

Mack REAR AXLES

CAPACITY — NOMENCLATURE — DETAIL SPECIFICATION
(CAPACITIES AT GROUND)

REFERENCE SHOULD BE MADE TO DATA BOOK FOR MODEL APPLICATION



(18,500 Lb. Rating)

Hypoid Single Reduction

RAS 307

DETAIL SPECIFICATIONS

MODEL RAS 307
MAKE ROCKWELL-STANDARD (L-145)
Final Drive Hypoid Single-Reduction
Construction Hot Forged High Carbon Steel, Rectangular Shaped, Welded on Bowl Cover

SPINDLE DIAMETER:

Inner Bearing 3 1/4"
Outer Bearing 3"

CARRIER:

Model CRS 125
Ratios 5.29, 5.83, 6.17, 6.83, 7.20
Housing Material Malleable Iron
Differential, Type Four-Pinion

DRIVING GEARS:

Face Width, Ring Gear 2 1/8"

BEARINGS:

Bevel Pinion, Front and Rear Tapered Roller, Single Row
Spigot Cylindrical Roller, Single Row
Differential Tapered Roller, Single Row (2)
Rear Wheels, Inner and Outer Tapered Roller, Single Row (2)

AXLE SHAFTS:

Material Drop Forged, Heat Treated Steel
Type Integral Flange
Diameter, Minimum 1.875"
Diameter, Over Spline 2"
Diameter, Root of Spline 1.875"
Splines at Inner End Twenty-One
Type Slant-Sided
Torque and Propulsion Hotchkiss
Oil Capacity 24 Pints

BRAKES

Actuation Hydraulic or Air
Diameter 16" 15"
Width 5" 6"
Lining Thickness 1/2" 3/4" tapered
Lining Area, Both Wheels 329 sq. in. 377 sq. in.

Brakes Wagner
Number 4 Per Axle
Effective Area 12 sq. in.
Wedge Angle 14"
Wheel Cylinder Diameter 1 3/4"
Automatic Brake Adjustment Standard

(20,000 Lb. Rating)

Dual Reduction

RAD 528 • RADL 528 • RAD 5281 • RADL 5281

DETAIL SPECIFICATIONS

MODEL RAD 528, RADL 528
RAD 5281, RADL 5281
Make MACK
Final Drive Dual Reduction
Construction Banjo, pressed steel halves, fused

SPINDLE DIAMETER:

Inner Bearing 3 3/8"
Outer Bearing 3 3/8"

CARRIER:

Model CRDL 111 or CRDL 1111
Ratios 4.32*, 4.99, 5.52, 5.88, 6.57
Housing Material Aluminum
Differential, Type Four-Pinion, closed

* Available with CRDL111 only.

DRIVING GEARS:

Face Width: Bevel Gears 2"
Helical Gears 3 3/8"

BEARINGS:

Bevel Pinion, Front and Rear Tapered Roller, Single Row
Bevel Gear and Helical Pinion Shaft Tapered Roller, Single Row
Differential Tapered Roller, Single Row (2)
Rear Wheels Inner and Outer Tapered Roller, Single Row (2)
Thru Shaft Cylindrical Roller, Single Row

AXLE SHAFTS:

Material Chromium Molybdenum Steel, Induction Hardened
Type Integral Flange
Diameter, Minimum 2"
Diameter, Over Spline 2.145"
Diameter, Root of Spline 2.225"
Splines at Inner End Seventeen
Type Involute
Torque and Propulsion Through Springs (Hotchkiss)
Oil Capacity 42 Pints

BRAKES: (AIR)

	RAD528	RADL528	RAD5281	RADL5281
Make	Rockwell Standard	Mack	Rockwell Standard	Mack
Type (Location)		Internal Expanding, Enclosed (Both Wheels)		
Drum Material		Alloy Cast Iron, Steel Backed		
Diameter	15"	16 1/2"	15"	16 1/2"
Width	6"	6"	7"	7"
Lining Thickness	3/4"	3/4"	3/4"	3/4"
Lining Area, Both Wheels	377 sq. in.	414 sq. in.	440 sq. in.	476 sq. in.
Brake Chamber(s), Effective Area Each Wheel	2-12 sq. in.	1-24 sq. in.	2-12 sq. in.	1-24 sq. in.
Slack Adjusters, Length	—	7"	—	7"
Wedge Angle	12°	—	12°	—

(23,000 Lb. Rating)

Hypoid Single Reduction

RAS 507* • RAS 508 • RAS 509* • RAS 512

DETAIL SPECIFICATIONS

MODEL*RAS 507, RAS 508
*RAS 509, RAS 512
MAKEMACK
Final DriveHypoid, Single Reduction
ConstructionOne piece, formed from tubular stock, heat treated;
cover, press steel, welded to banjo
SPINDLE DIAMETER:
Outer Bearing35/8"
Inner Bearing33/8"
CARRIER:
ModelCRS 84
*Ratios4.25, 4.63, 5.14, 5.57, 6.17, 6.83, 7.14
Housing MaterialMalleable Iron
Differential, TypeFour-Pinion, closed
*Availability dependent upon individual chassis model.
DRIVING GEARS:
Face Width: Bevel Gear (Ratios)2 1/4" (5.57, 6.17)
2-17/64" (4.25, 4.63, 5.14, 6.83, 7.14)

