H. Adjustment of Wheels

Values for Adjustment of Wheels with Vehicle Ready for Driving[1])[2])

Model	280 S/8 280 SE/8 280 SEL/8 280 SE/9 3.5	280 SL/8	300 SEL/8 300 SEL/9 3.5	300 SEL/8 6.3
Front wheel camber	+ 0°30′ – 20′	+ 0°10′ + 20′	+ 0°20′ – 20′	
Toe-in (rolled average)	2 ± 1 mm or 0°20′ ± 10′ [2])			
Track difference angle at 20° lock of inner wheel	approx. –0°30′ ± 40′			approx. 0°50′ ± 40′
Caster, with manual steering	3°30′ ± 15′			
Caster, with power steering	4° ± 15′			6° ± 30′
KPI	5°30′		5°40′	
Control arm position of front axle (difference in height "a" between inner and outer bearing bolt of lower control arm refer to Fig. 40–6/1)	Refer to Section "G. Vehicle Level"			
Perm. difference of control arm position between left and right	5 mm			
Pivot point position = distance "A" (practically not measurable) between axis of lower control arm bearing and center of ball joint on track rod on steering arm and intermediate steering lever	48.5 $^{+2}_{-4}$ mm	44.5 $^{+1}_{-5}$ mm	48.5 $^{+2}_{-4}$ mm	45 $^{+2}_{-4}$ mm
Pivot point position = distance "a" (check with fixture 108 589 02 21 00) between axis of lower control arm bearing and bottom edge of ball pin on steering arm and intermediate steering lever (steering arm or intermediate steering lever swivelled to center of control arm bearing bolt)	4 $^{+2}_{-4}$ mm	0 $^{+1}_{-5}$ mm	4 $^{+2}_{-4}$ mm	0.5 $^{+2}_{-4}$ mm
Permissible deviation in height of ball point position between steering arm and intermediate steering arm	4 mm			
Permissible difference of axle base between right and left, Rear axle	5 mm			
Permissible difference of axle base between right and left, Front axle	3 mm			
Camber of rear wheels	Refer to Section "G. Vehicle Level"			
Permissible toe-in (+) or toe-out (–) of rear wheels	± 2 mm or ± 0°20′			

Model	280 S/8 280 SE/8 280 SEL/8 280 SE/9 3.5	280 SL/8	300 SEL/8 300 SEL/9 3.5	300 SEL/8 6.3
Distance of pivot point of rear axle supporting tubes from vehicle center	36 mm			
Permissible deviation of rear axle from center position	2 mm			

[1] **Measure vehicle only in condition ready for driving.**
To check the vehicle level on the rear axle on vehicles with hydropneumatic compensating spring under load, loading the rear end of vehicle or trunk will be adequate (refer to Section "G. Vehicle Level").
[2] Try for toe-in of 2 mm or 0° 20'.
[3] Deduct toe-in value obtained during measurements from measured track differential angle.

Change of Control Arm Position on Front Axle

Model 280 S/8, 280 SE/8, 280 SEL/8, 280 SL/8, 280 SE/9 3.5

Change of difference in height "a" (refer to Fig. 40–6/1)	
Changing the rubber mount for front spring by	results in a change of the difference in height "a" of
2 mm	approx. 4 mm
2.5 mm	approx. 5 mm

Adjustment of Rear Wheel Camber

Model 280 S/8, 280 SE/8, 280 SEL/8, 280 SL/8, 280 SE/9 3.5

Changing the camber by adjusting spring retainer by 1 notch (2 mm)	approx. 0°10'
Changing the camber by installing a lower or higher upper rubber mount (6 mm)	approx. 0°30'
Changing the rear wheel camber on vehicles with hydropneumatic compensating spring with the vehicle under load	
Changing the rear wheel camber by installing a washer Part No. 108 326 00 76, 3 mm thick, or a lefthand ball joint on hydropneumatic compensating spring longer by 3 mm	approx. 0°30'

Adjustment of Front Wheel Camber

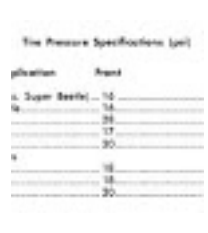
Cam adjustment on steering knuckle		Additional adjustment of camber on bearing bolt of upper control arm by means of washers	
Adjusting range of cam [1]	Change of camber on wheel	Thickness of washer	Change of camber on wheel by 1 washer
± 2.5 mm	approx. ± 0°35'	1.0 mm	approx. ± 0°15'
		2.0 mm	approx. ± 0°30'

[1] The highest position of cam is marked by a notch on the hexagon head.

