BLUE BADGE INSURANCE AUSTRALIA

A-Z Guide on Disability Converted Cars







Everything you need to know about buying, owning and maintaining a disability converted vehicle

WELCOME

Welcome to your one-stop guide for drivers and passengers with a disability! Having access to a car can provide freedom and independence for many people living with disability and their families.

People who struggle to access standard model cars are often forced to rely solely on accessible taxis and public transport to get around.

Luckily, there are lots of ways to modify cars to make them more accessible and this guide is here to help get you on the road. Inside you'll find an A to Z listing of everything you need to know about buying, owning and maintaining a Wheelchair Accessible or Converted Vehicle.

Buying a car is a big investment, but if you do your homework, you can get a vehicle that meets all of your access needs now, and in the future. This guide is designed to answer your questions, but if you need information that you still can't find, just flick to the back of the book for a handy list of organisations who will be happy to tell you more.

Wheelchair Accessible Vehicles and Converted Cars **– what's the difference?**

Cars that have been converted for drivers or passengers with a disability fall into two different categories: Wheelchair Accessible Vehicles (WAV's) and Converted Vehicles. Deciding which type you will need depends on the nature of your disability.

WHEELCHAIR ACCESSIBLE VEHICLES (WAV'S)

WAV's have been structurally modified to allow a person to enter the car while still in their wheelchair. They are most commonly used by people in power wheelchairs or by people who are unable to easily transfer from their chairs. WAV's are available in a wide range of designs to suit either drivers or passengers with a disability. Structural modifications can be very expensive and most WAV conversions start at around $25,000, on top of the cost of the car itself.

CONVERTED VEHICLES

The term Converted Vehicle describes a wide range of generally non-structural conversions or equipment designed to make it easier for a person with restricted mobility to use the vehicle. These conversions may help a person to drive, they may make it easier to get in or out of the car or they may be designed to stow bulky equipment like mobility scooters and wheelchairs. Depending on your needs, converting a vehicle might include anything from a spinner knob worth $150, to specialised driving control equipment costing hundreds of thousands of dollars.

Whether you are purchasing a WAV or a Converted Vehicle, it's important to do your research. Vehicles are a big investment, so make sure you take into account any changes that may occur to your family, your medical condition or your equipment over the next ten years. Before purchasing or converting your car, arrange a test drive in a suitable configured vehicle to make sure it meets your needs. Most importantly, never be afraid to ask questions or get a second opinion.

CHANGING TECHNOLOGY

The technology involved in modifying cars is changing at a rapid rate. This means that more and more people with a disability are able to drive independently. Joystick control, foot-steering and even operating controls with your voice are now all realistic options for drivers with a disability. If you've never had your licence, or had your licence revoked due to your medical condition, flick to the Driver Assessment section to find out how you can get behind the wheel.

A-C

ACCELERATOR
ACCESS
AIRBAGS
BRAKES
CARER
CLINICAL ASSESSMENT

Total Ability: Satellite Controls

ACCELERATOR

Not everyone can easily use an accelerator with their right foot. Fortunately there are a range of alternatives on the market to make them more accessible. Adaptive accelerators are available in two main types, mechanical and electronic equipment.

Choosing which type of accelerator is best for you will depend on your vehicle and the nature of your disability. Mechanical hand controls are not compatible with all vehicles. For example, in some cases mechanical linkages may impede the deployment of knee airbags and potentially lead to driver injury. In contrast, electronic hand controls can be routed around the airbag. Electronic hand controls also usually require less effort to use, minimising fatigue when driving. Your Occupational Therapist and vehicle converter can help you choose the right accelerator for your needs.

Mechanical

- Left Foot Accelerators
- Mechanical Hand Controls

Electronic

- Accelerator Rings
- Electronic Radial Accelerators
- Electronic Triggers Accelerators
- Electronic Push Pull Accelerators
- Satellite Accelerators

PME: Over Ring

ACCELERATOR RINGS

Accelerator rings are designed for people with little or no use of their lower limbs, allowing drivers to operate the accelerator with their hands. They come in two main types, Over Ring Accelerators and Under Ring Accelerators. Over ring accelerators sit directly over the steering wheel, while under ring accelerators sit directly below it. Drivers using accelerator rings can control acceleration without moving their hands from the steering wheel.

PME: Over Ring

LEFT FOOT ACCELERATORS

Left foot accelerators, also known as inversion accelerators, are designed to allow drivers to use both the accelerator and the brake with their left foot. They can be fitted to automatic transmission vehicles and move the accelerator to the left-hand side of the brake. Left foot accelerators are available in quick release and flip up versions, allowing other drivers to use the car. Portable versions are also available, perfect for using in hire cars.

Be aware, however, that portable equipment is not legal in some states. Check with your state or territory's regulatory body for compliance.

Mobility Engineering: Left Foot Accelerator

SATELLITE ACCELERATORS

Satellite accelerators are small units which are worn like a glove while driving to control accelerator functions. They are available in left and right-hand models and are great for people with limited arm movement because they are controlled solely by a person's thumb movement and can be worn while holding the steering wheel or using other equipment. The come in two main types, wired and wireless. Wired models are directly attached to the car via a cord, the main benefit of wired satellite accelerators is that they are around half the size of the wireless versions and do not need to be recharged. Wireless versions communicate with your vehicle electronically but need to be recharged regularly.

Total Ability: Satellite Accelerator

See also: Brakes, Pedal Extensions, Vehicle Certification and Compliance

ACCESS

Access is one of the first things that you'll want to consider when buying a vehicle. Travelling can be difficult if you can't get into and out of your car easily. Choices for accessing cars differ depending on whether you are buying a Wheelchair Accessible or Converted Vehicle.

WHEELCHAIR ACCESSIBLE VEHICLES

There are two main types of entry for WAV's, rear and side entry. The wheelchair user enters the vehicle through the back door, either via a lift or ramp. In the past, wheelchair users wishing to access the front seat, either as a driver or a passenger, were limited to side entry designs, but there are now front seat designs available in both side and rear entry. There are pros and cons to both designs.

Rear entry vehicles are generally cheaper than side entry ones, because fewer modifications are required. These vehicle conversions have a range of different ground clearance and this should be considered and tried prior to purchase. Rear entry conversions allow the wheelchair user to enter from the back of the vehicle and sit in either the front position, second row position or third row position depending on their preference.

Things to think about when choosing between a side or rear entry WAV:

1. Where you intend to park your car – the amount of room you have available at home and other areas will impact whether a side or rear entry WAV is better for you
2. Size and type of wheelchair that the driver/passenger uses
3. Required headroom
4. How much storage room you want or need
5. Ground clearance

K+M Kite: Rear entry WAV

Side entry vehicles either use a ramp, lift or hoist to allow the wheelchair user to enter the vehicle to sit in either the first or second row position depending on their preference.

Before deciding on a rear or side entry WAV, you should give careful consideration to where and how you are going to use and park your car and how easily you can get in and out. It is well worth trying both options in the places you are most likely to use it before making your decision.

Capital Special Vehicles: Side Entry WAV

Auto Extras: Rear Entry WAV

Freedom Motors: Rear Entry WAV

See also: Brakes, Pedal Extensions, Vehicle Certification and Compliance

CONVERTED VEHICLES

There are a range of options available to make access to converted vehicles easier. These begin with choosing the right base vehicle. When choosing your car, check to see how wide the doors open, and how far back the seats can be moved. If you're planning to drive the car yourself, check to see whether the steering wheel can be easily raised to allow for smoother access.

There are also a number of modifications that can make vehicles more accessible. Swivel seats can be installed which turn out of the vehicle, allowing the user to sit down comfortably before swivelling the seat back into position. For people requiring a little more assistance, lowering swivel seats can be programmed to swivel and lower themselves outside the car to make transferring easier. Lowering swivel seats also often have sliding and reclining functions. For people with more mobility, a swivel cushion is a simpler, more affordable option. These cushions sit on your car seat, and feature a base plate attached to a rotating cushion, operating like a lazy susan to help you to spin into position more easily under your own momentum.

For added stability while entering and exiting the car, portable grab rails are available that attach easily to your vehicle. If you have a larger vehicle like a minivan, you could also install fold-down steps or permanent grab rails.

For people who are unable to do sliding or standing transfers from their wheelchairs, transfer chairs, which allow a user to remain seated while transferring, and in-car passenger sling lifts are also available.

Things to think about when buying a Converted Vehicle:

1. Your preferred transferring option for existing and entering the car
2. Door space you need to enter/exit the car safely and comfortably
3. Internal cabin and boot space required to store your mobility equipment and other items

Asquith: Secondary Hand Controls

Auto Extras: Access Grab Rails

Swivel seats are designed to make it easier to transfer from your wheelchair into the car with little or no need to twist or move your body. Swivel seat systems can be installed in driver, front passenger or rear seats and are available in manual or electronic models.

Total Ability: Swivel Seat

AIRBAGS

Airbags are an important safety feature in most cars, however some vehicle modifications can affect their use. Some airbags may even be dangerous for people with certain types of disability. Below is an outline of some of the safety issues to consider.