BEARINGS:

Bevel Pinion, Front and RearTapered Roller, Single Row
SpigotCylindrical Roller, Single Row
DifferentialTapered Roller, Single Row (2)
Rear Wheels, Inner and OuterTapered Roller, Single Row (2)

AXLE SHAFTS:

MaterialChromium Molybdenum Steel, Induction Hardened
TypeIntegral Flange
Diameter, Minimum2"
Diameter, Over Spline2.431"
Diameter, Root of Spline2.137"
Splines at Inner EndSeventeen
TypeInvolute
Type of DriveHotchkiss
Oil Capacity28 Pints

BRAKES

*RAS 507 *RAS 509
RAS 508 RAS 512
ActuationAir Air
Diameter16 1/2" 16 1/2"
Width6" 7"
Lining Thickness3/4" 3/4"
Lining Area, Both Wheels414 sq. in. 476 sq. in.

LocationBoth Wheels
TypeInternal Expanding, Inclosed
Drum MaterialAlloy Cast Iron, Steel Backed
Brake Chambers, Effective Area30 sq. in.
Slack Adjusters, Length6-15/16"

*RAS 507 and RAS 509 have aluminum brake chamber brackets, spiders and shoes.

(23,000 Lb. Rating)

Dual Reduction

RAD 529 • RADL 529* • RAD 530 • RAD 5291 • RADL 5291* • RAD 5301

DETAIL SPECIFICATIONS

MODELRAD 529, RADL 529,* RAD 530
RAD 5291, RADL 5291,* RAD 5301
MAKEMACK
Final DriveDual Reduction
ConstructionOne piece, formed from tubular stock, heat treated;
cover, pressed steel, welded to banjo
SPINDLE DIAMETER:
Inner Bearing35/8"
Outer Bearing33/8"
CARRIER:
ModelCRD 117
*Ratios4.00, 4.25, 4.62, 4.88, 5.43, 5.78, 6.36, 6.80, 7.48, 7.85, 8.83, 9.87
Housing MaterialMalleable Iron
Differential, TypeFour-Pinion, closed
Model (Opt. Extra)CRD 1171
Carrier CRD 1171 has the Mack Power Divider type differential.
*Availability dependent upon individual chassis model.

DRIVING GEARS:

Face Width: Bevel Gear (Ratios)1 3/4" (4.88, 5.78, 6.36, 6.80, 7.48)
1 7/8" (4.00, 4.25, 4.62, 5.43)
Helical Gears1-11/16" (7.85, 8.83, 9.87)
3/4"

BEARINGS:

Bevel Pinion, Front and RearTapered Roller, Single Row
Bevel Gear and HelicalTapered Roller, Single Row (2)
Pinion ShaftTapered Roller, Single Row (2)
Rear Wheels, Inner and OuterTapered Roller, Single Row (2)

AXLE SHAFTS:

MaterialChromium Molybdenum Steel, Induction Hardened
TypeIntegral Flange
Diameter, Minimum2"
Diameter, Over Spline2.415"
Diameter, Root of Spline2.225"
Splines at Inner EndSeventeen
TypeInvolute
Torque and PropulsionThrough Springs (Hotchkiss)
Oil Capacity31 Pints

BRAKES: (AIR)

RAD 529,*RADL 529 RAD 5291,*RADL 5291
RAD 530 RAD 5301
ActuationAir Air
Diameter16 1/2" 16 1/2"
Width6" 7"
Lining Thickness3/4" 3/4"
Lining Area, Both Wheels414 sq. in. 476 sq. in.

TypeInternal Expanding, Inclosed
Drum MaterialAlloy Cast Iron-Steel Backed
Brake Chambers, Effective Area30 sq. in.
Slack Adjusters, Length6-15/16"

*RADL 529 and RADL 5291 have aluminum brake chamber brackets, spiders and shoes.

(23,000 Lb. Rating)

Dual Reduction

RAD 533 • RADL 533*

DETAIL SPECIFICATIONS

MODEL RAD 533
RADL 533
MAKE MACK
Final Drive Dual Reduction
Construction One piece formed from tubular stock, heat treated;
cover, pressed steel welded to banjo

SPINDLE DIAMETER:

Inner Bearing 35/8"
Outer Bearing 33/8"

CARRIER:

Model CRD 119
Ratios 4.60, 4.99, 5.52, 5.98, 6.52, 7.21, 7.81, 8.52, 9.38
Housing Material Malleable Iron
Differential Type Four-Pinion, closed
Model (Opt. Extra) CRD 1191
CRD 1191 has the Mack Power Divider type differential.

