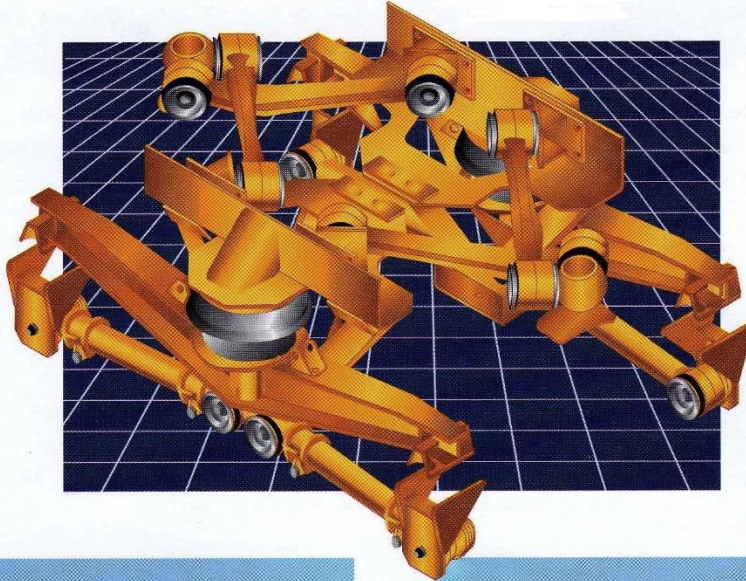




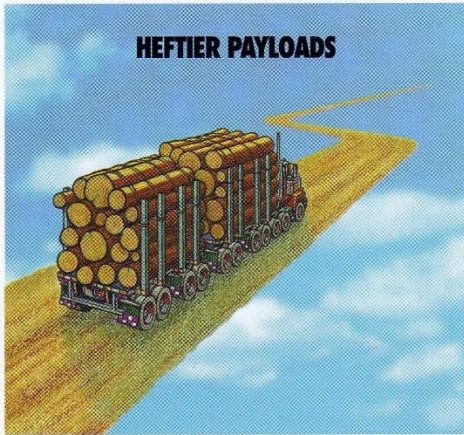
CHALMERS SUSPENSIONS INTERNATIONAL INC.