Adjustment of Caster

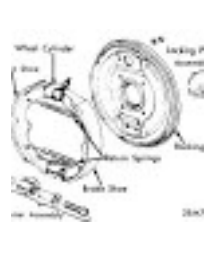
Adjustment of caster on steering knuckle		Adjustment of caster by means of cam on leaf springs supporting front axle	
Perm. adjustment of threaded bushing toward both sides	Change of caster on wheel	Adjustment on leaf spring by 1 mm provides change of caster on wheel of	Total adjusting capacity of caster by cam
1.5 mm	approx. ± 0°20′	approx. 0°10′	approx. 1° in plus direction approx. 0°30′ in minus direction

Popular Posts


Volkswagen 1962-72 Models Wheel Alignment Guide
1962-72 VOLKSWAGEN SPECIFICATIONS AND ADJUSTMENTS TIRE INFLATION (COLD) Before attempting to check or adjust wheel alignment, ensure that ...


Jaguar XJ6 XJ12 XJS 1975-77 Drive Axles Repair Manual
DESCRIPTION The differential assembly is of hypoid design with centerline of drive pinion gear set below centerline of ring gear. A collapsi...

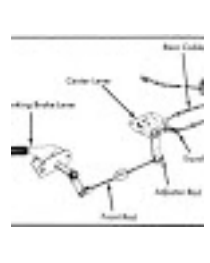

Volkswagen 1973 Models Wheel Alignment Guide
1973 VOLKSWAGEN SPECIFICATIONS AND ADJUSTMENTS TIRE INFLATION (COLD) Before attempting to check or adjust wheel alignment, make sure tires...

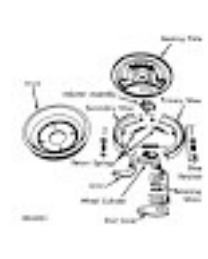

Nissan Datsun 521 & 620 Pick-Up 1969-73 Brake Repair Guide
For Models: 521 Pickup (1969-72) 620 Pickup (1973) DESCRIPTION Brake system is hydraulically operated, using a tandem master cylinder a...

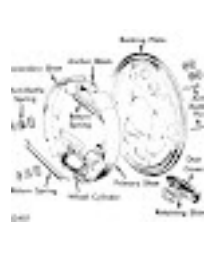

Porsche 1963-72 Wheel Alignment Repair Guide
1963-72 PORSCHE SPECIFICATIONS AND ADJUSTMENTS TIRE INFLATION (COLD) Before attempting to check or adjust wheel alignment, ensure that tir...


1962-72 Jaguar Wheel Alignment
1962-72 JAGUAR SPECIFICATIONS AND ADJUSTMENTS TIRE INFLATION (COLD) Before attempting to check or adjust wheel alignment, ensure tires are...


Mercedes-Benz 1962-72 Wheel Alignment Repair Guide
1962-72 MERCEDES BENZ SPECIFICATIONS AND ADJUSTMENTS TIRE INFLATION (COLD) Before attempting to check or adjust wheel alignment, ensure th...


Datsun 280Z 1976-77 Brake Repair Manual
DESCRIPTION Brake system is hydraulically operated, using a tandem master cylinder and a Master-Vac power brake unit. Front brakes are Girli...


Nissan Datsun 1200 1971-73 Brake Repair Guide
DESCRIPTION Front brakes are either disc or drum type. All models use drum brakes on rear. Master cylinder is tandem piston type. All models...


Nissan Datsun 240Z 1970-73 Brake Repair Guide
DESCRIPTION Brake system is hyrdraulically operated, using a tandem master cylinder and a Master-Vac power brake unit. Front brakes are Girl...

Labels

- Auto Download Free (112)
- Auto Repair Manuals (112)
- Auto Security (112)
- Auto Sercive Manuals (112)
- Auto Worksho (40)
- Auto Workshop Manuals (111)
- Workshop Manuals (111)

Mercedes-Benz 1962-72 Wheel Alignment Repair Guide

1962-72 MERCEDES BENZ SPECIFICATIONS AND ADJUSTMENTS

TIRE INFLATION (COLD)

Before attempting to check or adjust wheel alignment, ensure that tires are properly inflated. Tire inflation pressures for some models are given on inside of gas tank cover. For additional information see Tire Pressure Specifications Table.