KNEE AIRBAGS

Knee airbags can make the installation of some hand controls difficult. Mechanical hand controls often have mechanical linkages that impede an airbag's deployment and potentially lead to driver injury. In this case electronic hand controls can be used as the brake lever can be routed around the knee airbag. This maintains all safety features of the vehicle for both drivers with disabilities and able-bodied drivers.

It is also possible to disarm or remove knee airbags to install mechanical hand controls, however removing airbags from your vehicle will also increase the chance of injury in an accident. You should discuss safety concerns in detail with both your Occupational Therapist and vehicle converter before removing any of your car's safety features.

STEERING WHEEL AIRBAGS

Steering wheel airbags can be dangerous for anyone whose disability causes them to sit particularly close to the steering wheel while driving. This might include people of short stature or people with limited arm span or reach. Steering wheel airbags can be electronically disarmed when a person with a disability is driving, and then re-armed when other people are driving the vehicle, maintaining the maximum level of safety for all drivers.

> **"Disability modifications can impact your airbags and in some cases, make them dangerous to use. It's important to speak to your vehicle converter about whether or not your modifications affect your airbags and safety."**

BRAKES

There are a range of braking options available and many are built into modified accelerator systems. For example, both accelerator rings and satellite accelerators are generally purchased with braking mechanisms included. Other braking systems include:

PME: Electronic Hand Brakes

Electronic Hand Brakes

Electronic hand brakes allow a driver to operate the hand brake with just the push of a button.

They are great for people with limited hand or arm strength. Electronic hand brakes can be installed in most models of car.

Total Ability: Brake Levers

Brake Levers

Brake levers attach to the steering column. To use the brake, the driver pushes forward on the lever with their hand. Brake levers are available in a number of designs. They can incorporate controls for other functions, including lights, indicators and the horn. While brake levers can be used separately, most are incorporated into accelerator systems.

See also: Brakes, Pedal Extensions, Vehicle Certification and Compliance

CARER

If you will be relying on a Carer or Support Worker to help you transfer, to drive your vehicle or to use specialised equipment, it is important that they are familiar and comfortable with your car.

Make sure you take your primary caregiver(s) with you when you visit your Occupational Therapist and your vehicle converter. Ask them to take your Carer(s) or Support Worker(s) through all the details that they need to know.

If your carer has a disability, impairment or any concerns about the vehicle or adaptive equipment, be sure to discuss them both your Occupational Therapist and your vehicle converter.

BLUE BADGE INSURANCE AUSTRALIA

Do ordinary insurers cover your carers? We do!

Discounted car insurance including cover for Carers and Support Workers

As Australia's first mobility and independence insurance specialist we know that sometimes your Carers and Support Workers drive your car. That's why we give you the option to cover multiple Carer and Support Workers under your policy so you have peace of mind that everyone is covered. Our Comprehensive Car Insurance policy provides up to 25% off^ for both disability converted vehicles and standard cars while also offering tailored benefits that have been developed with you in mind.

Lets Talk: 1300 304 802

www.BlueBadgeInsurance.com.au

^Discounts for the Blue Badge Insurance Comprehensive Motor Vehicle Insurance will be applied to the base vehicle rates subject to the customer holding a permanent Disability Parking Permit and/or the vehicle has been converted for use by a driver or passengers that have a disability. The discounts do not apply to the Blue Badge Roadside Assistance Optional Benefit. Underwriting criteria will be applied to the consideration of the risk. Additional excesses will apply to drivers under 25 or those drivers who have held a full Australian drivers licence for less than 2 years. This offer may be withdrawn at any time. Consider the PDS at www.BlueBadgeInsurance.com.au to decide if the product is right for you.

CLINICAL ASSESSMENT

Having a clinical assessment with an Occupational Therapist prior to buying or modifying your vehicle is a great way to make sure you purchase the best equipment for your needs.

If you are planning on driving your vehicle, make sure that you get the necessary medical clearance from your doctor and state regulatory authority.

An Occupational Therapist can work with you to explore your physical and lifestyle requirements and discuss appropriate modifications with you, your Carer or Support Worker (if applicable) and your vehicle converter. A vehicle is a long-term purchase, so it is important that you take into account your changing needs over time. If you intend to drive the vehicle yourself, you will also need to undergo a driver assessment with an Occupational Therapist with specialist driver training.

A clinical assessment should take into account all aspects of your transportation requirements. This means that your Occupational Therapist will not only explore your level of disability, but will also discuss your home, the size of your family and the places you frequently visit (for example, there is no point in buying a vehicle that is too tall to enter the parking facility at your workplace). If you rely on caregiver(s) or drive the vehicle, their needs should also be taken into account. In many cases there are multiple options for vehicle modifications and it is important that you and your carer openly discuss your preferences, and the various costs involved, with your Occupational Therapist. After completing an assessment, the Occupational Therapist can work with you and your chosen vehicle converter to make sure you get the car and modifications that best suit your requirements.

See also: Carer, Driver Assessment, Occupational Therapist

D-F

DOOR AUTOMATION
DRIVER ASSESSMENT
DRIVING CONTROLS
ELECTRONIC CLUTCH
FUNDING

Total Ability: Electronic Clutch

DOOR AUTOMATION AND OPENERS

Doors and ramps can be automated in most vehicles.

In Wheelchair Accessible Vehicles, automatic door openers can be used to lower ramps as well as open doors.

Straps can also be attached to rear doors to make them easier to reach for wheelchair users or people of short stature. Some wheelchair hoists for converted vehicles are also available that will automatically close doors after stowing your chair.

Mobility Engineering: Automated Door Opener

See also: Lifting Systems, Ramps

DRIVER ASSESSMENT

If you've never had your licence before, or if your functionality levels have changed due to a new or existing disability, you will need to undergo a driver assessment.

An Occupational Therapist with specialist driver training will assess your ability to drive, and what kind of modifications you require. They will discuss your options, and the various costs involved. When you are issued your driver's licence or learner's permit, it will list the vehicle modifications that you require. Your Occupational Therapist will be able to advise you on licence and testing requirements in your state.

Occupational therapy driving assessments are recognised internationally and take around two to three hours. They contain both off-road and on-road components, usually conducted on separate days. The off-road assessment includes screening of vision, physical function and cognition. The on-road assessment takes around 50 minutes and is conducted with a professional driving instructor in a dual control vehicle.

Following the tests, your Occupational Therapist will discuss the results with you and the licensing authority in your state. If you are not immediately approved for a licence, you may be able to attend a driver rehabilitation program to help get you back on the road. Driver rehabilitation programs may include:

- Learning to use modified vehicles or adaptive equipment
- Learning new driving techniques to compensate for limited functionality
- Desensitisation programs for people with anxiety or phobias
- Driving test preparation
- Upper limb strengthening for people with high-level spinal cord injury

> **"You will need to do a driver assessment with a qualified Occupational Therapist if you've never had your licence before or if your functionality levels have changed."**

Mobility Engineering: Driver Assessment

See also: Clinical Assessment, Occupational Therapist

DRIVING CONTROLS

Rapidly improving technologies mean that more and more people with disabilities are now able to drive independently. The type of driving controls you choose will depend on the nature of your disability.

HAND DRIVING CONTROLS

The most common driving controls are hand controls. There are two main types of hand driving controls, those that transfer functions normally accessed by the feet to hand control, and those that make traditional hand controls more easily accessible to people with impaired hand and/or arm strength and mobility.

Transferred Pedal Functions

Traditionally, most drivers use their feet to access their vehicle's accelerator, brake and clutch. For people with limited foot control, all of these functions can be transferred to hand control, making for total, foot-free driving. There are a number of hand controlled brakes and accelerators available on the market, many systems combine operation of brake and accelerator into one system. Popular hand controlled accelerator and brake systems include:

- Ring Accelerators which are mounted on the steering wheel
- Electronic Radial and Trigger Accelerators
- Satellite Controls. which are worn by the driver like a glove
- Brake levers, which are mounted on the steering column.
- Mechanical hand controls for accelerator and brake

For drivers who use a manual transmission who are unable to operate the clutch with their foot, electronic clutch controls can be installed on the gear leaver.

Controlling the Steering

Often a person's ability to engage with the steering wheel is affected by their disability. There are a range of options to assist with this, from a simple spinner knob through to bespoke steering aids made to suit a person's specific disability.

Steering aids are also available with switches to enable operation of secondary functions such as indicators, high and low beam lights and the horn. There is a large range and variety of steering aids available and it is advisable that you speak with your Occupational Therapist and vehicle modifier can assist with selecting a safe and suitable option.

One of the most important functions that is usually performed by a driver's hands and arms is steering. One of the most commonly used hand steering options are spinner knobs, designed to make turning the steering wheel easier. Many spinner knobs also include features that provide orthopaedic support to a driver's arms while steering.

For people with inadequate strength and range of movement to operate conventional or modified conventional controls, there are alternative controls available that require extremely low effort. These controls provide an option to be able to steer, brake and accelerate using very small movements and low effort. There are a range of devices that a person can use. These are very advanced driving controls and, because any failure of the system could be extremely dangerous, these modifications require stringent independent testing and competent multiple redundancies to ensure their safety.

If you are considering such low effort control systems, ensure that they have the required certification and testing and that the vehicle converter you choose is experienced in working with these technologies.

