pin Kit Type	Bushing and Seal Driver	Cross Reference
SKB12001	Bronze	SKPT120A	K120A, R200321, R201330, R202037
SKS12001	Steel Spiral	SKPT120A	K120A, R200321, R201330, R202037
SKB12101	Bronze	SKPT120A	K121A
SKS12101	Steel Spiral	SKPT120A	K121A
SKB14705	Bronze	SKPT147E	K147E, 50.147.05, 70.147.05
SKS14705	Steel Spiral	SKPT147E	K147E, 50.147.05, 70.147.05
SKB96112	Bronze	SKPT122E	K961L, 50.961.12, 70.961.12
SKS96112	Steel Spiral	SKPT122E	K961L, 50.961.12, 70.961.12
SKB98118	Bronze	SKPT122E	K981R, 50.981.18, 70.981.18
SKS98118	Steel Spiral	SKPT122E	K981R, 50.981.18, 70.981.18

SUSPENSION SCHEMATICS

FREIGHTLINER FAS II

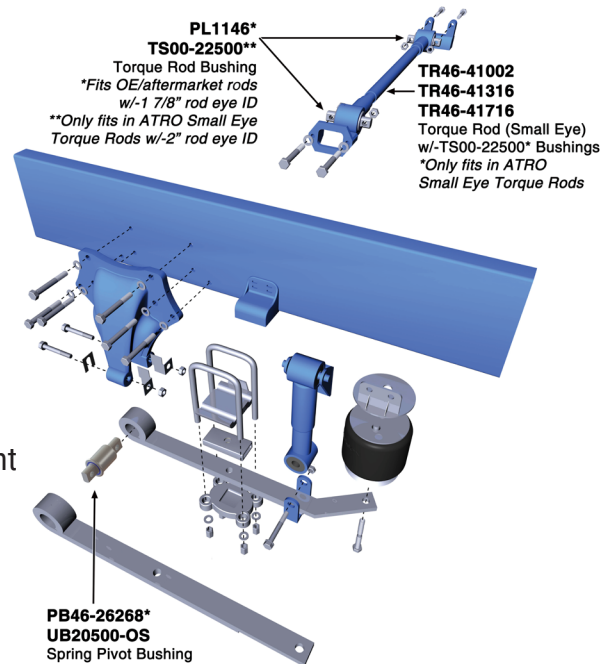
- Popular in over-the-road applications
- Designed to cushion load and reduce sway in turns
- Features an underslung parabolic leaf spring trailing arm

ATRO Spring Pin Solution (PB46-26268; UB20500-OS)

- Rotating pin design with flanged outer sleeve limits travel
- Revolving inner pin eliminates bushing wind-up
- Oversized version available (UB20500-OS)

ATRO Torque Rods

- ATRO offers complete replacement rods for the three different length options
 - TR46-41716 (23 15/16")
 - TR46-41316 (22 7/8")
 - TR46-41002 (24 5/16")



FREIGHTLINER TUFTRAC

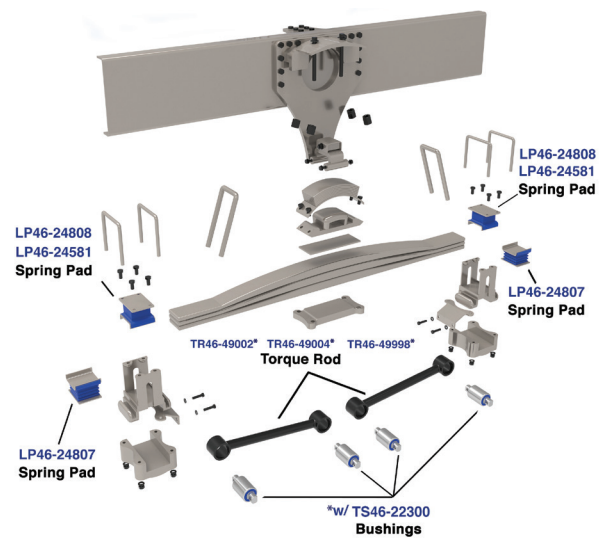
- Popular in vocational and high-center-of-gravity applications
- Designed to smooth out ride, reduce noise and vibration, and provide ground clearance
- Features parabolic springs with elastomeric load cushions.

ATRO Spring End Pad Solutions

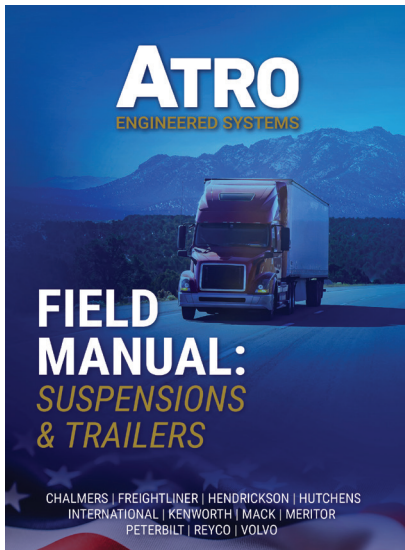
- Proprietary polyurethane resists compression set while absorbing shock and dampening vibration.
 - LP46-24808 – upper pad, 40k suspension
 - LP46-24581 – upper pad, 46k suspension
 - LP46-24807 – lower pad, used on both 40k & 46k suspension

ATRO Torque Rods

- ATRO offers complete replacement rods for the three different length options
 - TR46-49002 – used on 40k suspension with 54" axle spacing
 - TR46-49004 – used on 46-52k suspension with 60" axle spacing
 - TR46-49998 – used on 46-52k suspension with 56" axle spacing



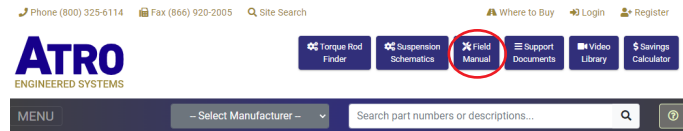
ATRO'S FIELD MANUAL



A valuable preventive maintenance guide from ATRO. To view the digital Field Manual follow the instructions below or scan the QR code to download a copy to your device.