*Availability dependent upon individual chassis model.

BRAKES

Actuation Air
Type Internal Expanding, Enclosed
Diameter 16 1/2"
Width 7"
Lining Thickness 3/4"
*RADL 533 has aluminum brake chamber brackets, spiders and shoes.

DRIVING GEARS:

Face Width: Bevel Gears 2"
Helical Gears 3 3/8"

BEARINGS:

Bevel Pinion, Front and Rear Tapered Roller, Single Row
Bevel Gear and Helical
Pinion Shaft Tapered Roller, Single Row (2)
Differential Tapered Roller, Single Row (2)
Rear Wheels, Inner Tapered Roller, Single Row (2)
Rear Wheels, Outer Tapered Roller, Single Row (2)

AXLE SHAFTS:

Material Chromium Molybdenum Steel, Induction Hardened
Type Internal Flange
Diameter, Minimum 2"
Diameter, Over Spline 2.415"
Diameter, Root of Spline 2.225"
Splines at Inner End Seventeen
Type Involute
Torque and Propulsion Through Springs (Hotchkiss)
Oil Capacity 31 Pints

(27,000 Lb. Rating)

Dual Reduction

RAD 606

DETAIL SPECIFICATIONS

MODEL RAD 606
MAKE MACK
Final Drive Dual Reduction
Construction Pressed steel banjo, fused

SPINDLE DIAMETER:

Inner Bearing 4"
Outer Bearing 3 3/4"

CARRIER:

Model CRD 118
Ratios 4.60, 4.99, 5.52, 5.98, 6.52, 7.21, 7.81, 8.52, 9.38
Housing Material Malleable Iron
Differential, Type Four-Pinion, closed
*Availability dependent upon individual chassis model.

DRIVING GEARS:

Face Width: Bevel Gears 2"
Helical Gears 3 3/8"

BRAKES

Type Internal Expanding, Enclosed
Actuation Air
Diameter 16 1/2"
Width 7"
Lining Thickness 3/4"

BEARINGS:

Bevel Pinion, Front and Rear Tapered Roller, Single Row
Bevel Gear and Helical
Pinion Shaft Tapered Roller, Single Row (2)
Differential Tapered Roller, Single Row (2)
Rear Wheels, Inner and Outer Tapered Roller, Single Row (2)

AXLE SHAFTS:

Material Chromium Molybdenum Steel, Induction Hardened
Type Free-Splined, Both Ends
Diameter, Minimum 2.250"
Diameter, Over Spline 2.687"
Diameter, Root of Spline 2.461"
Splines at Inner End Seventeen
Splines at Outer End Seventeen
Type Involute
Torque and Propulsion Through Springs (Hotchkiss)
Oil Capacity 28 Pints

(35,000 Lb. Rating) RAD 703

(38,000 Lb. Rating) RAD 704

Dual Reduction

DETAIL SPECIFICATIONS

MODEL RAD 703
RAD 704
MAKE MACK
Final Drive Dual Reduction
Construction Pressed Steel Banjo, Fused

SPINDLE DIAMETER:

Inner Bearing 4"
Outer Bearing 3 3/4"

CARRIER:

Model CRD 118
Ratios 7.21, 7.81, 8.52, 9.38
Housing Material Malleable Iron
Differential, Type Four-Pinion

DRIVING GEARS:

Face Width: Bevel Gears 2"
Helical Gears 3 3/8"

BRAKES

Type Internal Expanding, Enclosed
Actuation Air
Diameter 17 1/4"
Width 7"
Lining Thickness 3/4"

BEARINGS:

Bevel Pinion, Front and Rear Tapered Roller, Single Row
Bevel Gear and Helical
Pinion Shaft Tapered Roller, Single Row (2)
Differential Tapered Roller, Single Row (2)
Rear Wheels, Inner and Outer Tapered Roller, Single Row (2)

AXLE SHAFTS:

Material Chromium Molybdenum Steel, Induction Hardened
Type Free-Splined, Both Ends
Diameter, Minimum 2.250"
Diameter, Over Spline 2.687"
Diameter, Root of Spline 2.461"
Splines at Inner End Seventeen
Splines at Outer End Seventeen
Type Involute
Torque and Propulsion Radius Rods and Torque Arms
Oil Capacity 28 Pints

Lining Area, Both Wheels 426 sq. in.
Drum Material Alloy, Cast Iron, Steel Backed
Brake Chambers, Effective Area 30 sq. in.
Stack Adjusters, Length 6 1/2"
RAD 703 RAD 704
426 sq. in. 476 sq. in.
Alloy, Cast Iron, Steel Backed 36 sq. in.
30 sq. in. 36 sq. in.
6-15/16" 6-15/16"