Secondary functions, like lights, indicators, windscreen wipers and windows are also usually controlled by a driver's hands. There are many ways to modify access to secondary controls. They can be incorporated into mechanical hand controls, electronic radial and occasionally brake levers. They can also be controlled by a remote unit which attaches to your steering wheel, spinner knob or steering aids. For people with more serious hand or arm impairments, they can be mounted on head-activated switches or operated by voice-control units.

"The rapid rate of technological advancements means that more than ever, people with disabilities are now able to drive independently."

PME: Joysitck Steering

FOOT STEERING

One of the more recent developments in accessible driving is foot-controlled steering. Foot-controlled steering is suitable for people with little or no use of their arms, but drivers must have excellent lower-body strength and control. A rotating footplate is installed to act as a steering wheel, with the left foot operating the steering while the right foot operates the brake and accelerator in the usual fashion. No arm or hand control is required to operate the vehicle's primary functions.

Foot-controlled steering can be complimented by voice controlled secondary functions for lights, indicators, windscreen wipers and the like, allowing for hands-free driving. Foot controls are currently only available in Australia from a limited number of manufacturers. If you are considering foot controls make sure that choose a converter that is familiar with this technology.

VOICE COMMAND

Voice command technology can be used to operate your vehicle's secondary controls. Voice command units connect directly to your car for instant control of windscreen wipers, windows, lights, horns and indicators. Many voice command units can be trained to recognise your specific voice, making them accessible to people with heavy accents and some types of speech impediments.

Asquith Mobility Solutions: Foot Controls

Total Ability: Voice Command

See also: Accelerator, Brakes, Driver Assessment, Electronic Clutch, Foot Steering, Joystick Control, Occupational Therapist, Pedal Extensions

PME: Eradial

Different Types of Driving Controls

- People with limited use of their legs can get hand controls for functions like accelerators, brakes and clutches.
- Pedals can be lengthened for people of short stature or rearranged for people who only have use of one leg.
- People who only have use of one arm or who have limited arm strength can steer with the help of spinner knobs. There are even driving control options available for people who have no use of their arms, but who have good lower body control. The driver steers with his or her left leg, using a rotating footplate, while they operate the brake and accelerator with their right.
- Controls which are not used while driving, such as automatic doors or ramps, can even controlled via your laptop or smartphone.
- Voice command technology can be used to operate your vehicle's secondary controls such as lights, windows and indicators.

BLUE BADGE INSURANCE AUSTRALIA

Do ordinary insurers cover your conversions? We do!

Get new for old replacement for your disability conversions

As Australia's first independence and mobility insurance specialist, we understand that your conversions are critical in supporting you to use your car. That's why we offer new for old replacement on all disability modifications.

Find out how you can get tailored cover at preferential rates^ with Blue Badge.

Lets Talk: 1300 304 802

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ELECTRONIC CLUTCH

An electronic clutch is designed to allow someone to operate the clutch with their hand rather than their foot.

The electronic clutch allows operation of the clutch pedal via a lever and button system attached to the gearknob. A range of switches are available, depending on the driver's hand strength and control.

The mechanism is controlled by a computer, which communicates directly with your vehicle's clutch pedal. The computer can be programmed to suit your individual driving style, allowing for smooth transitions. Most electronic clutches can easily be turned off, allowing the vehicle to be driven in the traditional way.

PME: Mitsubishi "Duck" Clutch"

Total Ability: Electonic Clutch

See also: Brakes, Driving Controls

FUNDING

There are various funding organisations that may be able to contribute to the costs of your car. Each of these organisations have their own qualification criteria so it's best that you contact them directly to find out if you meet their criteria.

- **Icare** - Pays for treatment, rehabilitation and care for people who've been severely injured in a motor accident in NSW.
- **Independent Living Centre, WA** - The Independent Living Centre manages two grant programs for individuals with disabilities, including funding for disability related vehicle modifications.
- **State-Wide Equipment Program (SWEP)** - SWEP provides subsidies towards the cost of equipment and/or modifications to Victorian residents to help improve independence in your home, assist in community participation and support families and carers in their role.
- **Territory Insurance Office** – Provide assistance with disability related vehicle modifications for people injured in motor accidents in the Northern Territory.
- **Transport Accident Commission** - Pays for treatment and benefits for people injured in transport accidents in Victoria.
- **Vehicle Options Subsidy Scheme (VOSS)** - Enables people with a disability, their families and carers in Queensland to participate further in their community by providing a package of funding options to meet their vehicular access needs.
- **Workcover NSW** – with work injury related vehicle modifications.
- **Work Safe VIC** - Assist with work injury related vehicle modifications.

G-K

GAS RING
HIRE CARS
IMPORTED CARS
INSURANCE
JOYSTICK CONTROL
KEYLESS ENTRY

GAS RING

Gas ring is a term commonly used in North America and Europe for accelerator rings. Gas rings can be mounted above or below your steering wheel to provide hand controlled accelerator use.

Brakes can also be incorporated into the controls. Gas rings mounted in this way are known as Over Ring Accelerators or Under Ring Accelerators.

PME: Ghost Under Ring

PME: Over Ring

See also: Lifting Systems, Ramps

HIRE CARS

Car hire companies are increasingly offering hire cars for people with disabilities. Many vehicle converters also offer hire vehicles. This is a great option for people who want to hire a car when they travel, or need to hire a replacement car when theirs is being serviced or repaired. Below is a list of some companies that offer disability modified cars for hire.

WHEELCHAIR ACCESSIBLE VEHICLES

- **AAB - Access All Bus Rentals** – Provide accessible bus rental across Australia, with vehicles that can accommodate up to six wheelchair seated passengers.
- **Budget** – Offer a fleet of Kia Grand Carnival WAV's from their Campbellfield (near Airport) and Croydon locations in Victoria.
- **Disability Hire Vehicles** – Based in Sydney, this company provides a range of disability converted cars.
- **Europcar** – Offer Kia Grand Carnival WAV's for hire at selected locations across Australia.
- **GoGet** - This carshare provider offer a WAV at the Royal North Shore Hospital in Sydney.
- **Freedom Motors** – This nationwide vehicle converter also provides WAV's for hire in Sydney. Pick up and return from St Marys (40km from Sydney CBD) or opt for delivery/pick up for an additional fee.
- **Hertz** – Offers WAV's for hire from Melbourne, Brisbane, Sydney and the Gold Coast.
- **Hire Mobility** – This Western Australian based company provides a variety of WAV's, seating up to eight people.
- **Integrity Car Sales & Rentals** – This Sydney based vehicle converter also provides WAV's for hire.
- **Wheelaway** – Offers a variety of small and large WAV's across Sydney, Brisbane, Canberra and Melbourne.
- **Wheelies Van Rentals** – Provide WAV's for hire in Sydney, Brisbane, Gold Coast, Adelaide, Melbourne, Hobart.

CONVERTED CARS

- Avis – Offers a full range of products and services for our drivers or passengers with disabilities including hand controls, swivel seats, transfer boards and even mobility scooter rentals.
- Disability Hire Vehicles – Based in Sydney, this company also provides some hand control equipment.

IMPORTED CARS

Imported Wheelchair Accessible Vehicles are cars that have been fully designed and manufactured to allow wheelchair access. This is why they tend to be much more affordable than standard cars that have been converted.

Imported Wheelchair Accessible Vehicles usually come from Japan and are often cheaper than locally converted ones. This is because they do not include the add-on cost of a base vehicle. However, in some cases imported cars will still need further modification to meet your specific needs, so you should take these costs into consideration if you're thinking about buying an imported car.

Imported WAV's offer many of the same benefits as locally converted cars, including ramps, lifts or hoist options to provide wheelchair access. There are many models of imported cars available to Australian buyers, allowing you to choose the accessibility, size, aesthetic and price that is most suited for your needs.

If you are interested in buying an imported Wheelchair Accessible Vehicle (WAV), one of the most important things you need to be aware of is to make sure that both the car and its modifications are fully compliant with all Australian Standards – otherwise, you may not be able to register or drive your new car.

Top Three Things to Be Aware of When Buying an Imported Car

1. Make sure all disability conversions comply with Australian Standards
2. Ensure the importer is experienced with WAV's so they can advise and guide you properly
3. Get a certificate to verify your car's compliance

These Wheelchair Accessible Vehicles are imported into Australia under the Specialist and Enthusiast Vehicle Scheme. This scheme covers car clubs and sports cars as well as WAV's. This means that you and your importer must make sure that all disability-specific safety requirements are met. For example, wheelchair restraints must be classified as safe to transport humans, not just cargo.

Another issue to be aware of is that the federal government is reviewing some of the legislation relating to imported vehicles. You can read more about this here.

BE SMART

To ensure that your imported vehicle meets all Australian Standards, choose a vehicle importer that is a Registered Automotive Workshop under the Registered Automotive Workshop Scheme (RAWS). Also make sure that your importer has experience in working with Wheelchair Accessible Vehicles. An importer listed with RAWS will be able to ensure that your imported vehicle meets Australian Design Rules (ADR's) compliance and safety procedures. They could issue a certificate stating your car's ADR compliance. You and your importer should also work closely with your Occupational Therapist to ensure that you get the best vehicle for your needs.

