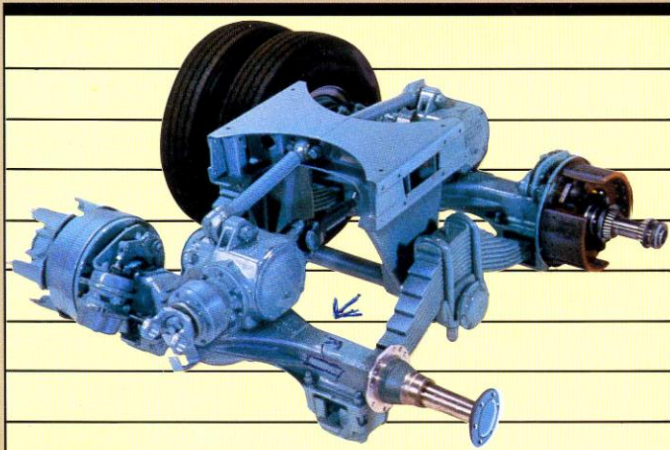




SS441C BOGIE



A Balanced Approach

The heart of "The Mack Difference" is the integrated "Balanced Design" powertrain. Mack engines, transmissions, bogies and axles are carefully engineered to complement each other, with efficient economical performance. And because Mack powertrain components are precisely matched, the truck operator reaps the added benefits of minimum component maintenance, wear and downtime . . . and maximum horsepower utilization, load carrying capabilities, fuel economy, and long life. Mack powertrain components — proven over billions of tough customer kilometres — deliver the essence of low life cycle cost: Stamina, dependability and profitability. A balanced approach is what today's heavy-duty truck customer needs. Less bull, and more Bulldog!

HEAVY DUTY VERSATILITY

The Mack bogie has been proven over decades of service and billions of kilometres in all the Mack heavy duty models. The inherent toughness of the product allows it to contend with the harshest conditions. The Mack SS441C bogie can withstand the severe conditions often imposed by on/off highway operations like logging and road train applications where sub-standard roads are common.

The bogie is four wheel drive with top mounted drive heads for straight line through drive for increased life. The spiral bevel input pinion is located above the axle shafts to allow a straight line from the transmission to the rear axle carrier for reduced parasitic horsepower loss and less wear on "U" joint life and less vibration.

The carrier is designed with spiral bevel gears in combination with helical bull gear final drive and an integral inter-wheel gear differential. The Mack SS441C is designed to operate in severe service conditions at full rated capacity. Springs are of the long proven camel back type, with solid spindle centre trunnion and one piece bronze bushings. Rubber or optional heavy-duty urethane insulators cushion spring ends from the axle housing, allowing free

vertical and angular movement of axles. Top and bottom retention is by a "button and plate" system bonded into the insulator for positive lock against pull-out.

The angular movement allowed by the camel back system gives a Mack bogie its unique self steering characteristics. As the vehicle corners, weight is transferred outwards. As the load on the outer spring increases, the outside wheelbase of the bogie increases. The inside spring is under less load and the inside wheelbase decreases. The bogie steers and follows the front axle.

Besides the obvious benefits to steering and stability, the camel back system prolongs tyre life. When travelling straight ahead, wheels follow bumps and dips without creating twisting stresses and axles, springs and frame are protected in the process. Axles have two top mounted torque rods to prevent axle rotation and counter axle hop.

Mack's famed inter-axle power divider automatically creates torque bias in favour of the axle with the greater traction and is standard on the Mack SS441C bogie. Its simplicity and efficiency contributes to on-the-job productivity by distributing driving torque to match operating conditions.