A GLOBAL COMPANY

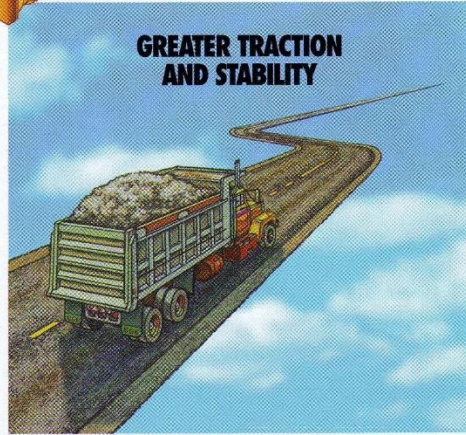
ISO/TS 16949 REGISTERED



HEFTIER PAYLOADS

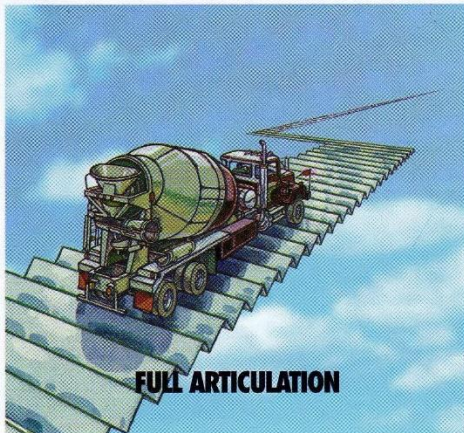


**GREATER TRACTION
AND STABILITY**

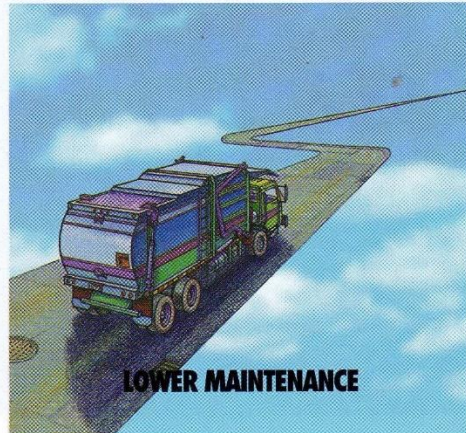


OUR EDGE IS OUR PRODUCT

FULL ARTICULATION



LOWER MAINTENANCE





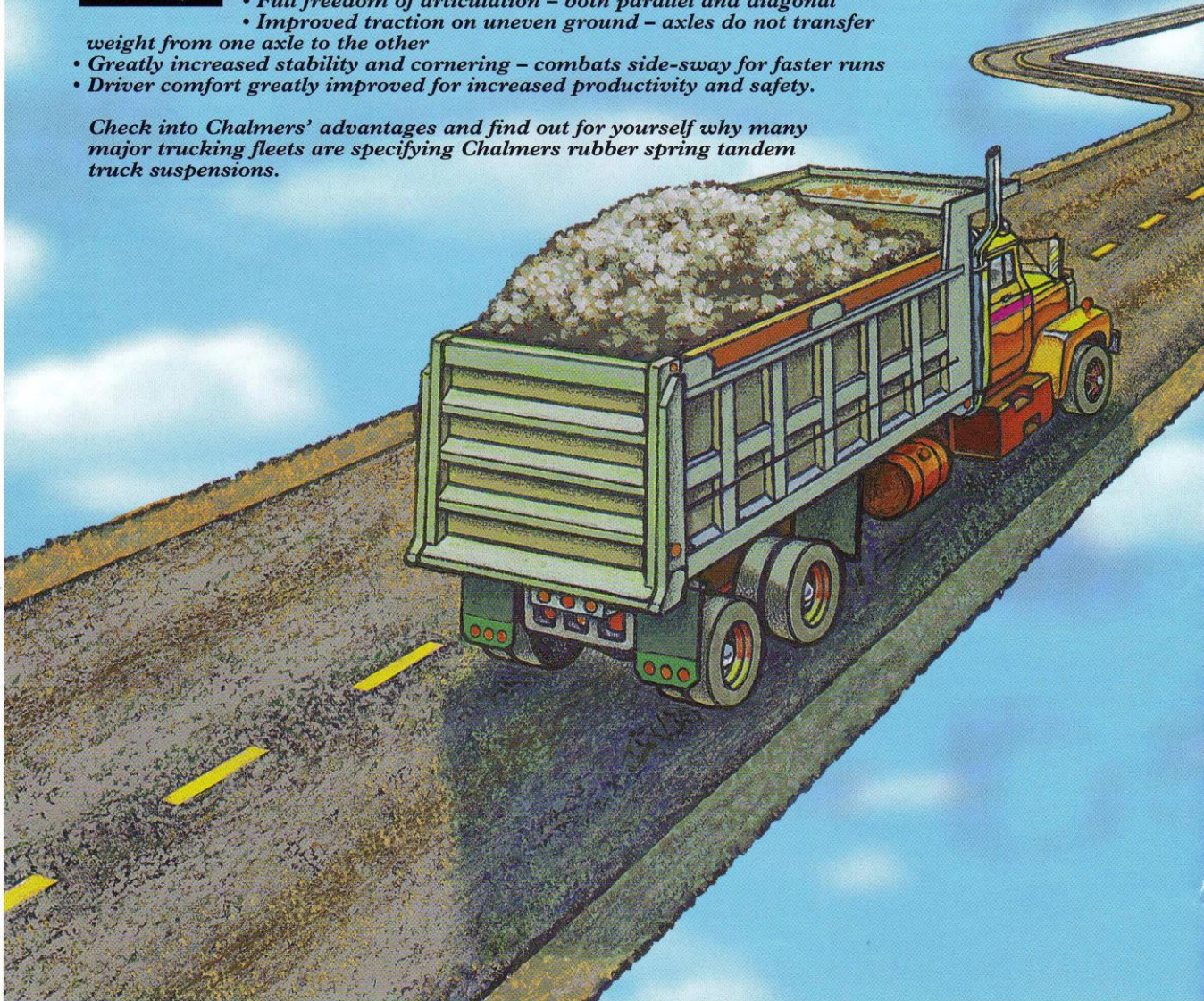
OUR EDGE IS OUR PRODUCT

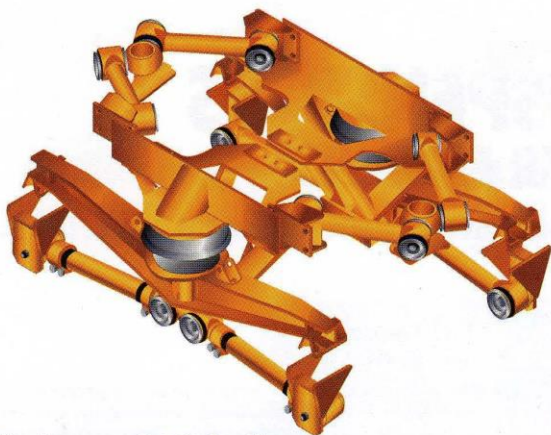
The superior Chalmers rubber spring tandem truck suspension – proving to be safer, smoother and more profitable in all applications.



- No leaf springs or air bags to replace ever – the Chalmers "Loadguard" hollow rubber spring is virtually indestructible
- Guaranteed no-hop on braking for safety
- Increased tire mileage due to true-tracking and no-hop
- Minimum maintenance on suspension – no grease or oil ever
- Reduced maintenance to vehicle
- Full freedom of articulation – both parallel and diagonal
- Improved traction on uneven ground – axles do not transfer weight from one axle to the other
- Greatly increased stability and cornering – combats side-sway for faster runs
- Driver comfort greatly improved for increased productivity and safety.

