



Drop-On & Automatic Coupler USER MANUAL



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Introduction

Thank you for choosing McHitch.

For decades, McHitch couplers have been trusted by trailer owners who demand strength, reliability, and exceptional articulation in a wide range of towing environments. From highways and gravel roads to challenging off-road terrain, McHitch products are engineered to provide a secure connection between tow vehicle and trailer while allowing the freedom of movement required for safe and controlled towing.



Unlike conventional ball couplings, McHitch couplers utilise a fully articulating universal-joint design. This allows the tow vehicle and trailer to move independently through a broad range of motion, reducing stress on the coupling, drawbar, chassis, suspension, and towing equipment when operating on uneven terrain.

Whether towing a caravan, camper trailer, work trailer, or specialist equipment, your McHitch coupler has been designed to deliver dependable performance in conditions where conventional couplings may be limited.

About This Manual

This manual covers the operation, inspection, maintenance, and servicing requirements of the following products:

- McHitch Drop-On Coupler
- McHitch Automatic Coupler

Although these couplers utilise different hitching methods, both are based on the proven McHitch articulation system and share many common maintenance and inspection requirements.

The information contained within this manual is intended to help you:

- Understand the operation of your coupler.

- Connect and disconnect your trailer safely.
- Carry out routine inspections.
- Perform basic maintenance and adjustments.
- Identify wear and service requirements.
- Maximise the service life of your equipment.
- Ensure safe towing practices at all times.

This manual should be read thoroughly before operating any trailer fitted with a McHitch coupling system.

Engineered for Articulation

When towing on uneven terrain, the tow vehicle and trailer rarely remain in the same plane.

Cross-axle situations, washouts, creek crossings, corrugations, steep ascents, steep descents, and off-camber tracks all place significant demands on a coupling system. Restricting movement between the vehicle and trailer can increase loads throughout the towing system and place unnecessary stress on critical components.

The McHitch articulation system is designed to accommodate these movements while maintaining a positive mechanical connection between the vehicle and trailer.



When correctly installed and maintained, McHitch couplers provide up to 90 degrees of articulation in all directions, allowing the trailer and tow vehicle to move independently while remaining securely connected.

This freedom of movement helps reduce component stress and contributes to improved towing performance in both on-road and off-road applications.

Designed for Real-World Towing

McHitch couplers are used across a broad range of applications, including:

- Caravans
- Hybrid caravans
- Camper trailers
- Off-road trailers
- Plant and equipment trailers
- Agricultural trailers
- Commercial trailers
- Recreational towing applications

Every McHitch coupler is designed with the same objective:

To provide a strong, secure, and reliable connection while delivering the articulation required for modern towing conditions.

Coupler Types

Drop-On Coupler

The McHitch Drop-On Coupler uses a hardened steel tow pin mounted to the towing vehicle. The coupler is lowered vertically onto the tow pin and secured using a threaded locking head and secondary locking pin.

The Drop-On design is simple, robust, and ideally suited to users who prefer a traditional vertical hitching process combined with the articulation benefits of the McHitch system.

Automatic Coupler

The McHitch Automatic Coupler utilises a horizontal engagement system consisting of a vehicle-mounted receiver and a trailer-mounted engagement shaft.



As the tow vehicle reverses into position, the receiver engages the shaft and automatically locks into place. A secondary locking pin and retaining clip are then fitted to complete the connection.

The Automatic Coupler has been developed to provide a fast, repeatable, and convenient hitching process while maintaining the strength and articulation characteristics expected from a McHitch coupling system.

Owner Responsibility

The safe operation of any trailer is dependent upon correct installation, regular inspection, proper maintenance, and responsible towing practices.

Before every journey, it is the responsibility of the owner and operator to ensure:

- The coupler is correctly connected.
- All locking devices are fitted and secure.
- Safety chains are correctly attached.
- Electrical connections are connected and functioning.
- Breakaway systems are correctly connected where required.

- All coupling components are in serviceable condition.

If any component shows signs of damage, excessive wear, deformation, cracking, corrosion, or abnormal operation, the trailer should not be towed until the issue has been rectified.

Safety Information

Your McHitch coupler is a critical safety component that forms the connection between the tow vehicle and trailer. Correct operation, regular inspection, and proper maintenance are essential for safe towing.

Before operating a trailer fitted with a McHitch coupler, ensure you understand the procedures and requirements outlined in this manual.

Failure to follow the instructions contained in this manual may result in equipment damage, loss of trailer control, serious injury, or death.

If any component of the coupling system appears damaged, excessively worn, loose, bent, cracked, or otherwise unserviceable, do not tow the trailer until the issue has been rectified.



General Safety Warnings

Never tow a trailer unless the coupler is correctly connected and secured.

Never operate a trailer if the locking pin and retaining clip are missing or incorrectly installed.

Never modify, weld, drill, grind, heat, or alter any McHitch component unless specifically authorised by McHitch.

Never exceed the rated capacity of the tow vehicle, towbar, coupling, trailer, safety chains, or associated towing equipment. Always observe the lowest-rated component within the towing system.

Always inspect the coupler before towing and after exposure to severe operating conditions.

Always ensure the tow vehicle and trailer are properly supported when performing maintenance or adjustments.

Always keep hands, fingers, and loose clothing clear of moving components during hitching and unhitching.

Always ensure bystanders remain clear of the coupling area while hitching, unhitching, and manoeuvring the trailer.

Before Every Trip

Before commencing any journey, perform the following inspections:

- Confirm the coupler is correctly connected.
- Confirm all locking mechanisms are fully engaged.
- Confirm locking pins and retaining clips are fitted correctly.
- Confirm safety chains are attached and secured.
- Confirm electrical connections are connected and functioning.
- Confirm the breakaway cable is connected where required.
- Confirm all mounting hardware is secure.
- Confirm there is no visible damage, cracking, bending, excessive wear, or corrosion.
- Confirm the coupler articulates freely without abnormal movement or binding.
- Confirm the trailer is loaded safely and within its rated limits.

If any defect or abnormality is identified, the trailer should not be towed until the issue has been corrected.

Coupling Safety

A coupling that is not correctly connected or secured may allow the trailer to separate from the towing vehicle.

Before towing, always verify that:



- The coupler is fully engaged.
- All locking components are correctly installed.
- Any secondary locking devices are secured.
- Safety chains are connected.
- The breakaway system is connected and operational where fitted.

Never assume the trailer is connected solely because the coupler appears to be engaged. Always perform a visual inspection and verify that all locking components are installed correctly before towing.