CASTER

300 SL - Caster is nonadjustable. If not within specification, inspect front suspension for damage or worn parts. Repair or replace as necessary.

600 & 600L - If caster is not within specifications, loosen bolts on mounting plate of guide joint on upper control arm. Using suitable tool (100 589 00 13) adjust guide joints by moving along elongated botl slots until caster is within specifications. Tighten bolts and recheck caster.

220/8, 220D/8, 230/8, 250/8 & 350SL - Test under loaded condition. Load vehicle with two 143 lb. weights in front seat, one 143 lb. weight on rear seat and full tank of gas. If caster is not within specifications, loosen locking nut of eccentric bolt on front side of lower control arm. To adjust, rotate eccentric bolt until caster is within specifications. Hold eccentric bolt in place and tighten locking nut. NOTE - Adjusting caster will affect camber angle. Increasing caster will increase camber.

All Other Models - If caster is not within specificaitons, loosen bolts attaching carrier of rear engine mounting and strut for lateral support on front axle carrier to eliminate and distortions of engine rubber mountings. Mark position of leave spring on body and loosen nuts. Using suitable spanner (111 589 02 09) adjust cam bolt equally on both sides. Tighten all nuts and bolts. Recheck caster. To adjust minor differences between left and right sides, loosen locking nut of cam bolt on upper steering knuckle bearing. Rotate cam bolt using suitable spanner (180 589 00 05). Inspect rubber ring to ensure a proper seal and tighten locking nut on cam bolt.

CAMBER

300 SL - If camber is not within specifications, loosen nuts on eccentric bolt and on upper control arm. Slide adjusting washer on upper control arm. Slide adjusting of washer no longer snaps into screw on control arm. To adjust, rotate eccentric bolt, using a suitable tool (186 589 00 09). Reverse removal procedure and recheck camber.

600 and 600L - If camber is not within specifications, loosen clamps on pivot pin of upper control arm. To adjust, rotate eccentric bushing until camber is within specifications. Tighten clamps and recheck camber.

220/8, 220D/8, 230/8, 250/8 & 350SL - Test under loaded condition. Load vehicle with two 143 lb. weights in front seat, one 143 lb. weight on rear seat and full tank of gas. If camber is not within specifications, loosen locking nut of eccentric bolt on rear side of lower control arm. To adjust, rotate eccentric bolt until camber is within specifications. Hold eccentric bolt in place and tighten locking nut. NOTE - Adjusting camber will affect caster. Increase in camber will increase caster.

All Other Models - If camber is not within specifications, loosen cam bolt locking nut on upper steering knuckle bearing. Loosen nut approximately three turns and tap cam bolt slightly forward. Highest point of cam bolt is marked by a notch on the head. To adjust, rotate cam bolt until camber is within specifications. Hold cam bolt in place and tighten locking nut. Recheck camber.

If camber cannot be brought within specifications by adjusting cam bolt, add or remove washers between bearing bolt for upper control arm and front axle carrier. If washer is removed it must be placed between lock washer and bolt to prevent bolt from bottoming against front spring.

TOE-IN

300 SL - Place wheels in straight ahead position. If toe-in is not within specifications, bend locking plate back, loosen nut and knock off tension ring form cone of tie rod tube. To adjust, rotate tie rod tube until toe-in is within specifications. Slide tension ring onto tie rod tube, tighten lock nut and bend locking plate. NOTE - When tightening nut, ensure that ball socket heads contact ball pins in the turning direction of tie rod nuts.

All Other Models - Place wheels in straight ahead position. If toe-in is not within specifications, loosen clamp bolts. To adjust toe-in, rotate tie rods until toe-in is within specifications. Rotate both tie rod heads in same direction as far as they will go and tighten clamp bolts. Recheck toe-in.