Check into Chalmers' advantages and find out for yourself why many major trucking fleets are specifying Chalmers rubber spring tandem truck suspensions.

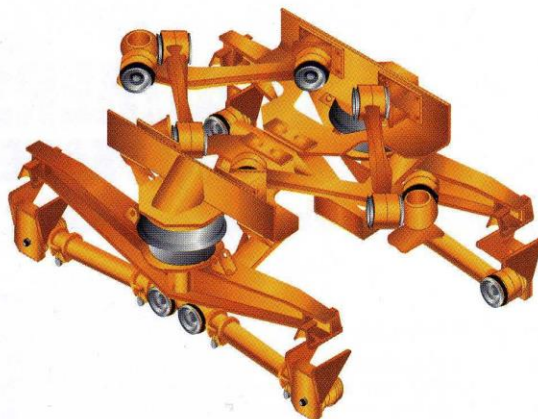




Chalmers 800 Series Tandem Truck Suspension 40,000 Pound Capacity

Model 800-40

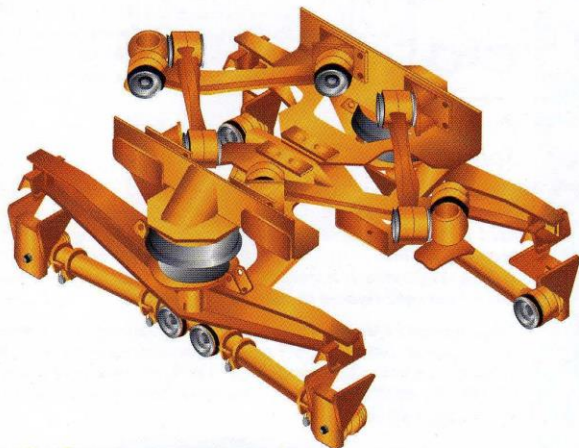
- Axle spacing
54" Total Weight - 865 lbs.
60" Total Weight - 905 lbs.
- Available in low, high, extra low and extra high mount
- Optional vertical or beam type shock kits
- HS - Model for high stability on high center of gravity applications
- Lighter capacity for tandems not exceeding 36,000 lbs.
- Shock kits recommended for all tractor applications



Chalmers 800 Series Tandem Truck Suspension 46,000 Pound Capacity

Model 800-46

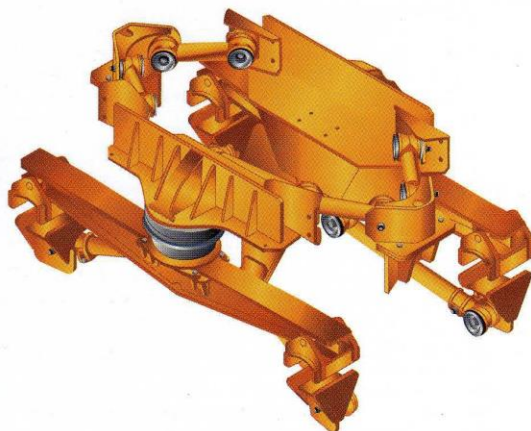
- Axle spacing
54" Total Weight - 995 lbs.
60" Total Weight - 1045 lbs.
72" Total Weight - 1115 lbs.
- Available in low, high, extra low and extra high mount
- Optional vertical or beam-type shock kits
- HS - Model for high stability on high center of gravity applications
- Shock kits recommended for all tractor applications



Chalmers 800 Series Tandem Truck Suspension 50,000 Pound Capacity

Model 800-50

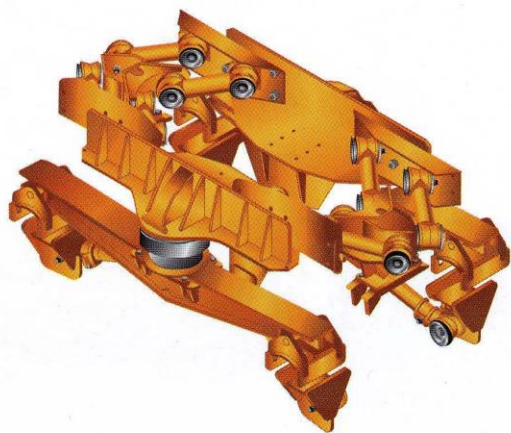
- Axle spacing
54" Total Weight - 1060 lbs.
60" Total Weight - 1100 lbs.
72" Total Weight - 1270 lbs.
- Available in low, high, extra low and extra high mount
- Optional vertical or beam-type shock kits
- HS - Model for high stability on high center of gravity applications
- Shock kits recommended for all tractor applications