Hitching and Unhitching Safety

Where possible, always hitch and unhitch the trailer on level ground.

Before hitching or unhitching:

- Apply the tow vehicle parking brake.
- Place an automatic transmission in Park.
- Place a manual transmission in gear.
- Chock the trailer wheels.
- Ensure the jockey wheel is supporting the trailer correctly.

- Remove unnecessary persons from the immediate work area.

When operating the jockey wheel, maintain control of the trailer at all times and avoid placing any part of your body beneath the drawbar or coupling assembly.

Take extra care when hitching or unhitching on uneven ground, as tension between the vehicle and trailer may place load on coupling components.

Towing Safety

Safe towing requires more than simply connecting the trailer.

Before and during travel:

- Drive to road and track conditions.
- Allow greater stopping distances.
- Reduce speed on rough or corrugated surfaces.
- Exercise caution when changing direction suddenly.
- Slow down when negotiating steep inclines and descents.
- Avoid aggressive acceleration, braking, and steering inputs.
- Periodically inspect the coupling system during long journeys.

Following severe off-road use, inspect the coupling for damage, loose components, or signs of excessive wear before continuing.



Jack-Knifing Warning

Although McHitch couplers provide exceptional articulation, excessive jack-knifing can still result in contact between the trailer drawbar, coupling system, tow vehicle, weight distribution equipment, or other towing components.

Particular care should be taken while:

- Reversing.
- Negotiating tight turns.
- Operating in confined areas.
- Using weight distribution systems.
- Manoeuvring on uneven terrain.

Always check that adequate clearance exists between all towing components throughout the full range of expected movement.

Excessive jack-knifing may cause component damage and may impair safe operation of the towing system.

Safety Chains

Safety chains form a critical secondary connection between the trailer and tow vehicle.

Before towing:

- Ensure all safety chains are correctly attached.
- Ensure chain attachment points are serviceable.
- Ensure shackles are correctly fitted and tightened.
- Replace damaged, worn, stretched, or corroded components immediately.

Where applicable, safety chains should be crossed beneath the drawbar to assist in controlling the trailer should a separation occur.

Always ensure safety chains comply with local regulations and trailer requirements.

Breakaway Systems

Where a breakaway system is fitted or required by law:

- Ensure the breakaway cable is connected directly to an approved attachment point on the tow vehicle.
- Do not attach the breakaway cable to safety chains unless specifically permitted by local regulations.
- Ensure the cable is correctly routed and free from entanglement.
- Test the breakaway system in accordance with the manufacturer's instructions.



A breakaway system should never be relied upon as a substitute for correct coupling procedures or regular inspections.

Maintenance Safety

Before carrying out maintenance, inspection, adjustment, or repair work:

- Park the trailer on firm, level ground.
- Chock the wheels securely.
- Support the drawbar using the jockey wheel and appropriate stands if required.
- Disconnect the trailer from the tow vehicle where necessary.
- Wear suitable eye protection.
- Use the correct tools for the task being performed.

Never perform maintenance beneath an unsupported drawbar or trailer.

Never attempt adjustments while the trailer is in motion or connected in a manner that may place unexpected loads on the coupling.

Corrosion and Environmental Exposure

Off-road trailers are frequently exposed to harsh operating environments including:

- Dust.
- Sand.
- Mud.
- Water crossings.
- Salt-laden air.
- Coastal conditions.
- Corrugated roads.

These conditions can accelerate wear and corrosion if left unchecked.

Following exposure to harsh conditions:

- Clean the coupling thoroughly.
- Remove accumulated mud, sand, and debris.
- Allow all components to dry completely.
- Inspect the coupling for wear or damage.
- Lubricate service points in accordance with the maintenance requirements outlined in this manual.

Regular inspection and maintenance will significantly improve service life and reliability.



Replacement Parts

For safety and performance reasons, only genuine McHitch replacement parts should be used when servicing or repairing the coupling system.

The use of incorrect, modified, damaged, or non-compatible components may affect the operation of the coupler and could result in equipment failure.

If replacement parts are required, contact an authorised McHitch dealer or distributor.

Safety Summary

Before every trip, remember the following:

- ✓ Coupler connected and locked
- ✓ Locking pin and retaining clip installed
- ✓ Safety chains attached
- ✓ Breakaway cable connected (where fitted)
- ✓ Electrical plug connected
- ✓ No visible signs of damage or excessive wear
- ✓ Mounting hardware secure
- ✓ Coupler articulates freely

✓ Trailer loaded safely and within specifications

✓ Final walk-around inspection completed

Understanding Your McHitch Coupler

Before operating your McHitch coupling system, it is important to understand how the coupler functions and the purpose of each major component. A basic understanding of the coupling system will assist with safe operation, routine inspections, troubleshooting, and maintenance.

McHitch couplers are designed to provide a secure mechanical connection between the tow vehicle and trailer while allowing a high degree of articulation. This articulation enables the tow vehicle and trailer to move independently when travelling over uneven terrain, reducing stresses throughout the towing system.

Both the Drop-On and Automatic Coupler are built around the same proven universal-joint articulation system and share many common components. The primary difference between the two designs is the method used to connect the trailer to the tow vehicle.

McHitch Articulation System

At the heart of every McHitch coupler is a universal-joint assembly that allows movement in multiple directions simultaneously.



Unlike conventional trailer couplings that rely on a tow ball, the McHitch system allows articulation through:

Pitch

Movement up and down between the tow vehicle and trailer.

Examples include:

- Climbing a steep incline.
- Descending a steep track.
- Crossing spoon drains.
- Traversing erosion mounds.

Roll

Side-to-side movement between the tow vehicle and trailer.

Examples include:

- Off-camber terrain.
- Deep wheel ruts.
- Uneven campsites.
- Side slopes.

Yaw

Horizontal turning movement between the tow vehicle and trailer.

Examples include:

- Cornering.
- Reversing.
- Tight manoeuvring.
- Parking.

The combination of these movements allows the tow vehicle and trailer to articulate independently while remaining securely connected.

Shared Coupler Components

Although the connection systems differ, both McHitch couplers contain several common components.

Coupler Body

The coupler body forms the main structure of the coupling assembly.

It houses the articulation system and connection mechanism while providing the mounting interface between the trailer drawbar and the coupling.

The coupler body is manufactured from heavy-duty steel and designed to withstand the loads encountered during towing operations.



Universal Joint

The universal joint provides the articulation that McHitch couplers are known for.