See also Clinical Assessment, Occupational Therapist, Vehicle Certification and Compliance

INSURANCE

Once you have purchased your WAV or Converted Vehicle, it is vital that you find a suitable insurance policy to make sure that your car is fully protected. It also pays to look for a policy that offers other benefits that will be valuable if you are involved in an incident. Unfortunately, this can be quite challenging as most insurance companies are not familiar with disability modifications.

Once you have purchased your WAV or Converted Vehicle, it is vital that you find a suitable insurance policy to make sure that your car is fully protected. It also pays to look for a policy that offers other benefits that will be valuable if you are involved in an incident. This can be quite challenging as most insurance companies are not familiar with disability modifications.

Owners of WAV's and Converted Vehicles face some unique challenges when it comes to finding the right insurance policy. Most vehicle modifications are expensive, often more than the cost of the original car. Fortunately, most conversions don't lose value over time – on the contrary, labour and materials get more expensive every year.

Despite this, insurers who are not familiar with the disability market treat these conversions in the same way as performance or luxury modifications, which can create two key issues for the customer. Firstly, because people with performance and luxury modifications pose a higher insurance risk (due to higher risk of theft and/or riskier driving behaviour) they are charged higher insurance premiums to account for the risk. Unfortunately, this means that people with disability modified cars are often charged higher insurance premiums despite generally being safer drivers.

The second issue is that mainstream insurers will typically depreciate the value of your modifications at the same rate as your car. For example, a driver may spend $50,000 on vehicle modifications, only to discover that they are only insured for $10,000 a few years later. This can be devastating news to discover after you've had an accident.

This is why it pays to consider a disability-specific insurer such as Blue Badge Insurance.

Blue Badge understands the importance of mobility to people with disability, and know that disabled drivers are typically safer drivers. This is why they are able to offer products suited especially to your needs. Some of the benefits of Blue Badge's insurance policy includes:

- Discounted premiums, by up to 25%^
- New for old replacement option for disability conversions
- Cover for your family, friends, Carers or Support Workers who drive your car
- Your choice to insure your car for agreed or market value
- Up to $5,000 cover for assistive technology (wheelchair, walkers, mobility scooter etc.) while in your car

^ Discounts for the Blue Badge Insurance Comprehensive Motor Vehicle Insurance will be applied to the base vehicle rates subject to the customer holding a permanent Disability Parking Permit and/or the vehicle has been converted for use by a driver or passengers that have a disability. The discounts do not apply to the Blue Badge Roadside Assistance Optional Benefit. Underwriting criteria will be applied to the consideration of the risk. Additional excesses will apply to drivers under 25 or those drivers who have held a full Australian drivers licence for less than 2 years. This offer may be withdrawn at any time. For full details of the conditions, terms, limits and exclusions and to decide whether this cover is suitable for you please read the relevant Product Disclosure Statement.

Like most technological breakthroughs, disability vehicle conversions come at a price. In many cases the cost of the conversions are higher than the value of the vehicle itself. This is why it's important to make sure you have a suitable insurance policy to protect yourself against unexpected costs.

- Up to $150 rental car benefit for up to 28 days following theft
- If a suitable rental car cannot be sourced you will receive up to $150/day for up to 28 days to use towards taxis or public transport
- Up to $1,000 cover for Carer's or Support Worker's tools of trade
- Your choice of repairer

Blue Badge also offers a range of additional benefits including Roadside Assistance and multi-policy discounts.

Take the time to review your current insurance to ensure it is suitable for your personal circumstances, and why not consider the specialist services provided by Blue Badge Insurance who understand the importance of your independence and mobility.

Top question to ask your insurance company when purchasing insurance for your Wheelchair Accessible or Converted Vehicle:

- Do they provide new for old replacement on your disability conversions?
- Do they depreciate the value of your conversions?
- Do they cover your wheelchair, mobility scooter or other mobility equipment if they are damaged while in your car?
- Do they provide cover for your family, friends, Carers or Support Workers who drive your car?
- Do they offer the option to insure your car for agreed or market value?
- Do they offer a suitable rental car benefit?
- Do they have other options available if rental cars are not available?
- Do they offer a return you home benefit which suits your personal circumstances?
- Do they know repairers with the necessary expertise in disability converted vehicles (this may impact how quickly they can repair your car after an incident)?

See also Under Insurance

JOYSTICK CONTROL

Joysticks can be used to control steering, accelerators or brakes, or any combination of the three. They are excellent for people with very restricted arm and hand function, allowing drivers to access controls with a turn of the wrist. Joystick control is designed for people with high level disabilities. In order to legally drive a joystick controlled vehicle you must obtain a driver assessment from a suitably qualified Occupational Therapist and pass a driver's license test in an appropriate vehicle.

These are very advanced driving controls that operate steering and brakes electronically. Because any failure of the system would be extremely dangerous, these modifications require stringent testing and multiple redundancies to ensure their safety. Joystick control is not available from all vehicle converters; if you are considering joystick control, choose a converter who is familiar with the technology.

PME: Joystick Control

See also Accelerator, Brakes, Driver Assessment, Driving Controls, Occupational Therapist

KEYLESS ENTRY

Most new cars now come with keyless entry. If yours doesn't, there are many types available through the mainstream automotive market. There are options that operate via Bluetooth, unlocking the doors automatically when you approach the car and locking them again when you leave, meaning that you don't even have to find your key fob or press a button.

Other designs can be operated via an app on your smartphone, allowing you to lock and unlock your doors from any distance, as long as you have an internet connection. These designs are all available in the mainstream market and do not require a specialist vehicle converter. If you need assistance in deciding which option is right for you, your Occupational Therapist can give you advice.

See also Occupational Therapist

L-Q

LIFTING SYSTEMS
MOBILITY EQUIPMENT STORAGE
MAINTENANCE
NDIS
OCCUPATIONAL THERAPIST
PARKING
PEDAL EXTENSIONS
QUESTIONS

Total Ability : Boot Crane

LIFTING SYSTEMS

There are a variety of hoists available, depending on your needs. Make sure you speak with your Occupational Therapist and vehicle converter to make sure you get one that suits you.

SLING LIFTS

Sling Lifts are used in Converted Vehicles to help a person transfer from their wheelchair, into the car and back again. Sling lifts are available that can be fitted into most types of vehicle, or stand-alone models are available that can be stored in the back seat or trunk of the car. They can be fitted to driver's side, passenger or rear car doors depending on your needs. Many sling lift designs are removable, making for easy use when other people are accessing your vehicle. Depending on a person's level of mobility, sling lifts can be designed for operation by the person being transferred, or by a caregiver. There are a wide range of sling lifts available, your Occupational Therapist will be able to help you find one to meet your needs.

> **"With all types of hoists, it is important to check that their weight limit meets your requirements before purchase. Your Occupational Therapist can help you find the right hoist to suit your needs."**

Mobility Engineering: Sling Lift

Mobility Engineering: Sling Lift

WHEELCHAIR LIFTS

Wheelchair lifts are fitted into WAV's to lift a person into the car while still seated in their wheelchair. They can be fitted to side or rear entry vehicles and are available in a range of sizes and weight ratings.

Wheelchair Accessible Vehicles can be accessed using either lifts or ramps. Lifts may be more suitable for some manual wheelchair users, who may struggle to push themselves up ramps independently.

Auto Extras: Wheelchair Loader

Asquith Mobility Solutions: Wheelchair Loader

IMPORTANT

Before purchasing a wheelchair lift you should talk to your vehicle converter about which models are suitable for your vehicle and your requirements. Some of the things you and your converter should discuss are:

- Will the lift be stored inside the car or externally? Internal designs will take up space that could otherwise be used for seating or storage.
- Is it strong enough? Will the weight rating hold you and all your mobility equipment, now and in the future?
- Is there enough headroom without having to tilt or duck your head?
- Does it have safety features such as non-slip surfaces and edge barriers?
- Is it big enough? It should be a few inches wider and longer than your mobility aid.
- Is there an emergency back-up mechanism in case the motor fails?
- Does it lock securely into place when not in use?
- Can you (or your carer) use it easily?
- Is the lift compliant with current Australian Standards for lifts and hoists?

STORAGE LIFTS

Storage lifts can be installed in Converted Vehicles to allow for automatic storage of a person's wheelchair after they have been seated in the car. They can be installed alongside sling lifts for easy, independent transferring. When choosing a storage lift it is important to make sure that it is strong enough to carry the required mobility equipment. Different designs are also operated in different ways, your Occupational Therapist will help you choose a model that is safe and easy to use for you and/or your caregiver. Talk to your vehicle convertor before choosing a vehicle to make sure that you choose one that will be compatible with your storage needs.

Roof hoists can be used to lift and store wheelchairs on the roof of the car. They are only suitable for people using foldable, manual wheelchairs. Roof hoists raise the overall height of the car, this should be taken into account if you already have a tall vehicle or if you regularly use height-restricted facilities like underground carparks.