Chalmers 800 Series Tandem Truck Suspension 65,000 Pound Capacity

Model 800-65

- Axle spacing
60" Total Weight - 1800 lbs.
65" Total Weight - 1830 lbs.
72" Total Weight - 2000 lbs.
- Available in low, high and extra low mount
- Shock kits not required



Chalmers 800 Series Tandem Truck Suspension 80,000 Pound Capacity

Model 800-80

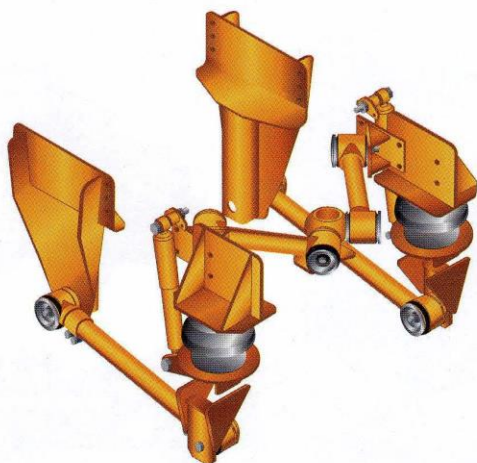
- Axle spacing
65" Total Weight - 2200 lbs.
- Available in low, high and extra low mount
- Shock kits not required



Chalmers 800 Series Tandem Truck Suspension 100,000 Pound Capacity

Model 800-100

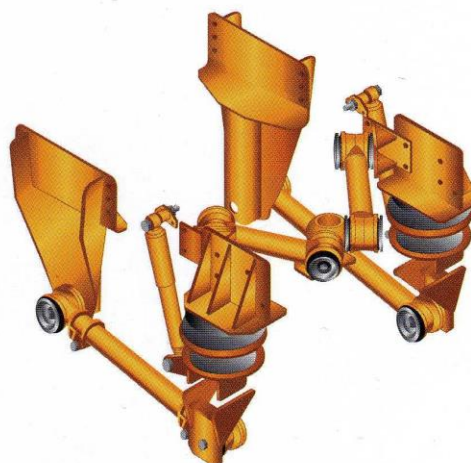
- Axle spacing
65" Total Weight - 2650 lbs.
- Available in low, high and extra low mount
- Shock kits not required