SS441C BOGIE SPECIFICATIONS 20,000kg (44,000lbs) Capacity

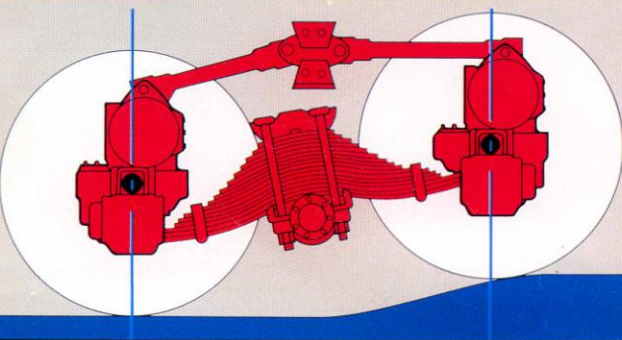
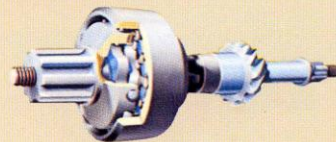
DETAIL SPECIFICATIONS

DIFFERENT MOUNT	SAME DIFFS
Make MACK	Axle retention Upper & lower rubber shock insulators, spring brackets integral with housing, cast iron caps.
Capacity 20,000kg (44,000lbs)	Trunnion Bracket & Crossmember One piece fabricated steel with integral spindle & collar assy.
Bogie wheelbase 1397mm (55") (Std.)	Spindle Solid (removable for maintenance)
Type, Std. Four wheel dual reduction, top mounted carrier, inter-axle power divider.	Bushing Bronze
Opt. Air power divider lockout.	Torque & propulsion Horizontal heavy duty torque rods and springs
Carriers Iron — CRDPC92 — CRD93	BRAKES
Available ratios: 3.87, 4.17, 4.42, 4.64, 5.02, 5.32, 5.73, 6.34	Service Brake
Oil capacity, litres 7.6L	Tayco Pty. Ltd. CAM (Heavy Duty)
Bevel gear comp't. 3.8L	Actuation AIR
each carrier 5L	Size & thickness 419 x 178 x 19mm (16.5" x 7" x .75")
Inter-axle P.D. 5L	Lining area per bogie 6529cm ² (1012"²)
Axle Housing, Type Steel casting with spindle inserts	Chamber size per wheel 1 @ 193cm ² (30"²)
Spindle, diameter Inner bearing 83mm (3.25")	Slack adjuster, length 152mm (6")
..... Outer bearing 76mm (3.00")	Parking emergency brake ... Spring loaded chamber
..... Spindle bore 59mm (2.31")	Auxiliary Spring Brake MGM Spring loaded chambers (Double diaphragm type)
Axle Shafts, Type Integral flange	Mechanical spring release
Material Boron alloyed steel. Induction hardened.	Four units (One unit per wheel)
Body diameter 50mm (2.0")	Wedge type brakes available
Diameter over splines 56mm (2.19")	
Splines, No. & type 17 — involute	
Suspension, Type Camel back spring	
Load centres 1397mm (55") (Std.)	
Spring centres (width) 991mm (39")	
Spring width 102mm (4")	
No. of leaves & thickness:	
Load Centres 1397mm (55")	
..... 11 @ 20mm (.788")	

MACK POWER DIVIDERS MEAN TRACTION

The mechanical, torque-biasing inter-axle power divider is a Mack exclusive. Its simplicity and efficiency contributes to the on-the-job productivity of a Mack vehicle by distributing driving torque to match operating conditions. Located on the centreline of the carrier input pinion, it provides three-to-one torque proportioning from axle-to-axle. Under minimum traction conditions, the

resisting force on the slipping axle is multiplied threefold and applied to the axle that has retained traction, without locking. The inter-axle power divider is lubricated by an integrated internal pump and filtered by magnetic plugs, without the need for external "add-on" pumps. Overall operation is simple, smooth, instant.



Maximum manoeuvrability from axle housing geometry

The Mack suspension concept creates a parallelogram of the axle housings relative to each other. Trunnion mounted torque rods anchored in a frame cross member, along with the carrier housings, form the parallelogram geometry which prevents axle rotation. Weight cannot be thrown forward or rearward by uneven surfaces, acceleration or braking forces and so axle hop is avoided and components and tyres last longer. This geometry along with power divider, tough axles, suspension system and frame all work together to provide superior articulation for maximum traction.

The information in this brochure was accurate at the time of publication. Mack Trucks Australia Pty Ltd reserves the right to make changes in specifications, equipment or design, or to discontinue models or options without notice at any time.