Boot mounted loaders are designed to move your wheelchair from the door of your car and load it into the trunk with the touch of a button. As the wheelchair is packed into the boot of your car, boot mounted loaders don't have the same height restrictions associated with roof hoists, they also leave your backseat free for extra passengers. Boot mounted loaders cannot be installed into all makes of car, so it is important to check with your vehicle converter before you purchase a base vehicle. There is also a weight limit on the types of wheelchairs that boot mounted loaders can lift, but unlike roof hoists, they are suitable for both rigid-frame and folding wheelchairs. Check with you Occupational Therapist that the design is right for you.

There are also boot cranes available that simply lift your wheelchair from the ground, directly into the boot of your car. These are not designed to be used from your car seat, so if you are unable to move independently without your wheelchair you will need a carer to help operate them. The major advantage that boot crane designs offer over roof hoists and boot mounted loaders is that they are able to lift heavier loads, allowing a full-sized mobility scooters and powered wheelchairs to be stored with ease. Models are available that can lift up to 150kg, however they must be installed into base vehicles that can also handle heavy loads and that have enough storage room to house the required mobility aids. Talk to a vehicle modifier to know what is suitable for your vehicle and for your requirements before you start. If you have the option, talk to your vehicle convertor before choosing a base vehicle to make sure that you choose one that will be compatible

For people who just need a little extra help getting their wheelchair out of the car, boot sliders are an inexpensive and effective option. Consisting of boot mat and wheelchair case which provide a slippery, low-friction surface, boot sliders allow a person to safely slide their wheelchair out of the car and onto the ground without having to do any heavy lifting.

There are three types of lifting systems:

1. Sling Lifts – These are suitable for Converted Vehicles, they are designed to lift a person out of their wheelchair to help them transfer into the car.
2. Wheelchair lifts – These can be fitted into Wheelchair Accessible Vehicles to lift a person into the car while still seated in their wheelchair.
3. Storage hoists – These are designed to lift an empty wheelchair for storage after the occupant has transferred.

See also Access, Mobility Equipment Storage, Occupational Therapist, Ramps, Transferring (Seating)

MOBILITY EQUIPMENT STORAGE

If you will be transferring out of your wheelchair to travel, or if you require other bulky equipment, you're going to need somewhere to store it while you're on the road.

When planning how much storage space you'll need, make sure to take into account all of your equipment not just your wheelchair. Walking frames, commodes, ventilators and emergency equipment all take up space. Heavy items like oxygen bottles will need to be properly secured to prevent them becoming hazards in case of an accident.

Your choice of base vehicle will go a long way to ensuring that you have room to store all your gear. Station wagons and minivans have more storage space than sedans or hatchbacks, but if your equipment is particularly bulky you might consider a full sized van. There are also a number of vehicle modifications that can increase your car's storage space.

TOW BAR MOUNTED WHEELCHAIR AND SCOOTER CARRIERS

Tow bar mounted wheelchair and scooter carriers come in a variety of designs depending on the size and weight of the mobility aid you wish to carry. Foldable manual wheelchairs can be mounted on a rack very similar to a standard bike rack, while larger aids like scooters can be carried on a tray with extendable ramp. Tow bar mounted carriers do not have their own wheels, therefore the entire weight of the mobility aid and the carrier rest on the tow bar. The combined weight of your mobility aid and carrier should not exceed the vehicle manufacturers' rated allowable down force. Larger tow bar mounted carriers, such as those designed to hold scooters, add a significant unsupported weight to the rear of the vehicle, which can affect road handling, and increase space required for parking.

ROOF RACKS

Roof racks are usually combined with roof hoists, allowing users to easily store their wheelchairs on the roof of their cars. Roof racks are available with or without covers, providing protection from the weather. Roof racks are only suitable for use with foldable manual wheelchairs. They raise the overall height of the car, which should be taken into account before installation.

TRAILERS

Trailers can be specially designed to carry mobility scooters or power wheelchairs. They carry the weight of the trailer and mobility device on the tow bar, but also feature their own wheels to more evenly distribute the load. The combined weight of the trailer and mobility device should not exceed the manufacturer's vertical load rating. Trailers should include a fold-up ramp, allowing for easy loading and unloading and you and/or your carer should ensure that you are familiar with the loading and unloading procedure. Trailers increase the parking space required by a vehicle, and drivers should make sure that they are comfortable reversing and parking with the trailer attached.

STORAGE BOXES

Storage boxes are a great way to store general mobility equipment. They secure all your gear safely, making them easy to find and ensuring that they don't become hazards in case of an accident. They are available from small sizes perfect for storing wheelchair restraints, up to large boxes that can hold manual wheelchairs or walking frames. Storage boxes can be fitted to the vehicle internally or externally, depending on their size.

Mobility Engineering: Tow Bar Mounted Wheelchair Carrier

See also Lifting Systems, Parking

MAINTENANCE

As is the case with all cars, it is important that you service your vehicle on a regular basis.

Speak with your vehicle converter about how often you should service your car and any disability related conversions to ensure that they stay in optimal condition.

PME: Roof Rack

NDIS

The National Disability Insurance Scheme (NDIS) is a national scheme aimed at supporting people with disabilities and their families. The NDIS provides Australians under the age of 65 who have a permanent and significant disability with reasonable and necessary supports to live an ordinary life.

Under the NDIS people can claim funding support to make modifications that allow them to access or drive a vehicle. Eligible modifications and services may include:

- Conversions allowing a person to get into or out of a vehicle.
- Conversions to allow storage of a wheelchair or other mobility device without lifting.
- Conversions that allow a person to travel safely in their wheelchair.
- Conversions to driving controls.
- Specialist driving lessons or assessments to allow someone to sit for an endorsed licence or learn to use modified equipment.
- The cost of engineering certification.
- The cost of moving existing conversions from an existing vehicle to a new vehicle, where this is appropriate.

In order to be eligible for NDIS funding, you should have your needs assessed by a qualified Occupational Therapist. If you are applying for conversions to allow you to drive, make sure that your Occupational Therapist has specialist driver training. You will also need to ensure that any modifications are carried out by a qualified installer in line with Australian Standards and local state and territory regulations. Your Occupational Therapist will guide you through the application process. They will need to demonstrate that the proposed vehicle modifications relate directly to your disability, and that they represent the best, and most cost-effective way to meet your driving or transport needs. You must get a compliance certificate from your vehicle modifier to qualify for NDIS funding. It is important to note that compliance certificates only guarantee compliance to external funding bodies, you will also need an engineering certificate to guarantee your vehicle's safety and that it meets all Australian standards.

The NDIS will not fund:

- The cost of the base vehicle.
- Registration, maintenance or running costs.
- Non-standard items where a more cost-effective alternative is available.
- Driving supervision to allow someone to accrue enough hours to sit a driving test.
- Major modifications (over $10,000), where less than eight years has elapsed since the most recent funding for vehicle modifications, unless the person's circumstances and needs have changed significantly.

Some NDIS participants have been able to claim back a portion of their Blue Badge insurance premium from various funding bodies, including the NDIS. Find out more by calling Blue Badge Insurance on 1300 304 802.

See also Clinical Assessment, Driver Assessment, Vehicle Certification and Compliance

The NDIS is designed to help Australians with permanent disabilities. Since its introduction in 2016, the program has assisted thousands of people with the objective of helping "you reach your goals and aspirations, and take part in activities to increase your social and economic participation.

As Australia's first disability insurance specialists, we here at Blue Badge are often asked whether the NDIS will contribute towards disability converted cars, and the cost to insure the vehicle.

The answer is yes!

The NDIS's website provides the following guidelines on how they will contribute towards the costs of both disability converted cars and associated insurance costs:

> The NDIA may also fund supports that are related or incidental to vehicle modifications, for example:

- driver assessments for the purpose of obtaining an endorsed license;
- driving lessons where a participant requires lessons to establish skills to use the modified vehicle, or additional lessons where a participant's disability results in them taking longer to learn to drive;
- additional insurance costs, where an additional insurance premium is payable as a result of the modifications. Note, the NDIA will only fund the increased amount of the premium, not the total cost of the policy;
- the cost of engineering certification and other checks required for initial registration; and
- the cost of removal of modifications and reinstallation on a new vehicle when doing so is practicable and represents value for money."

To help you get the maximum value from your funding, Blue Badge Insurance will separate the cost associated with insuring your disability conversions from that of the base vehicle in our quotes, invoices and Certificate of Insurance so that you have the necessary paperwork to clearly illustrate the additional insurance costs payable as a result of the modifications.

TAC and ICare clients also qualify for some funding contribution towards your insurance costs.

Find out more here

OCCUPATIONAL THERAPIST

Occupational Therapists (OT's) are healthcare professionals who work to help people participate in the activities of everyday life. They can answer any questions that you may have about buying cars and sitting for your licence. An OT will assess the transport needs of you and your family and make sure you choose the best possible vehicle modifications for your needs. They can liaise with your doctors and vehicle converters, help you apply for funding and explain regulations and paperwork.

If you don't already have an Occupational Therapist, ask your doctor to provide you with a referral. If you are planning on driving the car yourself, you will need to see an OT with specialist driver qualifications and obtain medical clearance from your doctor and state regulatory authority. On your first visit make sure you take along your doctor's referral and any relevant medical records. If your carer will be driving the vehicle or operating hoists or other equipment, the OT will need to take their needs into account as well.