Chalmers 1000 Series Single Axle Truck Suspension 23,000 Pound Capacity

Model 1023

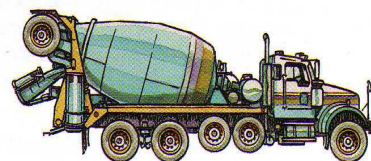
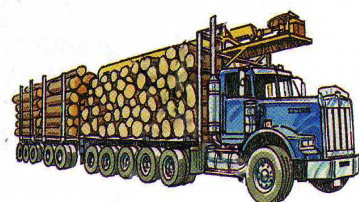
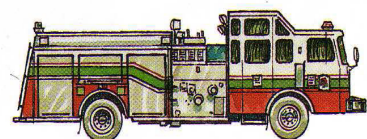
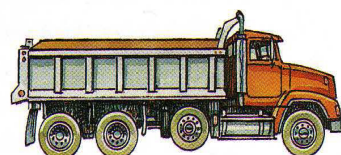
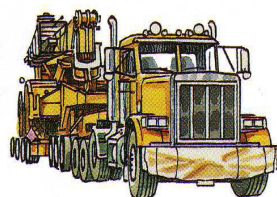
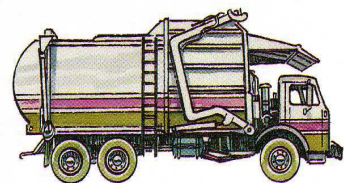
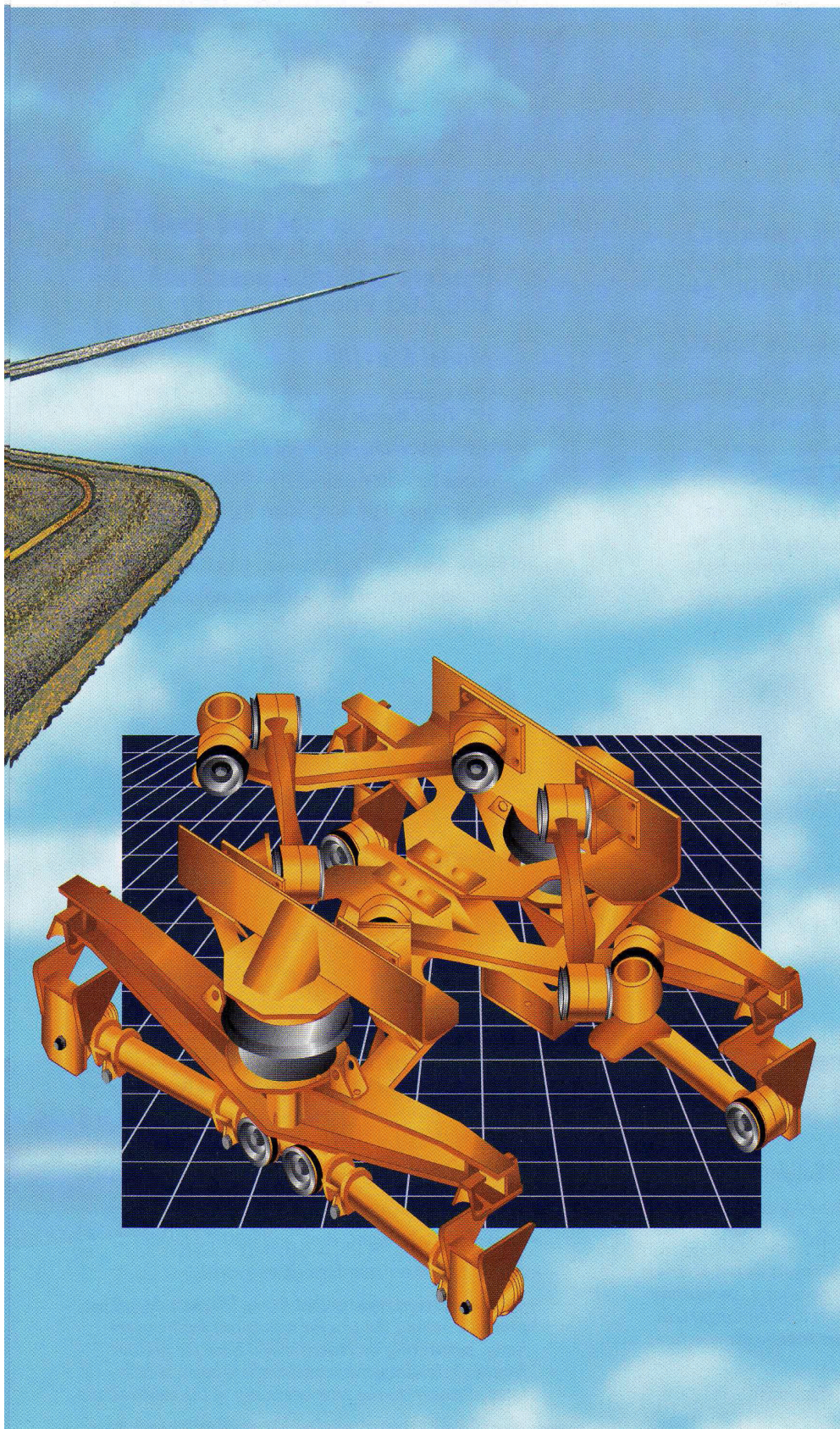
- 15,000 to 23,000 lb. Capacity - Total weight - 450 lbs.
- Available for straight, drop and tapered frames
- Shock absorbers standard on all models
- Compact design ensures that frame brackets do not protrude behind the tire for minimum frame overhang, permitting increased wheel base for greater front axle loadings; this allows the wheels to be located closer to the rear overhang of the vehicle
- Ideal for all types of single-axle applications



Chalmers 1000 Series Single Axle Truck Suspension 30,000 and 40,000 Pound Capacity

Model 1030 - 1040

- 30,000 lb. Capacity - Total weight - 480 lbs.
- 40,000 lb. Capacity - Total weight - 600 lbs.
- Available for straight, drop and tapered frames
- Shock absorbers standard on all models
- Compact design ensures that frame brackets do not protrude behind the tire for minimum frame overhang, permitting increased wheel base for greater front axle loadings; this allows the wheels to be located closer to the rear overhang of the vehicle
- Ideal for all types of single-axle applications



CHALMERS SUSPENSIONS

OUR EDGE IS OUR PRODUCT

Proving in service to be safer, smoother, more profitable on all trucks.

Original Principle:

Chalmers has separated the responsibilities of supporting and cushioning the load from those of locating and guiding the axles. This has resulted in one of the lightest truck tandems in the industry for any given capacity.

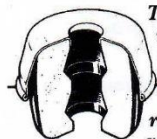
Running maintenance is virtually eliminated, as the suspension requires no lubrication, and the easily replaced rubber torque rod end bushings are essentially the only wearing parts. Consequently, operating costs are extremely low.

It exhibits excellent and uninhibited articulation coupled with superior traction provided by the eight-rod design.

Variable rate springs in restrictor cans, placed on wide spring centres, provide a quality ride with superior stability while loaded.

Support and Cushioning:

Natural Rubber Springs



The Chalmers "Loadguard" variable-rate 100% rubber springs - one per side are directly loaded in compression and self-adjust to the load on impact. This variable rate of deflection also minimizes the roll or side-sway so that anti-roll bars or systems are not required. When a vehicle rolls, the rate of deflection of the outer spring increases considerably while that of the inner spring decreases, resulting in a very stable vehicle with excellent cornering. The springs are therefore literally maintenance-free.