Its purpose is to allow movement in multiple directions while maintaining a secure connection between the trailer and tow vehicle.

The universal joint is a serviceable component and should be inspected regularly for wear, damage, binding, excessive movement, or insufficient lubrication.

Main Shaft

The main shaft runs through the centre of the coupling assembly and supports the articulating components.

The shaft rotates inside replaceable nylon bushes and must be correctly adjusted to eliminate free play while maintaining smooth movement.

A properly adjusted shaft should:

- Rotate freely.
- Have no binding.
- Have no noticeable vertical movement.
- Have no noticeable side movement.

If excessive movement develops, adjustment or service may be required.

Nylon Bushes

Nylon bushes support the main shaft and provide smooth rotational movement within the coupler body.

These bushes are considered normal wear items and should be inspected periodically.

Over time, wear may occur due to:

- High usage.
- Dust contamination.
- Lack of maintenance.
- Heavy towing conditions.
- General age and service life.

Worn bushes may result in looseness, rattling, or excessive movement within the coupling assembly.

Secondary Locking System

Both McHitch coupler designs utilise a secondary locking system consisting of a locking pin and retaining clip.

The purpose of the secondary locking system is to:

- Provide an additional level of security.



- Prevent accidental disengagement.
- Assist in preventing unauthorised removal.

The secondary locking system must always be installed before towing.

McHitch Drop-On Coupler

Overview

The McHitch Drop-On Coupler uses a vertical connection method.

A hardened tow pin is mounted to the tow vehicle, and the coupler is lowered directly onto the pin before being mechanically secured using a rotating locking head.

This design combines simplicity, strength, and ease of operation while retaining the full articulation offered by the McHitch system.

How the Drop-On Coupler Works

When connecting the trailer:

1. The coupler is positioned above the vehicle's tow pin.
2. The drawbar is lowered using the jockey wheel.
3. The coupler body locates onto the tow pin.
4. The rotating locking head is tightened to clamp securely onto the pin.
5. A secondary locking pin and retaining clip are installed.

Once connected, the coupling remains securely attached while allowing full articulation through the universal-joint assembly.

Main Components

The McHitch Drop-On Coupler consists of:

- Coupler body.
- Universal joint.
- Main shaft.
- Nylon bushes.
- Rotating locking head.
- Tow pin.
- Locking pin.
- Retaining clip (R-clip).
- Security lock (where fitted).

Each component plays an important role in maintaining a safe and secure connection.



Advantages of the Drop-On Coupler

The Drop-On Coupler offers several benefits:

- Simple connection procedure.
- Positive mechanical connection.
- Full off-road articulation.
- Minimal moving parts.
- Easy visual inspection.
- Robust construction.
- Straightforward maintenance requirements.

The Drop-On Coupler is particularly well suited to users who prefer a traditional vertical hitching process combined with exceptional articulation capability.

McHitch Automatic Coupler

Overview

The McHitch Automatic Coupler utilises a horizontal engagement system designed to simplify the hitching process.

Rather than lowering the trailer onto a tow pin, the towing vehicle is reversed until the receiver slides over the tapered engagement shaft mounted to the trailer.

As the receiver engages the shaft, the locking mechanism automatically operates and secures the connection.

A secondary locking pin and retaining clip are then installed before towing.

How the Automatic Coupler Works

The Automatic Coupler consists of two primary components:

Vehicle Side

A square receiver mounted to the tow tongue or approved towing attachment.

Trailer Side

A tapered engagement shaft incorporated into the coupler assembly.

During coupling:

1. The receiver is aligned with the engagement shaft.
2. The vehicle is reversed slowly.
3. The receiver slides onto the tapered shaft.



4. The locking handle activates automatically.
5. The coupling seats fully.
6. The secondary locking pin and retaining clip are installed.

This system enables fast, repeatable hitching while maintaining the articulation and strength associated with the McHitch design.

Main Components

The McHitch Automatic Coupler consists of:

- Coupler body.
- Universal joint.
- Main shaft.
- Nylon bushes.
- Tapered engagement shaft.
- Receiver assembly.
- Locking handle.
- Locking mechanism.
- Locking pin.
- Retaining clip (R-clip).

- Security lock (where fitted).

Each component should be inspected regularly to ensure correct operation and safe towing.

Automatic Locking Mechanism

The Automatic Coupler incorporates a self-engaging locking mechanism.

When the receiver moves onto the tapered engagement shaft, the locking handle automatically lifts and engages the locking system.

This allows the coupling to lock during the hitching process without requiring manual operation of the handle.

The locking handle should always be visually inspected after connection to confirm it has fully engaged before installing the secondary locking pin.

Secondary Locking Pin

Although the Automatic Coupler incorporates a primary locking mechanism, the secondary locking pin remains a critical safety component.

The locking pin:

- Provides an additional level of security.
- Prevents accidental disengagement.
- Helps protect against unauthorised removal.



The locking pin and retaining clip must always be fitted before towing.

Auto Coupler Interlock Mechanism

The Automatic Coupler incorporates an interlock mechanism that retains the handle in the raised position during the unhitching process.

This feature assists with disconnection and helps prevent unintended handle movement while uncoupling.

If the locking handle is accidentally raised while the coupling remains engaged, do not attempt to force the handle back down.

The coupling should be disconnected normally, or the retaining pin released before lowering the handle.

Forcing the mechanism may cause damage to coupling components.

Understanding Wear and Movement

A small amount of movement is normal within any coupling system.

However, excessive movement may indicate:

- Worn nylon bushes.
- Loose shaft adjustment.
- Universal-joint wear.
- Worn locking components.

- Poor maintenance.
- Component damage.

Owners should familiarise themselves with the normal feel and operation of their coupling system. Changes in movement, unusual noises, rattles, binding, or difficulty operating the coupler should be investigated as soon as possible.

Serviceable Components

Many McHitch components are designed to be inspected, adjusted, and serviced throughout the life of the product.

Serviceable components include:

- Nylon bushes.
- Main shaft adjustment hardware.
- Universal joint assembly.
- Locking pins.
- Retaining clips.
- Tow pins.
- Receivers.
- Locking mechanisms.



Routine inspection and maintenance of these components will help ensure safe operation and maximise the service life of the coupling system.

In the following section, you will learn the correct procedures for hitching, unhitching, and performing pre-tow safety checks on both the McHitch Drop-On and McHitch Automatic Coupler.

Hitching and Unhitching Procedures

Correct hitching and unhitching procedures are essential for safe towing. Always take your time when coupling or uncoupling a trailer and perform all required safety checks before towing.