An occupation therapy assessment should take into account all aspects of your transport needs, these include:

- Whether you have the physical, cognitive and psychological ability to drive a car.
- Your ability to enter and exit a vehicle. Can you transfer? Are there ways to make transferring easier? If not, what is the best way for you to travel safely in your wheelchair?
- Your carer's needs. Carers should be comfortable and confident with any equipment that they will be required to use.
- The size of your family. Your vehicle should have enough seating for everyone.
- Budget. There are often multiple options available for vehicle modifications. Your OT should help you find one that you can afford.
- Height and weight. Your vehicle and any ramps, lifting or storage equipment should be strong enough to hold you, your wheelchair and any other equipment (such as ventilators) that you carry.
- Safety and comfort. Your OT will help to make your vehicle both safe and comfortable for all your needs. For example, you should not need to bend or tilt your head when using hoists, ramps or other lifting equipment. If you experience seizures there should be a mechanism for your carers to quickly and safely change your position in case of emergency.
- Environment. Do you regularly travel on dirt roads or over speed humps? Does your garage have a low ceiling? Your OT will ask you about the kind of terrain you usually travel on. They may even visit your home or work place to assess any possible obstacles.
- Storage space. If you need to travel with extra equipment like walking frames, oxygen bottles or commodes, you vehicle should have space to safely store all your gear.
- Changes over time. Buying a vehicle is a long-term investment. Your assessment should take into account any changes that are likely to occur to your condition or equipment over the next decade.

Once your assessment is complete your Occupational Therapist will discuss the results with both you and your vehicle converter to come up with a plan that best suits your needs. Once your vehicle conversion is complete, ask your OT to inspect it before purchase, to ensure that the design meets the requirements set out in your plan.

If you would like more information on Occupational Therapists visit Occupational Therapy Australia: www.otaus.com.au

See also Carer, Clinical Assessment, Driver Assessment, Mobility Equipment Storage

BLUE BADGE INSURANCE AUSTRALIA

Do ordinary insurers care where you park? We do!

Discounted car insurance for disability parking permit users

As Australia's first mobility and independence insurance specialist we know that Disability Parking Permit Users are safer drivers who deserve lower prices. Our Comprehensive Car Insurance policy provides up to 25% off^ for both disability converted vehicles and standard cars while also offering tailored benefits that have been developed with you in mind.

Lets Talk: 1300 304 802

www.BlueBadgeInsurance.com.au

^Discounts for the Blue Badge Insurance Comprehensive Motor Vehicle Insurance will be applied to the base vehicle rates subject to the customer holding a permanent Disability Parking Permit and/or the vehicle has been converted for use by a driver or passengers that have a disability. The discounts do not apply to the Blue Badge Roadside Assistance Optional Benefit. Underwriting criteria will be applied to the consideration of the risk. Additional excesses will apply to drivers under 25 or those drivers who have held a full Australian drivers licence for less than 2 years. This offer may be withdrawn at any time. Consider the PDS at www.BlueBadgeInsurance.com.au to decide if the product is right for you.

PARKING

People with an impairment that limits their mobility are eligible to apply for a Disability Parking Permit. Disability parking permits allow drivers to park in designated spaces featuring an international access symbol. These spaces are generally wider than other parking spaces, allowing room for a wheelchair ramp or for people to transfer easily. People with disability parking permits are also allowed to park in time-limited spaces for double the advertised time. Parking permit applications and regulations differ in each state and territory. There is a list of websites for each region below.

Some vehicle modifications limit the places that a vehicle can park. In Wheelchair Accessible Vehicles, the available parking will depend on the type of access required. Vehicles that use side-door access need extra width in their parking spaces to allow wheelchair users to enter and exit the vehicle. These can be easily parked in spaces marked for disabled access, which are wider than normal. They can also be used in parallel parking spaces, as long as there is sufficient space to exit without entering traffic. Wheelchair Accessible Vehicles with rear door entry don't require the extra width of accessible parking spaces, but they need extra length to allow a wheelchair user to enter or exit the car safely. This can be limit their access to parallel parking.

Certain forms of mobility equipment storage, such as trailers, tow bar mounted carriers and external storage boxes can also extend the length of a vehicle. If you are considering one of these options you should take your parking requirements into account.

Disability Parking Permits – Regulations for your State or Territory

Click on your state/territory to find out how to apply for a Disability Parking permits:

See also Access, Mobility Equipment Storage, Transferring (Seating)

Disability Parking Myths

Disability parking permit holders are eligible for certain allowances and entitlements to accommodate their mobility restrictions.

Find out exactly what your permit allows you to do by clicking here.

PEDAL EXTENSIONS

Pedal extensions are designed to help people of short stature use accelerator, clutch and break pedals. They can also be useful for people with limited leg strength or joint movement. Both the height and the space between the pedals are adjustable, allowing you to set them for maximum ease of use and comfort.

Some pedal extensions also include a quick release raised floor assembly, allowing drivers to rest their feet on the floor when not in use. Pedal extensions are available in either fold away or removable versions, allowing other drivers to use the car in the regular way.

PME: Pedal Extensions

See also Accelerator, Brakes, Electronic Clutch.

QUESTIONS

Have you read our guide but still have more questions? In most cases, the first person you should ask is your Occupational Therapist, they can liaise between you, your doctor, your vehicle converter and the licencing authority in your state or territory. If you don't already have an Occupational Therapist your doctor can refer you to one. Otherwise, here's a short list of websites that might be of use. If you are looking for a specific vehicle converter, installer or distributor check out the handy list at the back of the book.

Occupational Therapy

Occupational Therapy Australia is the national professional association representing Occupational Therapists in Australia. Their website includes a nation-wide directory of OT's working in private practice.

Insurance

Blue Badge Insurance is Australia's independence and mobility insurance specialists. Contact them on 1300 304 802 to arrange coverage for your Wheelchair Accessible or Converted Vehicle, mobility scooter or wheelchair.

State and Territory Licencing Authorities

Each state and territory has slightly different road laws and licencing requirements. Your Occupational Therapist will be familiar with the requirements of your particular area. You can find out more information on the requirements for drivers with a disability at the following websites:

- **Australian Capital Territory**
- **New South Wales**
- **Victoria**
- **Queensland**
- **South Australia**
- **Western Australia**
- **Tasmania**
- **Northern Territory**

See also Access, Mobility Equipment Storage, Transferring (Seating).

R-Z

RAMPS
RESTRAINTS
SECOND HAND VEHICLES
SPINNER KNOBS
TRANSFERRING (SEATING)
UNDERINSURANCE
VEHICLE CERTIFICATION AND COMPLIANCE
WHEELCHAIR

Total Ability: Ramp

RAMPS

Ramps can be installed in either side or rear entry vehicles. They are available in three types: portable, mounted (non-powered) and powered.

If you are purchasing a Wheelchair Accessible Vehicle you're going to need a way to get into your car. The two most common methods of access are ramps and wheelchair lifts. There are a number of things to consider when choosing between a ramp and a lift. Ramps often require less space than a lift, and so can be installed into smaller vehicles. Ramps should always be safe and manageable. If you are considering installing a ramp in your Wheelchair Accessible Vehicle you need to make sure that you (or your carer) are strong enough to push yourself up the ramp. Buying a car is a long-term investment, so consider whether your strength or weight are likely to change over the next ten years.

Ramps can be installed in either side or rear entry vehicles. They are available in three types: portable, mounted (non-powered) and powered. Portable ramps are stowed in the vehicle and need to be lifted into position for each use. When not in use, portable ramps need to be stored carefully, to ensure that they don't become a hazard in an accident. Non-powered mounted ramps are attached permanently to the vehicle, but need to be manually lifted up and down when in use. If choosing a portable or non-powered mounted ramp, you should make sure that you or your carer have the strength and agility to use them. Powered ramps are also attached to the vehicle, but they also include an electric lifting system than moves the ramp into position at the touch of a button. Powered ramps are generally more expensive than non-powered ones, but they are much easier to use and do not require any lifting.

"Ramps can be installed in either side or rear entry vehicles. They are available in three types: portable, mounted (non-powered) and powered."

IMPORTANT

It is important to talk to a vehicle converter before purchasing your ramp, they will help to ensure that you choose a product that is suitable for your vehicle and your needs. There are a number of things to consider when choosing a ramp, including:

- **Strength –** Is the ramp strong enough to hold the weight of you and your mobility equipment?
- **Safety –** Does it have non-slip surfaces and edge barriers? Are there controls to stop it folding when in use?
- **Motor failure –** Does your powered ramp have a manual back up mechanism in case of motor failure?
- **Storage –** Can the ramp be safely locked away when not in use?
- **Compliance –** Does the ramp comply with Australian Standards?

See also Access, Carers, Lifting Systems

RESTRAINTS

Wheelchair restraints are fitted into Wheelchair Accessible Vehicles to allow a person in a wheelchair to be safely secured while traveling.

Restraints are available to suit both manual and powered wheelchairs and can be used to allow people to travel in the driver's seat, front passenger or back seats. Wheelchair restraints should be used in conjunction with occupant restraint systems. These are lap or sash belts that protect the user in the same way that seat belts do. They are attached to the car and are separate from any postural harnesses attached to the wheelchair. When fitting your lap or sash belt, ensure they fit snuggly across your waist and chest.