Floating Beams

Each spring bears on the middle of a walking beam, the ends of which rest on the two axles. This oscillates or rocks without friction on its spring with no pins, bushings, or trunnions to change. The walking beams cut the bumps in half with the springs doing the final cushioning. The beams thus only have to support the load, dividing it between the two axles and being located by them. In effect, they are "floating".

The suspension has literally free articulation as there is unrestricted movement of the beams. Each wheel thus maintains its full share of the load at all times, resulting in maximum traction. The minimizing of wheel-spin and hop reduces drive-line maintenance and lengthens tire life.

The rubber springs and the beams are the sole support and cushion the load and provide the oscillation.

Minimal maintenance is required.



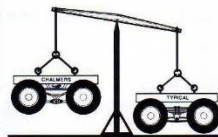
Axle Guidance:

Four-Rod Axle Location

There now remains the responsibility of guiding the axles. Each axle is located longitudinally, transversely, and torsionally by four rubber-bushed torque rods. There are two longitudinal rods attached below the axle centre which take most of the longitudinal forces, holding the axles parallel to each other. The twin upper rods complete the parallelogram, maintaining a near constant "planing" angle for the axle and helping to absorb the torque at all times. Their angled mounting in plan view locates the axles transversely. The unique cross-over arrangement on the larger models permits wider splaying of the upper rods, thus lessening their loads and permitting the use of longer ones. They are attached to the two mainrails, dividing the forces between them. The use of twin diagonal rods keeps the suspension symmetrical.

The roll-centre of the suspension is at the tower above the axle where the upper rods pivot. Its high location minimizes side-sway and aids cornering.

Lightweight Suspension:



High-strength, low-alloy steel parts, high-tensile steel castings, and hollow LOADGUARD rubber springs make Chalmers Suspensions extremely lightweight and extremely strong. Up to 700 lbs. saved on truck tandems.

Spigot Joints

The torque rods pivot on rubber bushings, which provide transverse cushioning. Unbonded all-rubber "cartilages" are used in the sixteen identical joints, each held together by a high-tensile bolt and nut. The fasteners hold a removable cap on to a spigot which is frame or axle mounted. This pre-loads the rubber and retains the torque rod end.

The long-life bushings can be replaced in minutes by common tools without disturbing the axles or jacking up wheels. These bushings do not support any load. There is one size of bushing to stock for each suspension. Only two different sizes are used in the range of capacities.

Chalmers Suspensions advises users to ensure that the suspensions capacity ratings are followed. Additional types of attachments to axles or load transferring devices may raise the suspension load in excess of the approved capacity rating.



CHALMERS SUSPENSIONS INTERNATIONAL INC.
A GLOBAL COMPANY

ISO/TS 16949 REGISTERED

6400 NORTHAM DRIVE, MISSISSAUGA, ONTARIO, CANADA L4V 1J1

TEL: (905) 362-6400 • FAX: (905) 362-6401 • E-MAIL: info@chalmerssuspensions.com • WEB SITE: www.chalmerssuspensions.com

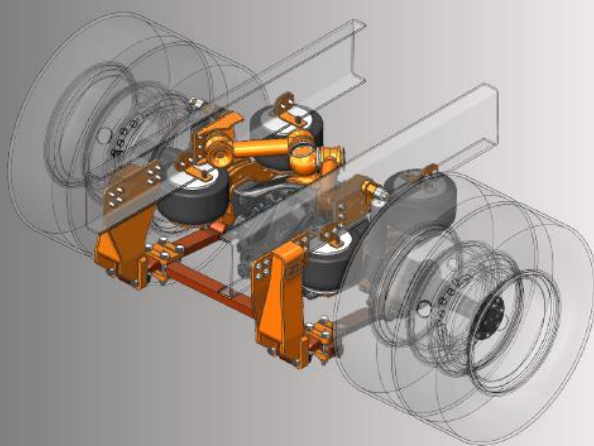


CHALMERS 1800 SERIES AIR RIDE SUSPENSION

NEW

BUILDING ON 50 YEARS OF PROVEN SUCCESS

**A VOCATIONAL TRUCK AIR SUSPENSION
WORTHY OF THE NAME CHALMERS**



- Superior ride comfort
- Improved stability
- Customized solutions for roll stiffness
- Standard and tailored suspension versions