WHEEL ALIGNMENT SPECIFICATIONS

R — Right F — Front Rr — Rear L — Left Man — Manual Steering Pwr — Power Steering	Steering Axis Inclin.	Caster (Degrees)	Camber (Degrees)	Toe-In (Inches)	Toe-Out On Turns Inner	Toe-Out On Turns Outer
190, 190D, 200 200D, 230, 230S 220SEB, 250SE 250S, 300SE	5°30'±10'	+3°30'±15'(1)	+0°30'	.079±.039	.....	.....
220, 220S, 220SE	5°30'±10'	+2°45'±15'(1)	+0°30'	.079±.039	.....	.....
220/8, 220D/8 230/8, 250/8	6°±10'	+2°30'±20'(2)	0°±10'	.197±.039	.....	.....
230SL, 250SL 280SL/8	5°30'	+3°30'±15'(1)	+0°10'+20'	.079±.039	.....	.....
280S/8, 280/8 280SEL/8 280SE/9 3.5	5°30'	+3°30'±15'(1)	+0°30'−20'	.079±.039	.....	.....
300SEL/8 300SEL/9 3.5	5°40'	+3°30'±15'(1)	+0°20'−20'	.079±.039	.....	.....
300SEL/8 6.3	5°40'	+3°30'±15'(1)	+0°20'−20'	.079±.039	.....	.....
300SL	.....	+5°15'±30'(3)	+30'±30'(4)	.079 to .157	.....	.....
350SL	6°	+3°15'±20'	−0°05'±15'	.079±.039	.....	.....
600, 600L	6°30'±10'	+2°±15'	0°±10'	.236±.039	.....	.....

(1) — With power steering 4°±15'.
(2) — With power steering 3°30'±20'.
(3) — With power steering 6°±30'.
(4) — Max. difference between wheels 30'.

Posted by Unknown at 12:50 AM

Labels: Auto Download Free, Auto Repair Manuals, Auto Security, Auto Sercive Manuals, Auto Workshop Manuals, Workshop Manuals

1 comments:

Winnipeg said...

Very interesting article post.. Thanks for sharing such a valuable info. Pritchard Autobody & Glass Inc. we're committed to helping you ease some of your stress by bringing your vehicle back to its pre-accident condition.
Wheel alignment winnipeg
Direct repair MPI winnipeg

March 7, 2019 at 12:45 AM

Post a Comment

Enter your comment...

Comment as: Google Account

Publish Preview

Newer Post Home Older Post

Subscribe to: Post Comments (Atom)