There are two main types of restraints available, Tie-Down Systems and Wheelchair Docks.

TIE-DOWN SYSTEMS

Tie-Down Systems are the most commonly available and cheapest wheelchair restraint system. Four-point systems are most widely used, meaning that the wheelchair is firmly secured to the floor of the car via four restraints that attach directly to the chair. In the case of an accident or sudden stop, most of the forward momentum of the wheelchair and its occupant is directed downward, into the floor of the car, providing less stress on the passenger's body. Retractor systems are available that greatly reduce the time it takes to secure a wheelchair user in a Tie-Down wheelchair restraint.

WHEELCHAIR DOCKS

Wheelchair Docks are mechanical lock down systems. Docking plates are attached to the floor of your car and to the bottom of your wheelchair. They can be fitted to both manual and power wheelchairs but not all wheelchairs are compatible. Your vehicle converter will be able to advise you whether your wheelchair is suitable. Wheelchair Docks are usually quicker to use than Tie-Down Systems and don't require any bending or kneeling, making them a great option if your carer has limited mobility. Wheelchair Docks also often come with quick release buttons and other automatic features. They are a great choice for people who wish to drive independently because they don't require the assistance of a carer to use.

Freedom Motors: Wheelchair Dock

Total Ability: Wheelchair Dock

SECOND HAND VEHICLES

Purchasing a second-hand vehicle is one way to reduce the costs associated with buying a car, however, there are a number of things that you should take into account when choosing your car. Obviously, the vehicle will have been set up to meet the previous user's needs. Check carefully that it also meets all of your personal requirements; an Occupational Therapist can help you with this. If the vehicle will need further modifications, you and your Occupational Therapist should discuss options with a vehicle converter and any additional costs should be taken into account.

Remember to check the age and mileage of the base vehicle, as it may not last as long as a new one. As with any second hand vehicle, it is wise obtain a roadworthy certificate before purchasing your car, also ensure that any previous modifications are properly installed and meet Australian Standards. All modifications should be assessed by a vehicle certifier registered in your state or territory and be issued with a certificate of compliance as well as engineering certification. Without these certificates you may not be able to legally register your vehicle for road use.

See also Occupational Therapist, Vehicle Certification and Compliance

SPINNER KNOBS

Spinner knobs are attached to the steering wheel to make it easier to grip while steering, allowing people to steer using only one hand. This is great for people with an impairment in one arm, or who need their other arm to use hand controlled brakes and accelerators. A variety of attachments are also available to assist people with impaired grip strength.

Spinner knobs can be mounted with wireless modules allowing drivers to access secondary controls like indicators or windscreen wipers with the touch of a button.

Spinner knobs come in a wide range of designs, including:

- **Knobs:** A traditional knob design to make gripping easier.
- **Rods:** A longer design, for those that have trouble gripping knob designs.
- **U or V Grips:** Two vertical pins stabilise the hand of the driver.
- **Tri-Grips:** Similar to U or V grips, but with an extra pin for added stability.
- **Cuff or Palm Devices:** These fit over the hand of the driver, helping to hold it in place.
- **Prosthetic Attachments:** These can be designed to integrate directly with your prosthesis.
- **Custom Designs:** Many vehicle converters will design a spinner knob that directly meets all you needs.

Total Ability: Spinner Knob

PME: Easy Spin

See also Driving Controls

TRANSFERRING (SEATING)

In case of an accident, it is safer to be sitting in a regular car seat than in your wheelchair, so if you are able to safely transfer into your vehicle, it is preferable to do so. Fortunately, there are many ways to make transferring into a car easier.

Choosing an appropriate base vehicle is important. The car should have wide-opening doors and be an appropriate height for you. For example, vans and 4WDs are often higher from the ground than sedans or station wagons, this is perfect for someone who has difficulty bending, but may be inappropriate for someone of short stature or in a wheelchair. Check the range of movement of existing seats in the car, as slight adjustments can often assist in transferring. If you are planning to drive the car, an adjustable steering column can also provide more room to transfer. Don't forget to check with your vehicle convertor that your car is suitable for any seating modifications that you intend to install.

There are many products available to help you transfer. Many of these modifications are simple and inexpensive. High-density foam pillows can help to provide a firm, even base on an existing car seat and can be strategically placed for extra support while transferring or travelling. Transfer straps and handles provide easy grab points to enable someone to lift themself while transferring. Transfer straps are looped over window frames or above door grab handles, while transfer handles are portable and lock into the doorframe when the door is open. Not all models of car can accommodate transfer handles.

Leg and thigh lifters are useful for people with little or no leg movement. One loop of the lifter is placed around the foot and the other around the forearm or held in the hand, allowing the user to easily lift their legs into place. Sliding boards and mats are designed to make it easier for the user to slide from their wheelchair into the car and back again. They can be used together or separately. Sliding boards are designed to bridge the gap between the chair and the car, allowing a person to slide easily into position, they are available in a range of shapes, sizes and materials. Sliding mats help to provide a slippery surface during transfer.

If you have trouble turning into position, a swivel cushion is an inexpensive option. These consist of a flat base with a cushion attached that can rotate, similar to a lazy susan. Once seated on the cushion, it takes little effort to spin into position.

For people who need more assistance to turn in their seats, swivel seating systems can be installed. These are designed to make it easier to transfer from your wheelchair into the car. The car seat is mounted on a turning base so that it can be swivelled to face the door of the vehicle. This allows a driver or passenger to transfer comfortably before swivelling the chair back into position with no extra twisting or body movement required. Swivel seat systems can be installed in driver, front passenger or rear seats and are available in manual or electronic models. If you choose a manual model make sure that you or your carer have enough strength to operate it easily. They can use the vehicle's original seat, or fit a custom made one designed to suit your specific needs.

> **"Make sure you speak with your vehicle convertor to make sure that your car is suitable for the seating modifications that you intend to install."**

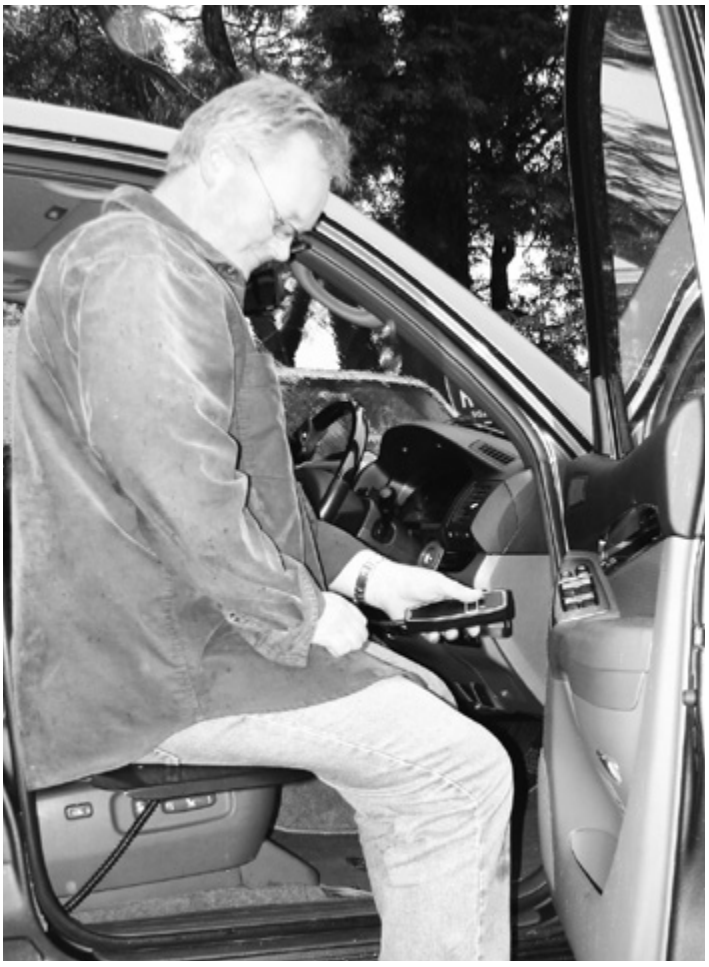
For people who need more help to transfer lowered swivel seats are available. In this case the car seat is mounted on an arm that extends from the vehicle and lowers to a comfortable height to transfer. Lowered swivel seats have electronic controls and can be pre-programmed to the height that most suits your needs. If you are planning to install any kind of swivel seat system it is important to make sure that your base vehicle is large enough to accommodate your chosen design.

Transfer seats can also be used. These consist of a seating system that slides out of a wheelchair base, directly into a receiver fitted into the floor of the vehicle, allowing the person to transfer without ever leaving the chair. Transfer chairs are not suitable for all types of vehicle or wheelchair, and require the assistance of a carer to use.

Sling lifts can also be used to lift a person out of their wheelchair, into the car. These are available in manual or electronic models and can be operated by the user or their carer. They are usually mounted either to the floor or the roof of the vehicle; some models are removable, great if other people will be using your car.

Talk to your Occupational Therapist if you have any doubts about whether you can transfer and what kind of equipment you will need to do it safely.