Go to ATRObushing.com

Click on Field Manual in the upper right hand corner



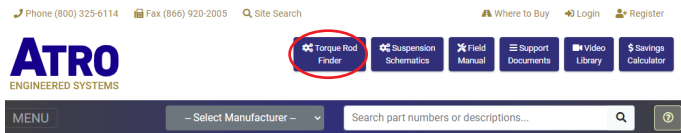
Scan QR Code to download:
ATRO Field Manual

ATRO'S VIN-LESS® TORQUE ROD FINDER

ATRO has compiled a master database to simplify and expedite the process of finding replacement rods. Shorten the time at the counter and confirm the right part for your customer.

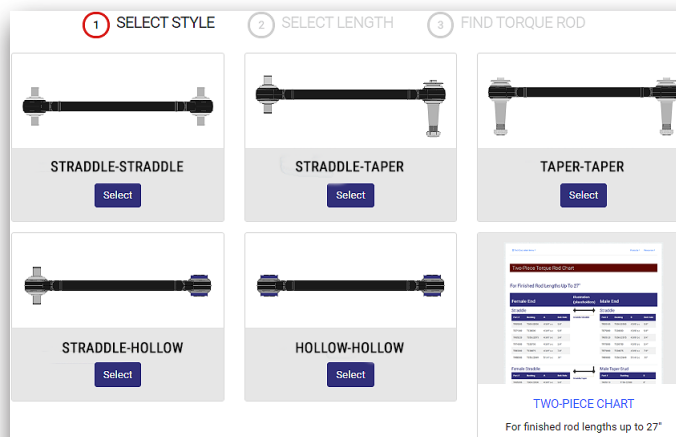
Go to ATRObushing.com

Click on the Torque Rod Finder in the upper right hand corner



1 Visually Identify the Rod

Select the types of bushings Straddle, Taper or Hollow

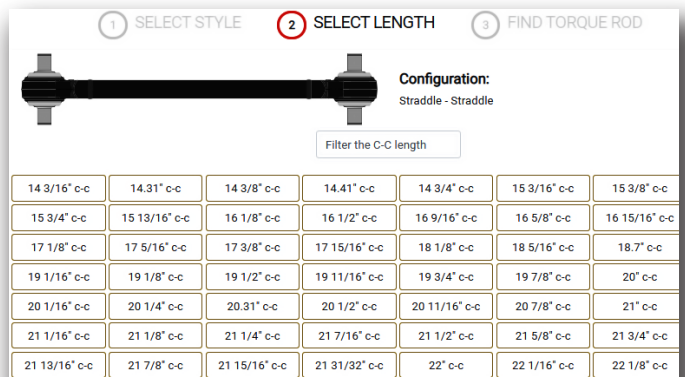


TECH TIP:

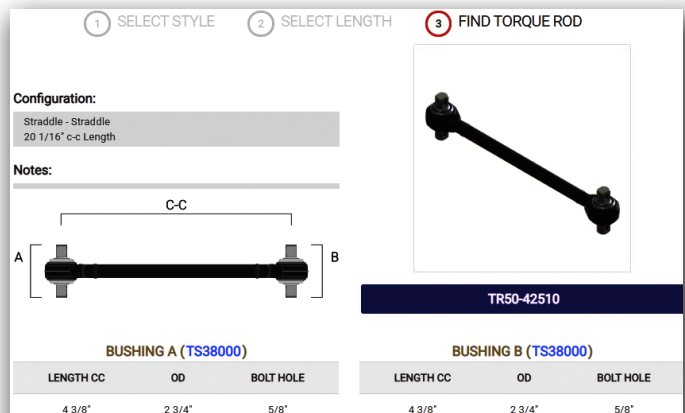
Sometimes the field measurement of a rod can be off by a little bit. In the Torque Rod Finder, check the measurements just a little longer or shorter than what you have and often you will find a very popular rod that is exactly what you need! Most suspensions are predictable and use common torque rods!

2 Measure the Rod

Measure from center of bushing to center of bushing or outside of one eye to inside of the other eye.



3 Results found with bushing and bolt hole detail



ATRO

ENGINEERED SYSTEMS

With ATRO behind you, drive forward.



Impervious to:

- Oil/Grease
- Brine
- Cleaning Solutions
- Hydraulic Fluids
- Diesel Fuel

Rubber Deteriorates



- Engineered to Function
- Providing Peak Performance
- Improving Ride Quality
- Absorbs Shock or Transfers Energy
- Exceeds OE Specs
- Longer Lasting Parts



ATRO Polyurethane vs Rubber

- 2-5 Times Stronger
- Rebound & Compression
- Tensile & Tear Strength
- Elongation Properties
- Ranging Durometer

Follow ATRO on



800.325.6114 • www.ATRObushing.com

6 Bolte Lane • St. Clair, Missouri 63077 • U.S.A.

ATRO, LLC. is not liable for any errors herein. All manufacturers' names and part numbers are used without permission; no endorsement, affiliation, or recommendation is implied. They are included for reference purposes only.

©JANUARY 2023 ATRO, LLC.