Where possible, hitch and unhitch on firm, level ground. Uneven terrain may place additional loads on the coupling system and can make connection or disconnection more difficult.

Before beginning any hitching or unhitching procedure:

- Apply the tow vehicle parking brake.
- Place the transmission in Park or in gear for manual transmissions.
- Chock the trailer wheels.
- Ensure the jockey wheel is supporting the trailer correctly.
- Keep bystanders clear of the working area.



McHitch Drop-On Coupler

Before Connecting

Before attempting to connect the trailer:

- Inspect the coupler for signs of wear or damage.
- Ensure the tow pin is secure and free from excessive wear.
- Check that the locking pin and R-clip are available.
- Confirm all coupling components are clean and free from excessive dirt, mud, or debris.
- Ensure the trailer and vehicle are aligned as closely as possible.

Connecting the Drop-On Coupler

The Drop-On Coupler is designed to locate onto the vehicle-mounted tow pin using a simple vertical engagement process.

Step 1 – Position the Trailer

Reverse the tow vehicle or move the trailer until the coupler is positioned slightly forward of the tow pin.

For easiest engagement, the coupler head should be angled approximately 45 degrees downward toward the tow pin.

Step 2 – Lower the Coupler

Using the jockey wheel, slowly lower the drawbar.

As the coupler approaches the tow pin, the coupling head will begin to self-locate onto the pin.

Continue lowering until the coupling is fully seated.

Step 3 – Confirm Full Engagement

Visually inspect the coupler to ensure it has dropped completely onto the tow pin.

In some situations, particularly on uneven terrain, slight misalignment may prevent the coupling from fully seating.

If required:

- Gently move the drawbar.
- Slightly adjust the jockey wheel height.
- Reposition the vehicle or trailer.

Do not proceed until the coupling is fully seated.

Step 4 – Tighten the Coupler Head

Rotate the coupling head clockwise until it clamps firmly onto the tow pin.

The coupling should feel secure and should not lift from the tow pin.



Do not overtighten.

Step 5 – Install the Locking Pin

Insert the locking pin through the front of the coupler.

Fit the R-clip through the locking pin.

If a security lock is fitted, install it in accordance with its instructions.

Pre-Tow Safety Check – Drop-On Coupler

Before towing, confirm the following:

- ✓ Coupler fully seated on the tow pin
- ✓ Coupler head securely tightened
- ✓ Locking pin installed
- ✓ R-clip fitted correctly
- ✓ Security lock fitted (if applicable)
- ✓ Safety chains connected
- ✓ Electrical plug connected
- ✓ Breakaway cable connected (where fitted)
- ✓ Final visual inspection completed

DO NOT TOW unless the coupler is fully seated, tightened, and secured with the locking pin and retaining clip.

Disconnecting the Drop-On Coupler

Step 1 – Secure the Trailer

Park on firm ground where possible.

Apply the vehicle handbrake and chock the trailer wheels.

Step 2 – Support the Trailer

Lower the jockey wheel until it firmly supports the trailer drawbar.

Continue raising slightly until any load is removed from the coupling.

Step 3 – Remove Locking Devices

Remove the security lock (if fitted).

Remove the R-clip.

Remove the locking pin.

Step 4 – Release the Coupler Head

Rotate the coupler head anti-clockwise until it is fully released from the tow pin.

Step 5 – Raise the Drawbar



Use the jockey wheel to raise the coupling clear of the tow pin.

Move the tow vehicle away only when adequate clearance exists.

McHitch Automatic Coupler

Understanding the Automatic Coupler

The McHitch Automatic Coupler uses a horizontal engagement system consisting of:

- A vehicle-mounted receiver.
- A trailer-mounted tapered engagement shaft.
- An automatic locking mechanism.
- A secondary locking pin.

Unlike a traditional vertical coupler, the Automatic Coupler is connected by reversing the receiver directly onto the engagement shaft.

Before Connecting

Before hitching the trailer:

- Inspect the receiver.
- Inspect the engagement shaft.
- Ensure the locking mechanism is operating freely.

- Confirm the locking pin and R-clip are available.
- Ensure all engagement surfaces are clean.
- Confirm the receiver handle is in the DOWN position.

For easier hitching, establish the correct coupling height and use the same jockey wheel height each time wherever practical.

Many owners find it useful to place a reference mark on the jockey wheel shaft once the ideal hitching height has been established.

Connecting the Automatic Coupler

Step 1 – Align Vehicle and Trailer

Position the tow vehicle so the receiver is aligned with the tapered engagement shaft.

As with any coupling system, accurate alignment will make connection easier.

Step 2 – Check Coupling Height

Adjust the jockey wheel so the engagement shaft is level with the receiver.

Proper height alignment is essential for smooth operation.

Step 3 – Reverse Slowly

Reverse the vehicle slowly toward the trailer.



As the receiver contacts the tapered shaft, it will slide onto the shaft and operate the locking mechanism.

Step 4 – Allow Automatic Engagement

As the receiver moves fully onto the shaft, the locking handle will automatically lift and lock into position.

Continue reversing until the receiver seats firmly against the coupling body.

Step 5 – Inspect the Locking Handle

Visually inspect the handle.

The handle should be fully engaged in the locked position and should not move freely.

If the locking mechanism has not engaged correctly, do not continue until the issue has been rectified.

Step 6 – Install the Secondary Locking Pin

Insert the locking pin through the aligned holes.

Fit the R-clip.

Install the security lock if applicable.

Post-Connection Safety Check – Automatic Coupler

Before towing, confirm the following:

- ✓ Receiver fully seated
- ✓ Locking handle fully engaged
- ✓ Locking pin installed
- ✓ R-clip installed
- ✓ Security lock fitted (if applicable)
- ✓ Safety chains connected
- ✓ Electrical plug connected
- ✓ Breakaway cable connected (where fitted)
- ✓ Final visual inspection completed

DO NOT TOW unless the locking mechanism is fully engaged and the locking pin and retaining clip are correctly installed.

Disconnecting the Automatic Coupler

On Level Ground

Step 1 – Secure the Vehicle and Trailer

Apply the vehicle handbrake.



Place the transmission in Park or in gear.

Chock the trailer wheels.

Step 2 – Remove Trailer Load from Receiver

Lower the jockey wheel until the trailer's weight is supported independently of the tow vehicle.

Step 3 – Remove Locking Devices

Remove the security lock (if fitted).

Remove the R-clip.