PME: Transfer Board



PME: Transfer Board

See also Access, Lifting Systems, Occupational Therapist

UNDERINSURANCE

Wheelchair Accessible and Converted Vehicles provide freedom and independence to people with disabilities. If you have an accident, you'll want to get back on the road as quickly as possible and the right insurance will make sure you can do just that.

Many vehicle modifications are expensive, some costing more than the original base car. Most insurers group disability conversions under the same category as luxury and performance modifications. This inflates the price of policies, even if you're a safe driver.

It also means that most insurers depreciate the value of disability modifications over time, despite the fact that costs of materials and labour continue to increase. This means that if your car is damaged or written off, you may not have enough money to repair or replace it.

To make sure that you're not underinsured, call your insurance provider and ask them the following questions:

- How have they valued your disability modifications?
- Do they depreciate the value of your modifications over time? If so, at what rate?
- Will they allow you to insure your disability conversions on a new for old replacement basis?
- Do they provide cover for all the family, friends, Carers or Support Workers who drive your car?

If your current policy doesn't include all of these benefits, you may want to consider switching to a disability-specific insurer like Blue Badge Insurance.

Blue Badge understands that people with disabilities are safe drivers and that disability conversions maintain their value. They also know how much people with disabilities rely on their cars and will help make it quick and easy to get you back on the road.

"Underinsurance refers to situations where you don't have enough insurance cover for your car, which can lead to significant financial loss."

See also Occupational Therapist, Vehicle Certification and Compliance

VEHICLE CERTIFICATION AND COMPLIANCE

Whether you're purchasing a new car or converting an existing one it is important that it complies with regulations in your state or territory. Before a modified vehicle can be registered for road use, it must be checked by a vehicle certifier registered in your state or territory and be issued an engineering certificate. You should not purchase a vehicle, or pay for conversions unless you receive an engineering certificate. All modifications should meet Australian Standards and it is your right to demand testing and Australian Standards information from your vehicle converter and/or supplier. If you are applying for funding through the NDIS or other funding body, you will also require a compliance certificate, issued by your vehicle converter.

If you are purchasing an imported vehicle the importer should be listed with the **Registered Automotive Workshop Scheme (RAWS)**. Imported vehicles should comply with all Australian Design Rules (ADRs), all disability related modifications should be compliant with Australian Standards and it should come with an ADR Compliance Certificate.

If you have any concerns about your vehicle modifications, you can refer them to the registration authority in your state or territory.

Click on your state/territory to find out about compliance in your region

See also Imported Vehicles, NDIS, Second Hand Vehicles

WHEELCHAIR

If you plan to use your wheelchair in your car, make sure you speak with both your Occupational Therapist and vehicle converter to make sure they take your wheelchair's specifications into consideration in their recommendations.

The type, size and weight of your wheelchair will impact a variety of car conversions including restraints, ramps, seating systems, storage and more.

Do ordinary insurers cover all your wheels? We do!

Our Comprehensive Car Insurance policy covers your wheelchair while it's in your car

Our Comprehensive Car Insurance policy protects your wheelchair and other mobility aids that are stored in your vehicle. Designed specifically for Disability Parking Permit Users, our policy provides up to 25% off^ for both disability converted vehicles and standard cars with while also offering tailored benefits that have been developed with you in mind.

Lets Talk: 1300 304 802

www.BlueBadgeInsurance.com.au

^ Discounts for the Blue Badge Insurance Comprehensive Motor Vehicle Insurance will be applied to the base vehicle rates subject to the customer holding a permanent Disability Parking Permit and/or the vehicle has been converted for use by a driver or passengers that have a disability. The discounts do not apply to the Blue Badge Roadside Assistance Optional Benefit. Underwriting criteria will be applied to the consideration of the risk. Additional excesses will apply to drivers under 25 or those drivers who have held a full Australian drivers licence for less than 2 years. This offer may be withdrawn at any time. Consider the PDS at www.BlueBadgeInsurance.com.au to decide if the product is right for you.

YOU'VE COME THIS FAR, WHERE TO FROM HERE?

You've come to the end of our guide for drivers and passengers with disability, we hope you've learnt a little bit more about Wheelchair Accessible and Converted Vehicles and are eager to get out on the road.

The first step towards getting the car that is right for you is to talk to your Occupational Therapist. If you don't already have one, your doctor can provide you with a referral. It is especially important to consult an Occupational Therapist if you are buying your first Wheelchair Accessible or Converted Vehicle, if your functionality has changed, or if you are applying for external funding for your vehicle.

VEHICLE CONVERTERS, INSTALLERS AND DISTRIBUTORS

Accessible Transit Specialists

Phone: 08 9256 3411
Email: dave@accessibletransit.com.au
Website: www.accessibletransit.com.au
Address: 45 Britton Street, Smithfield, NSW, 2164

Advance Mobility

Phone: 03 9722 5050
Email: sales@advancemobility.com.au
Website: www.advancemobility.com.au
Address: 13 Clare Street, Bayswater, VIC, 3153

Astec Equipment Services

Phone: 03 5336 3900
Email: chas.werner@astecservices.net.au
Website: www.astecservices.net.au
Address: 612 Skipton Street, Redan, VIC, 3350

Automobility

Phone: 1800 662 454
Email: sales@automobility.com.au
Website: www.automobility.com.au
Address: 3/63 Canterbury Rd, Montrose, VIC, 3765

Auto Extras

Phone: 1800 811 626
Email: sales@auto-extras.com.au
Website: www.auto-extras.com.au
Address: 39-41 Butterfield Street, Herston, QLD, 4006

Asquith Mobility

Phone: 02 9482 5770
Email: michael@asquithmobility.com.au
Website: www.asquithmobilitysolutions.com.au
Address: 1/18 Sailsbury Rd, Asquith, NSW, 2077

AVA – Vehicle Access Solutions

Phone: 1300 133 353
Website: www.vehicleaccesssolutions.com.au
Address: 49 Fennel Street, Port Melbourne

Bancroft Engineering

Phone: 02 9584 3290
Address: Unit 3 16-18 Stanley St, Peakhurst, NSW, 2210

Capital Special Vehicles

Phone: 03 9794 8888
Email: csv@csv.com.au
Website: www.csv.com.au
Address: 12 Capital Drive, Dandenong, VIC, 3175

Franks Engineering

Phone: 03 9354 0400
Email: sales@franksengineering.com.au
Website: www.franksengineering.com.au
Address: 84A Bakers Rd, North Coburg, VIC, 3058

Freedom Motors

Phone: 02 9673 4033
Email: sales@freedommotorsaustralia.com.au
Website: www.freedommotorsaustralia.com.au
Address: 17 Plasser Crescent, St. Marys, NSW, 2760

Integrity Car Sales

Phone: 02 9981 1884
Website: www.integritycarsalesandrentals.com.au
Address: 32 Wattle Road, Brookvale NSW, 2100

KCF Engineering

Phone: 07 3203 0604
Email: info@kcfeng.com.au
Website: www.kcfdisabilityengineering.com.au
Address: 1/12 Robart Court, Narangba, QLD, 4504

K & M Kite

Phone: 1300 352 742
Email: sales@kmkite.com.au
Website: www.kmkite.com.au
Address: 10 Demand Avenue, Arundel, QLD, 4214

Les Brazier Special Vehicles

Phone: 08 8255 1947
Email: info@lesbrazier.com.au
Website: www.lesbrazier.com.au
Address: 8 Barfield Crescent, Edinburgh North, SA, 5113

Mobility Engineering

Phone: 02 9482 4572
Email: sales@mobilityengineering.com.au
Website: www.mobilityengineering.com.au
Address: 4/45 Sailsbury Rd, Hornsby, NSW, 2077

Mobility Plus

Phone: 03 9495 1955
Email: info@mobilityplus.com.au
Website: www.mobilityplus.com.au
Address: 40-42 Montefiore Street, Fairfield, VIC, 3078

Norden Conversions

Phone: 03 9793 1066
Email: conversion@norden.com.au
Website: www.norden.com.au
Address: 60-62 Bennet Street, Dandenong, VIC, 3175

Problem Management Engineering

Phone: 02 9482 2808
Email: bill@pmeautoconversions.com.au
Website: www.pmeautovconversions.com.au
Address: 6 Kookaburra Rd, Hornsby Heights, NSW, 2077

Reben Mobility

Phone: 1300 620 774
Email: info@rebenmobility.com.au
Website: www.rebenmobility.com.au
Address: 2/24 Carroll Street, Toowoomba, QLD, 4350

Safe-T-Ride

Phone: 07 5571 5077
Email: safe-t-ride@outlook.com
Website: www.safe-t-ride.com.au
Address: 2/4 Wain Avenue, Ashmore, QLD, 4214

TotalAbility

Phone: 1300 858 410
Email: info@totalability.com.au
Website: www.totalability.com.au
Address: 146 Gilba Rd, Girraween, NSW, 2145

TL Engineering

Phone: 08 9279 5466
Email: sales@tleng.com.au
Website: www.tleng.com.au
Address: 463 Bushmead Road, HAZELMERE, WA, 6055

Vehicle Modification Specialists

Phone: 03 5278 4705
Website: www.vmsgroup.net.au
Address: 6 Kim Court, North Geelong, VIC, 3215

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