VOCATIONAL USES



CONCRETE MIXER



CONSTRUCTION



OIL FIELD



CRANE



LOGGING



VAC TRUCK



REFUSE



ROLL-OFF



CHALMERS SUSPENSIONS INTERNATIONAL INC.
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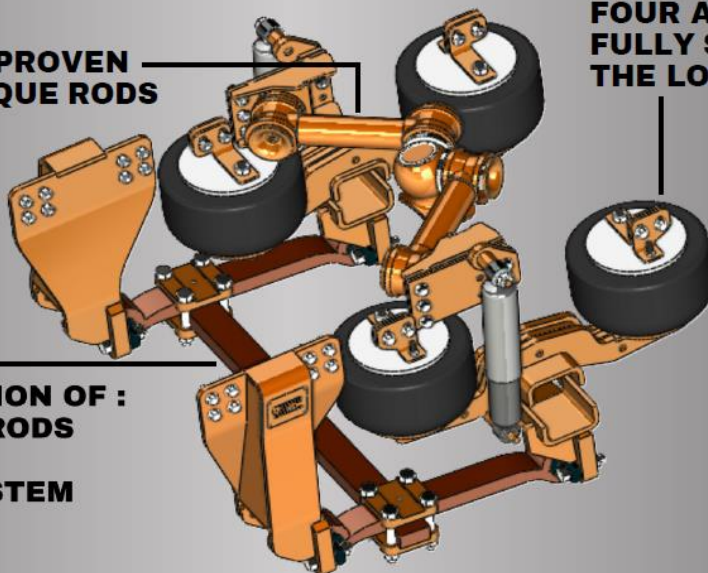
CHALMERS 1800 SERIES AIR RIDE SUSPENSION

KEY FEATURES

**CHALMERS PROVEN
UPPER TORQUE RODS**

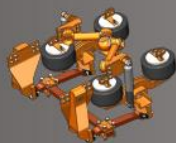
**FOUR AIR SPRINGS
FULLY SUPPORTING
THE LOAD**

**H - FRAME
PROVIDING FUNCTION OF :**
• **LOWER TORQUE RODS**
• **CUSTOMIZABLE
ANTI-ROLL SYSTEM**

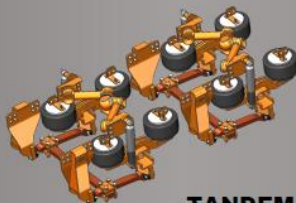


PATENT PENDING

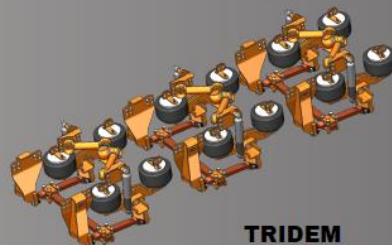
CONFIGURATIONS



SINGLE



TANDEM



TRIDEM

SPECIFICATIONS

- **Load rating : 23K - 26K lbs / axle**
- **Site rating : 30K - 34K lbs / axle**
- **Axle spacing : minimum 52"**

- **Ground clearance* : 10"**
- **Ride height* : 10"**
- **Axle travel* : 8"**

* Depending on version

Customized solutions available



CHALMERS SUSPENSIONS INTERNATIONAL INC.
6400 NORTHAM DRIVE, MISSISSAUGA, ONTARIO, CANADA, L4V 1J1
Tel : 905 362 6400 www.chalmerssuspensions.com

The Superior Chalmers 700 rubber spring tandem trailer suspension

**The premium advantage now offers
even lighter weight - less maintenance
greater stability - more economy**



The 700 series continues the premium advantages of Chalmers suspensions - 10 years tested and proven to be safer, smoother and more profitable in all heavy duty applications.

Virtually indestructible rubber springs and upgraded walking beams ensure full equalization of axle weights at all times under the most extreme degrees of articulation. Maintenance is reduced to an absolute minimum - only one rubber bushing in all wear joints could

require replacement service. And this can be completed within 2 hours in any shop - no special equipment needed.

Chalmers Suspensions are ideal when stability for full loads, and soft-rides for empty loads are important features.

Check into Chalmers advantages and find for yourself why many major tank and trailer fleets are specifying Chalmers rubber spring tandem trailer suspensions.

Chalmers Suspensions International Inc.

6400 NORTHAM DRIVE, MISSISSAUGA, ONTARIO L4V 1J1 - TEL: (905) 362-6400 - FAX: (905) 362-6401



CHALMERS TANDEM TRAILER SUSPENSIONS

Original Principle:

Chalmers have taken a completely fresh approach to the conflicting problems associated with the design of tandem suspensions. They have separated the responsibilities of supporting and cushioning the load from those of locating and guiding the axles. This separation has permitted each part to be specifically designed for its one function. This Chalmers design approach has resulted in one of the lightest, if not the lightest, trailer tandems available to the industry for any given capacity. Running maintenance is virtually eliminated as the suspension requires no lubrication, and the easily replaced rubber torque rod end bushings are essentially the only wearing parts; consequently operating costs are extremely

low.

The suspension is equally at home on or off-highway due to its excellent and uninhibited articulation. The wheels stay on the ground.