Remove the locking pin.

Step 4 – Raise the Locking Handle

Lift the locking handle fully.

The handle should remain in the raised position.

Step 5 – Separate the Vehicle and Trailer

Drive the tow vehicle slowly forward until the receiver clears the engagement shaft.

Disconnecting on Uneven Ground

Terrain can sometimes place load on the coupling system, making removal of the locking pin difficult.

If this occurs:

1. Support the trailer using the jockey wheel.
2. Slowly raise the jockey wheel.
3. Observe the receiver and coupling.
4. Continue until the load is removed from the locking mechanism.
5. Remove the locking pin.
6. Raise the handle.
7. Move the vehicle forward slowly and carefully.

Never use excessive force on the locking handle or locking pin.

Automatic Coupler Interlock Warning

The Automatic Coupler incorporates an interlock mechanism that is designed to retain the handle in the raised position during uncoupling.

If the handle is accidentally lifted while the coupling remains engaged:

Do not force the handle back down.



Instead:

- Disconnect the trailer normally, or
- Release the retaining mechanism before lowering the handle.

Forcing the handle may damage the locking components and affect future operation.

Hitching Tips

The following practices can help make coupling easier and reduce component wear:

- Hitch and unhitch on level ground whenever possible.
- Keep receiver and engagement surfaces clean.
- Reverse slowly during connection.
- Use a reversing camera where available.
- Establish and mark the ideal jockey wheel height for repeatable hitching.
- Avoid forcing components together.
- Stop and realign if excessive resistance is encountered.

Operation and Towing

Understanding how your McHitch coupler behaves during normal towing conditions will help maximise performance, reduce component wear, and ensure safe operation both on and off the road.

Although McHitch couplers are designed to provide exceptional articulation and durability, safe towing practices remain the responsibility of the vehicle operator.

First Trip Recommendations

If this is your first experience using a McHitch coupler, take time to become familiar with its operation before undertaking extended travel or challenging off-road conditions.

Before your first trip:

- Read this manual completely.
- Practice hitching and unhitching several times.
- Familiarise yourself with all locking components.
- Inspect the coupling after your first few hours of towing.
- Recheck all mounting hardware after initial use.
- Become familiar with the normal feel and movement of the articulation system.



Understanding what is normal operation will make it easier to identify potential issues during future inspections.

Understanding Normal Coupler Movement

McHitch couplers are designed to articulate freely.

As a result, some movement between the trailer and tow vehicle is normal and should not be mistaken for wear or a fault.

During operation you may observe:

- Rotational movement through the universal joint.
- Pitch movement during inclines and descents.
- Roll movement on uneven terrain.
- Minor articulation noises.
- Natural suspension and chassis movement.

These characteristics are normal and are part of the coupler's design.

Any sudden change in noise, looseness, operation, or towing behaviour should be investigated.

On-Road Towing

McHitch couplers are suitable for highway, sealed road, and general towing applications.

When towing on sealed roads:

- Maintain safe following distances.
- Allow increased braking distances.
- Observe all applicable speed limits.
- Load the trailer correctly.
- Avoid sudden steering inputs.
- Perform regular walk-around inspections during long journeys.

Normal road operation places less demand on the coupler than severe off-road conditions, however routine inspections should still be carried out before every trip.

Off-Road Towing

One of the key advantages of a McHitch coupler is its ability to accommodate significant articulation between the tow vehicle and trailer.

When travelling off road:



- Reduce speed to suit terrain conditions.
- Avoid sudden impacts where possible.
- Approach washouts and erosion channels slowly.
- Exercise caution on steep climbs and descents.
- Inspect the coupling after severe impacts.
- Check for loose components during rest breaks.
- Remove accumulated mud or debris when practical.

Although the coupler is designed for demanding conditions, excessive speed over rough terrain may increase wear on all vehicle and trailer components.

Corrugated Roads

Extended travel on corrugated roads can place significant loads on both the towing vehicle and trailer.

During corrugated-road travel:

- Reduce speed appropriately.
- Stop periodically to inspect the coupling.
- Check all locking pins remain secure.

- Inspect safety chains and shackles.
- Inspect mounting hardware.
- Listen for changes in noise or operation.

Following prolonged corrugated-road travel, a more thorough inspection should be performed before continuing.

Steep Climbs and Descents

The McHitch articulation system allows the vehicle and trailer to move independently when negotiating steep terrain.

When approaching steep climbs or descents:

- Reduce speed before entering the obstacle.
- Maintain smooth throttle inputs.
- Avoid sudden braking.
- Select an appropriate gear.
- Allow the coupler to articulate naturally.

Do not attempt to restrict articulation or modify the coupling's range of movement.



Off-Camber Terrain

When traversing side slopes or uneven terrain, the trailer and vehicle may lean at significantly different angles.

This is a normal operating condition for a McHitch coupler.

When travelling on off-camber terrain:

- Drive cautiously.
- Avoid sudden steering inputs.
- Maintain awareness of trailer position.
- Monitor wheel placement carefully.
- Reduce speed as terrain complexity increases.

The articulation system is specifically designed to allow these movements while maintaining a secure connection.

Reversing

McHitch couplers are designed to allow effective reversing and manoeuvring.

When reversing:

- Proceed slowly.
- Use a spotter where possible.

- Avoid sudden steering changes.
- Monitor clearance around the drawbar and coupling.
- Be particularly aware of jack-knife angles.

Remember that most instances of excessive jack-knifing occur during low-speed reversing manoeuvres.

If operating in a confined area, stop and assess clearances regularly.

Tight Turns

McHitch couplers provide significant articulation, however sufficient clearance must always exist between:

- Tow vehicle.
- Towbar assembly.
- Coupler.
- Drawbar.
- Trailer body.
- Weight distribution equipment.

During tight turns:

- Proceed slowly.



- Monitor clearances carefully.
- Avoid forcing the trailer beyond practical turning limits.
- Stop immediately if contact between components appears likely.

Articulation does not eliminate the need for adequate clearance.

Weight Distribution Systems

If a weight distribution system is fitted, always follow the manufacturer's instructions regarding operation and adjustment.

Some weight distribution systems may reduce available articulation during certain towing conditions.

When operating on rough terrain, steep driveways, creek crossings, washouts, or other situations producing high articulation angles:

- Be aware of possible clearance limitations.
- Inspect the coupling regularly.
- Follow the recommendations provided by the weight distribution system manufacturer.

Always verify adequate clearances before towing.