Blog Archive

- ▼ 2013 (112)
  - ▼ July (112)
    - Toyota Automotive Technical Training Series
    - Toyota All Models 1975-77 Drive Axles Repair Guide...
    - Why Brake Repairs Needed? Don't Take Chances With ...
    - Cooling System Repairs: It's Easy to Prevent Break...
    - Fuel Pumps & Fuel Injection Repairs
    - Engine Knock? Low Oil Pressure? How To Diagnose Ne...
    - Tuneup & Auto Maintenance Tips to Lengthen Your Im...
    - Replacing Wiper Blades Regularly Saves Lives & Win...
    - Understanding Your Import Car's Electrical System
    - Oxygen Sensors Are Critical Key to Passing Emissio...
    - Know Your VIN & Get Exactly the RIGHT Auto Repair ...
    - Top Tips to Improve Fuel Efficiency - How to Impro...
    - Bosch Icon Wiper Blades Provide Cleanest Windshiel...
    - Gas Pump Tricks You Can Use to Save Money on Fuel
    - Ford AVI IDS Training Video
    - How to remove instrument panel in Audi A6 4B C5
    - How to Repair an Instrument Cluster in an Audi A6
    - 1976 Fiat Honda Jaguar Wheel Alignment Guide
    - 1975 Honda Wheel Alignment Guide
    - 1974 Honda Wheel Alignment Guide
    - 1965 Import Vehicles Ball Joint Checking Guide
    - 1975 Vehicles Ball Joint Checking
    - Wheel Bearing Adjustment Guide
    - 1974 Vehicles Ball Joint Checking
    - BMW General Hydraulic Brake Troubleshooting Guide ...
    - General Suspension Troubleshooting 1980 US Vehicle...
    - BMW 320i 530i 630Csi 1977 Brake Repair Guide
    - BMW 1976 Models 6 Cylinder Brake Repair Guide
    - BMW 4 Cylinder Models 1976 Brake Repair Guide
    - BMW 1969-73 6 Cylinder Models Brake Repair Manual
    - BMW 1963-73 4 Cylinder Brakes Repair Manual
    - BMW 1975-76 Drive Axles Split Housing Repair Guide...
    - BMW 1969-74 Drive Axles Repair Manual
    - BMW 1968-74 Drive Axles Repair Manual
    - 1976 Import Models Wheel Bearing Adjustment Guide
    - 1976 Import Models Wheel Alignment Guide
    - BMW 1966-73 Models Wheel Alignment Guide
    - 1965 Import Vehicles Jacking and Hoisting Guide
    - Wheel Bearing Adjustment Guide 1965 Vehicles
    - 1975 Vehicles Jacking and Hoisting Guide
    - Wheel Bearing Adjustment Guide
    - Guide: Jacking and Hosting Vehicles 1968 to 1972
    - Import Wheel Bearing Adjustment 1974
    - Audi 100LS 1977 Brake Repair Guide
    - Audi S90 & 100 1970-73 Brake Repair Guide
    - Audi Fox 1973-77 Brake Repair Guide
    - Audi Wheel Alignment Guide 1975 Models
    - 1974 Audi Wheel Alignment Guide
    - Audi Wheel Alignment Guide 1970-73
    - Wheel Alignment Arrow, Colt and Audi 1965 Vehicles...
    - Wheel Alignment Arrow, Colt and Audi 1976 Vehicles...
    - Alfa Romeo 1975 Wheel Alignment Repair Guide
    - Alfa Romeo 1974 Wheel Alignment Repair Guide
    - Alfa Romeo 1963-73 Wheel Alignment Repair Guide
    - Chevrolet LUV 1972-74 Axles Repair Manual
    - Datsun F10, 200SX & B210 1976-77 Brake Repair Manu...
    - Datsun 710 & 810 1976-77 Brake Repair Manual
    - Datsun 280Z 1976-77 Brake Repair Manual
    - Datsun (Nissan) Pickup 1975-77 Brake Repair Manual...
    - Datsun (Nissan) B-210 & 610 1975 Brake Repair Manu...
    - Datsun (Nissan Stanza) 710 1975 Brake Repair Manua...
    - Datsun (Nissan) 280Z 1975 Brake Repair Manual
    - Datsun (Nissan) B-210 1974 Brake Repair Manual
    - Datsun (Nissan) 620 1974 Brake Repair Guide
    - Datsun (Nissan) 610 & 710 1974 Brake Repair Manual...
    - Datsun (Nissan) 260Z 1974 Brake Repair Manual
    - Nissan Datsun 1200 1971-73 Brake Repair Guide
    - Nissan Datsun 521 & 620 Pick-Up 1969-73 Brake Repa...
    - Nissan Datsun 510 610 1968-73 Brake Repair Manual
    - Nissan Datsun 240Z 1970-73 Brake Repair Guide
    - Colt 1974-75 Brake Repair Guide
    - Dodge Colt 1971-43 Brake Repair Guide
    - FIAT 131 1975-77 Drive Axles Repair Guide
    - Fiat 124 1975-77 Drive Axles Repair Manual
    - Fiat 124 1968-74 Axles Repair Manual
    - 1975 Fiat Wheel Alignment Guide
    - 1963-73 Fiat Models Wheel Alignment Guide
    - Ford Courier 1977 Brake Repair Guide
    - Ford Courier 1974-76 Brake Repair Guide
    - Ford Courier 1972-73 Brake Repair Manual
    - Jaguar XJ6 XJ12 XJS 1975-77 Drive Axles Repair Man...
    - Jaguar 1968-74 Drive Axles Repair Manual
    - 1974 Jaguar Wheel Alignment Guide
    - 1973 Jaguar Wheel Alignment Guide
    - 1962-72 Jaguar Wheel Alignment
    - Mazda 1975-77 Drive Axles Repair Guide
    - Mazda 1968-74 Models Drive Axles Repair Manual
    - Mazda 1971-73 Wheel Alignment Repair Guide
    - Mazda 1974-76 Models Wheel Alignment Repair Guide
    - Mercedes-Benz 1968-72 Split Housing
    - Mercedes-Benz 1975-77 Drive Axles Repair Guide
    - Mercedes-Benz 1974-75 Wheel Alignment Guide
    - Mercedes-Benz 1962-72 Wheel Alignment Repair Guide...
    - Mercedes-Benz 1974 Wheel Alignment Repair Guide
    - Porsche 1974-75 Wheel Alignment Guide
    - Porsche 1973 Wheel Alignment Repair Guide
    - Porsche 1963-72 Wheel Alignment Repair Guide
    - Renault 1974 Wheel Alignment Repair Guide
    - Renault 1963-73 Wheel Alignment Repair Guide
    - Toyota All Models 1975-77 Drive Axles Repair Guide...