Variable rate rubber springs in restrictor cans, placed on wide spring centres, couple a soft, empty ride with superior stability while loaded.

The separation of the load-carrying function from the braking, and steering functions ensures equalization of load between the two axles and eliminates axle wind-up. The axles are always loaded 50/50, even during severe braking.

SUPPORT AND CUSHIONING

1. Rubber Springs:

Rubber is lighter than steel and possesses excellent qualities as a spring. The Chalmers "Loadguard" variable rate 100% rubber springs - one per side - are directly loaded in compression and self-adjust to the load on impact. The result is that the springs are very soft when the load is light, but become very stiff under full load. There is thus a near constant frequency and quality of ride. This variable

rate of deflection also minimizes the roll or side-sway so that anti-roll bars or systems are not required. When a vehicle rolls, the rate of deflection of the outer spring increases considerably while that of the inner spring decreases. The net result is a very stable vehicle with excellent cornering.

The springs are unbonded and their hollow centres are open to the air for ventilation.

Metal cans fit over them to prevent excessive deformation. The springs are thus literally maintenance free.



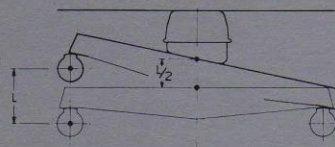
2. Floating Beams:

Each spring bears on the middle of a longitudinal equalizer or walking beam, the ends of which rest on the two axles. Each beam oscillates or rocks without friction on its spring with no pins, bushings, trunnions, or lubrication. The walking beams

cut the bumps in half with the springs doing the final cushioning. The beams thus only have to support the load, dividing it between the two axles and being located by them. In effect, they are "floating".

The suspension has literally free articulation as there is unrestricted rocking of the beams. Each wheel thus maintains its full share of the load at all times, resulting in maximum braking. No axle hop.

The rubber springs and the beams thus solely support and cushion the load and provide the oscillation. Minimal maintenance is required.



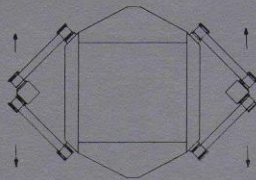
AXLE GUIDANCE

3. Four-Rod Axle Location:

There now remains the responsibility of guiding the axles. Each axle is positively located longitudinally, transversely, and torsionally by four rubber-bushed torque rods. There are two longitudinal rods attached below the axle centre which take most of the longitudinal forces, holding the axles parallel to each other at all times.

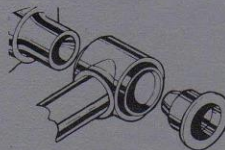
The twin upper rods complete the parallelogram to absorb the torque at all times. Their angled mounting in plan view locates the axles sideways. This unique arrangement maintains accurate axle alignment and resists all side scuffing. The use of twin diagonal rods keeps the suspension symmetrical.

The roll-centre of the suspension is at the tower above the axle where the upper rods pivot. Its high location minimizes side-sway.



4. Spigot Joints:

The torque rods pivot on rubber bushings, which provide transverse cushioning. Unbonded all-rubber "cartilages" are used in the sixteen identical joints, each held together by a high tensile bolt and nut. The fasteners hold a removable cap on to a spigot which is frame or axle mounted. This pre-loads the rubber and retains the torque rod end.



The long-life bushings can be replaced in minutes by common tools without disturbing the axles or jacking up wheels. These bushings do not support any load. There is one size of bushing to stock for each suspension. Different sizes are used in the range of capacities.

CHALMERS ADVANTAGES

1. No leaf springs or air bags to replace - the Chalmers "Loadguard" hollow rubber spring is literally indestructible.
2. Guaranteed no-hop on braking for safety.
3. Increased tire mileage due to true-tracking and no-hop.
4. Minimum maintenance on suspension - no grease or oil ever.
5. Reduced maintenance to vehicle due to soft ride - no fifth wheel surge.
6. Full freedom of articulation - both parallel and diagonal.
7. Each set of tires takes its full weight at all times - this saves stub ends and wheel bearings.
8. Ease and simplicity of repairs if in an accident.
9. Greatly increased stability - combats side-sway for faster runs.
10. Increased cornering ability.
11. Driver comfort greatly improved for increased productivity and safety.

AXLE SPACING	CAPACITY	WEIGHT (LBS.)	AVAILABLE OPTIONS
54", 63" & 72"	46,000 LB.	54" - 755	High, low and extra low mount
		63" - 850	
		72" - 900	
54", 63" & 72"	60,000 LB.	54" - 900	Fits all axle types
		63" - 950	
		72" - 1,000	
96", 108"	46,000 LB.	96" - 850	Available for all axle tracks
		108" - 879	
96", 108"	55,000 LB.	96" - 1060	High stability model for high center of gravity applications
		108" - 1089	
500 Single Axle	23,000 LB.	280	
Model Available	30,000 LB.	390	