Water Crossings

Water crossings expose coupling components to moisture, mud, sand, and contaminants that may accelerate wear.

Following any water crossing:

- Inspect the coupling as soon as practical.
- Remove mud, sand, and debris.
- Rinse with fresh water where necessary.
- Dry all components thoroughly.
- Reinspect before continuing.

Additional maintenance may be required following repeated water crossings or prolonged exposure to wet conditions.

Beach and Coastal Use

Salt exposure can accelerate corrosion and increase wear if not properly managed.

Following travel in coastal or beach environments:

- Rinse the coupler with fresh water.
- Remove accumulated sand deposits.
- Dry thoroughly.



- Inspect all metal surfaces.
- Check moving components for signs of contamination.

Extra maintenance may be necessary when operating regularly in coastal environments.

Parking and Storage

When parking a trailer for extended periods:

- Park on stable ground.
- Chock the wheels.
- Support the drawbar correctly.
- Inspect the coupling before storage.
- Remove accumulated dirt and debris.
- Ensure locking components are retained safely.

Where possible, store the trailer in a dry environment protected from prolonged exposure to weather.

Long-Term Storage

If a trailer is to be stored for an extended period:

- Thoroughly clean the coupling.

- Inspect for damage or wear.
- Perform any required maintenance.
- Protect exposed surfaces from corrosion.
- Store locking pins and clips in a secure location.
- Periodically inspect the coupler during storage.

Before returning the trailer to service, complete a full pre-trip inspection in accordance with this manual.

Operating in Harsh Conditions

Harsh operating environments may require more frequent inspections and maintenance.

Examples include:

- Heavy off-road use.
- Corrugated roads.
- Mining and industrial environments.
- Agricultural applications.
- Beach driving.
- Water crossings.



- Dusty conditions.
- High-use commercial applications.

In these situations, inspection intervals should be shortened and maintenance performed more frequently.

Best Practice Towing Checklist

For the best performance and longest service life from your McHitch coupler:

- ✓ Hitch and unhitch carefully.
- ✓ Perform a pre-trip inspection before every journey.
- ✓ Keep coupling components clean.
- ✓ Inspect the coupler after severe off-road use.
- ✓ Check locking mechanisms regularly.
- ✓ Maintain the universal joint and serviceable components.
- ✓ Replace worn parts promptly.
- ✓ Avoid excessive jack-knifing.
- ✓ Drive to the conditions.
- ✓ Stop and inspect whenever something doesn't seem right.

Inspection and Maintenance

Regular inspection and maintenance are essential for the safe operation and long-term reliability of your McHitch coupler.

Like all critical towing components, a coupler is subject to wear through normal use. Exposure to dust, mud, water, corrugations, vibration, and harsh operating environments can accelerate wear and increase the need for routine inspection.

A consistent maintenance program will help identify potential issues before they affect performance and will assist in maximising the service life of the coupling system.

Safety First

Before carrying out any inspection, adjustment, maintenance, or repair work:

- Park on firm, level ground.
- Apply the tow vehicle parking brake.
- Chock the trailer wheels.
- Support the trailer using the jockey wheel.
- Use additional stands where required.
- Wear suitable eye protection.



- Use the correct tools for the task.

Never work beneath an unsupported drawbar or trailer.

Never perform maintenance while the trailer is moving or under load.

Never heat, weld, grind, or modify any coupling component unless specifically approved by McHitch.

Service Intervals

Service intervals should be adjusted according to operating conditions.

Trailers regularly exposed to off-road use, corrugations, beach environments, water crossings, mining applications, or commercial service may require more frequent inspection and maintenance.

Before Every Trip

The following checks should be performed before every journey:

Coupler Assembly

Inspect the coupler for:

- Cracks.
- Impact damage.
- Excessive wear.
- Corrosion.

- Missing components.
- Loose hardware.

Main Shaft and Articulation

Check that:

- The coupler rotates freely.
- No binding is present.
- No excessive vertical movement exists.
- No excessive side movement exists.

Locking Components

Verify that:

- Locking pins are present.
- R-clips are present.
- Components are straight and undamaged.
- Locking mechanisms operate correctly.



Safety Equipment

Inspect:

- Safety chains.
- Safety chain attachment points.
- Shackles.
- Electrical plug.
- Breakaway cable and switch (where fitted).

Engagement Surfaces

Ensure all engagement surfaces are:

- Clean.
- Free from mud.
- Free from sand.
- Free from debris.
- Free from excessive corrosion.

External engagement surfaces should remain clean and dry.

Monthly or Every 1,000 km

More frequent inspections may be required in severe operating conditions.

Carry out the following checks:

General Cleaning

Remove:

- Dust.
- Sand.
- Mud.
- Dirt.
- Foreign material.

Pay particular attention to:

- Locking components.
- Engagement surfaces.
- Universal joint areas.
- Receiver assemblies.
- Tow pins.



Coupler Operation

Confirm:

- Smooth articulation.
- Smooth rotation.
- No abnormal noises.
- No binding.
- No looseness.

Main Shaft

Check for:

- Vertical movement.
- Side-to-side movement.
- Loose adjustment nut.
- Damage to locking hardware.

Nylon Bushes

Inspect for:

- Wear.
- Cracking.
- Ovalisation.
- Excessive clearance.

Universal Joint

Inspect for:

- Excessive movement.
- Dryness.
- Corrosion.
- Damage.
- Binding.

Vehicle-Side Components

For Drop-On Couplers:

- Inspect the tow pin for wear.



- Check that the tow pin remains secure.
- Verify the tow pin remains round and free from deformation.

For Automatic Couplers:

- Inspect the receiver.
- Check for impact damage.
- Check for excessive wear.
- Ensure mounting hardware remains secure.

After Heavy Off-Road Use

Following exposure to:

- Corrugated roads.
- Deep ruts.
- Severe vibration.
- Heavy dust.
- Mud.
- Water crossings.

Perform a thorough inspection of the coupling system before the next trip.

Check:

- All locking components.
- Universal joint operation.
- Main shaft adjustment.
- Bush condition.
- Tow pin or receiver condition.
- Mounting hardware.

Any unusual wear or damage should be addressed immediately.

After Water Crossings

Water crossings can introduce contaminants into moving components and accelerate corrosion.

After any significant water crossing:

1. Rinse contamination from the coupling.
2. Remove all mud and debris.
3. Dry all components thoroughly.
4. Inspect for signs of corrosion.
5. Verify normal operation of all moving parts.

Additional inspection may be required after repeated water crossings.



After Beach or Coastal Use

Salt and sand can accelerate wear and corrosion.

After exposure to beach or coastal environments:

- Rinse thoroughly with fresh water.
- Remove accumulated sand.
- Dry completely.
- Inspect all metal components.
- Check moving assemblies for contamination.
- Inspect all locking components.

Do not allow salt deposits to remain on the coupling system.

Annual Inspection

At least once every 12 months, or more frequently in high-use applications, perform a comprehensive inspection of the entire coupling assembly.

The annual inspection should include:

Coupler Body

Inspect for:

- Cracks.
- Corrosion.
- Deformation.
- Impact damage.

Main Shaft Assembly

Inspect:

- Shaft condition.
- Adjustment.
- Retaining hardware.
- Thread condition.

Nylon Bushes

Inspect for:

- Wear.
- Cracking.
- Ovalisation.
- Excessive clearance.



Replace as required.

Universal Joint

Inspect:

- Overall condition.
- Smooth articulation.
- Lubrication condition.
- Excessive movement.
- Wear.

Locking Components

Inspect:

- Locking pins.
- R-clips.
- Locking handle.
- Interlock mechanism.
- Security lock provisions.

Replace any damaged components.

Mounting Hardware

Check all mounting bolts and hardware for:

- Tightness.
- Corrosion.
- Damage.
- Elongated mounting holes.

Signs That Service May Be Required

Immediate inspection should be carried out if any of the following are observed:

- Excessive rattling.
- Clunking during towing.
- Increased component movement.
- Difficulty hitching or unhitching.
- Difficulty inserting locking pins.
- Binding during articulation.
- Uneven wear patterns.
- Loose adjustment hardware.



- Visible damage.
- Corrosion affecting operation.

Ignoring these symptoms may result in accelerated wear and reduced service life.

Coupler-Specific Inspection Points

Drop-On Coupler

Inspect:

- Rotating head operation.
- Tow pin condition.
- Thread condition.
- Locking pin hole condition.
- Coupler seating surfaces.
- Secondary locking system.

Verify the rotating head tightens smoothly and securely.

Automatic Coupler

Inspect:

- Receiver condition.
- Tapered engagement shaft.
- Locking handle operation.
- Interlock mechanism.
- Locking pin alignment.
- Secondary locking system.

Verify the locking handle engages positively and remains secure when connected.

Maintenance Record

McHitch recommends maintaining a written service record for the coupling system.

Record:

- Inspection dates.
- Maintenance performed.
- Replacement parts fitted.



- Component adjustments.
- Issues identified and corrected.

Maintaining accurate records can assist with preventive maintenance, warranty enquiries, and long-term service planning.

Inspection Summary

Regular inspection is the most effective way to ensure continued safe operation of your McHitch coupler.

As a minimum:

- ✓ Inspect before every trip.
- ✓ Clean after exposure to dust, mud, sand, or water.
- ✓ Check shaft adjustment and bush condition regularly.
- ✓ Service the universal joint at recommended intervals.
- ✓ Replace worn components promptly.
- ✓ Investigate unusual movement, noise, or wear immediately.
- ✓ Perform a comprehensive annual inspection.

Consistent inspection and maintenance procedures will help ensure safe towing performance and maximise the service life of your McHitch coupling system.

Cleaning and Lubrication

Proper cleaning and lubrication play a critical role in maintaining the performance, reliability, and service life of your McHitch coupler.

Trailers are commonly exposed to dirt, dust, sand, water, mud, road grime, salt, and other contaminants that can accelerate wear and affect the operation of moving components if not removed regularly.

Routine cleaning and inspection should form part of every owner's maintenance program, particularly following off-road travel or operation in harsh environments.

General Cleaning

The coupling should be inspected and cleaned regularly to prevent the build-up of abrasive contaminants.

Pay particular attention to:

- Coupler body.
- Locking mechanisms.
- Tow pins.
- Receivers.
- Engagement shafts.



- Universal joints.
- Locking pins and retaining clips.
- Mounting areas.
- Safety chain attachment points.

Accumulated dirt, sand, mud, and debris can affect operation, increase wear, and make inspections more difficult.

Recommended Cleaning Procedure

1. Park the trailer on firm, level ground.
2. Ensure the trailer is stable and safely supported.
3. Remove any loose dirt using a soft brush.
4. Wash external surfaces using clean water.
5. Remove stubborn mud and debris by hand where necessary.
6. Dry all components thoroughly before storage or inspection.

Following cleaning, perform a visual inspection of all coupling components for signs of wear, damage, or corrosion.

Cleaning Products

Suitable cleaning products include:

- Clean water.
- Mild automotive detergents.
- Soft brushes.
- Clean cloths.
- Compressed air (where available).

Avoid using:

- Harsh chemicals.
- Strong acidic cleaners.
- Abrasive cleaning compounds.
- Aggressive solvents that may damage nylon components.
- High-pressure cleaning directly into moving joints and serviceable areas.

Improper cleaning methods may reduce component life and promote premature wear.



Cleaning After Off-Road Use

Following off-road travel, inspect the coupling for:

- Mud accumulation.
- Dust build-up.
- Sand deposits.
- Stone impacts.
- Vegetation or foreign material.

Particular attention should be paid to:

- Universal-joint areas.
- Receiver openings.
- Tow pin surfaces.
- Locking mechanisms.
- Bush locations.

Removing contaminants promptly will reduce wear and assist with future maintenance inspections.

Cleaning After Water Crossings

Water crossings can introduce contaminants into moving components and increase the potential for corrosion.

After water crossings:

- Remove mud deposits.
- Rinse the coupling thoroughly.
- Allow the assembly to dry completely.
- Inspect all moving parts.
- Verify normal operation before continued use.

Where repeated water crossings occur, more frequent inspection and maintenance may be required.

Cleaning After Beach or Coastal Use

Salt, moisture, and sand can significantly accelerate wear and corrosion.

Following exposure to beach or coastal conditions:

- Thoroughly rinse the coupling with fresh water.
- Remove all sand deposits.
- Allow the coupling to dry completely.



- Inspect locking mechanisms and moving components.
- Inspect exposed metal surfaces for signs of corrosion.

Do not allow salt deposits to remain on the coupler for extended periods.

Lubrication Overview

Correct lubrication is important, however excessive or incorrect lubrication can attract dust, sand, and other contaminants that may increase wear.

Not all components of a McHitch coupler require lubrication.

Some components are designed to operate clean and dry, while others require periodic lubrication as part of routine maintenance.

Always follow the lubrication recommendations outlined in this manual.

External Engagement Surfaces

The primary engagement surfaces of both coupling systems should be kept clean and dry.

This includes:

Drop-On Couplers

- Tow pin.
- Coupler seating surfaces.

- Locking pin surfaces.

Automatic Couplers

- Receiver.
- Tapered engagement shaft.
- Locking handle.
- External locking surfaces.

Traditional grease should not be applied to these components.

Grease can attract abrasive contaminants including dust, sand, and road grime, potentially increasing wear and reducing the effectiveness of the coupling system.

Instead, maintain these surfaces in a clean condition and inspect them regularly.

Dry Film Lubricants

Where additional lubrication of engagement surfaces is considered necessary, a dry-film lubricant may be used.

Dry-film lubricants provide lubrication without leaving a wet, sticky surface that attracts contaminants.

Benefits of dry-film lubricants include:



- Reduced dirt build-up.
- Improved corrosion resistance.
- Reduced component wear.
- Cleaner operation in dusty environments.

Always follow the lubricant manufacturer's instructions when applying any product.

Universal Joint Lubrication

The universal joint is the primary moving component within the McHitch articulation system and requires periodic lubrication.

Regular lubrication helps:

- Reduce wear.
- Maintain smooth articulation.
- Reduce corrosion.
- Extend component life.

Lubrication frequency will depend on operating conditions.

As a guide:

- Normal recreational use: inspect and lubricate every 6 to 12 months.
- Heavy off-road use: inspect and lubricate more frequently.
- Commercial applications: inspect and lubricate according to operational demands.

If the universal joint shows signs of dryness, corrosion, squeaking, binding, or increased operating resistance, inspection and lubrication should be performed immediately.

Main Shaft Lubrication

Under normal operating conditions, the main shaft does not require routine external lubrication.

However, if the shaft is removed during servicing or nylon bushes are replaced:

- Apply a light and even coating of grease to the shaft.
- Apply a light coating inside the bush contact surfaces.
- Reassemble the coupling.
- Remove any excess grease.

Only enough lubricant should be used to provide smooth operation.



Excess lubrication serves no benefit and may attract contaminants.

Nylon Bushes

The nylon bushes are designed to operate in conjunction with the main shaft and should be inspected regularly for wear.

During bush replacement:

- Clean all mating surfaces.
- Apply a light coating of grease during assembly.
- Ensure smooth shaft operation following adjustment.

Do not apply excessive grease.

Any excess grease should be wiped away before returning the coupler to service.

Locking Mechanisms

Locking pins, retaining clips, locking handles, and secondary locking components should generally be kept clean and free of contamination.

Routine inspection should focus on:

- Smooth operation.
- Corrosion.
- Wear.

- Damage.
- Correct engagement.

Avoid excessive lubrication of locking mechanisms as this can attract contaminants and interfere with proper operation.

Corrosion Prevention

Although McHitch couplers are manufactured using durable materials and protective finishes, all metal components remain susceptible to corrosion if neglected.

To minimise corrosion:

- Keep the coupling clean.
- Remove mud and salt deposits promptly.
- Inspect coatings regularly.
- Store trailers in a dry location whenever possible.
- Address damaged finishes before corrosion develops.

Early identification and treatment of corrosion can significantly extend service life.

Lubrication and Cleaning Summary

For long service life and reliable operation:



- ✓ Keep engagement surfaces clean and dry.
- ✓ Remove dust, mud, sand, and salt deposits promptly.
- ✓ Lubricate the universal joint at recommended intervals.
- ✓ Apply grease to the main shaft and bush surfaces only during servicing or reassembly.
- ✓ Avoid excessive lubrication.
- ✓ Inspect all moving components regularly.
- ✓ Clean the coupler after harsh environmental exposure.
- ✓ Dry the coupler thoroughly before storage.

A clean and properly maintained coupling system will operate more reliably, wear more slowly, and provide many years of dependable service.

Main Shaft and Nylon Bush Adjustment

The main shaft is a critical component of the McHitch articulation system. It passes through the coupler body and rotates within a set of nylon bushes, allowing smooth articulation while supporting operational loads during towing.

Over time, normal wear, vibration, and extended use may cause the shaft adjustment to loosen or the nylon bushes to wear. If left uncorrected, this can result in excessive movement, unwanted noise, accelerated wear, and reduced coupling performance.

Regular inspection and adjustment will help maintain correct operation and maximise component life.

Understanding the Main Shaft Assembly

The main shaft assembly consists of:

- Main shaft.
- Nylon bushes.
- Retaining washers.
- Adjustment nut.



- Locking grub screw.

These components work together to ensure the coupler rotates freely while eliminating unwanted movement.

When correctly adjusted:

- The coupler rotates smoothly.
- No binding is present.
- No excessive vertical movement exists.
- No excessive side movement exists.
- The coupler remains stable during towing operations.

Recognising Excessive Movement

Some movement within the articulation system is normal.

However, excessive movement may indicate:

- Loose shaft adjustment.
- Worn nylon bushes.
- Damaged components.
- Improper previous adjustment.
- Extended service wear.

Owners should periodically check for looseness as part of their routine inspection program.

Symptoms of Loose Adjustment or Bush Wear

Inspect the coupler if any of the following conditions are observed:

- Noticeable movement when lifting the coupler head by hand.
- Movement when pushing the coupler side to side.
- Rattling noises while towing.
- Clunking during acceleration or braking.
- Increased movement compared with normal operation.
- Inconsistent coupling feel.
- Visible movement of the shaft assembly.

These symptoms do not necessarily indicate component failure but should be investigated promptly.

Inspection Procedure

1. Park the trailer on firm, level ground.
2. Chock the trailer wheels.
3. Support the drawbar using the jockey wheel.



4. Ensure the coupler is unloaded.
5. Grip the coupler head firmly.
6. Lift and lower repeatedly.
7. Push side to side.
8. Observe for free movement.

A properly adjusted coupler should show smooth articulation with minimal free play.

If excessive movement is detected, adjustment may be required.

Main Shaft Adjustment

In many cases, wear-related movement can be corrected by adjusting the main shaft retaining nut.

This should always be performed before assuming bush replacement is required.

Required Tools

- Correct size spanner or socket.
- Allen key suitable for the grub screw.
- Clean cloths.
- Suitable lighting.

Adjustment Procedure

Step 1 – Prepare the Coupler

Ensure the trailer is stable and properly supported.

Clean the adjustment area if necessary.

Locate:

- Main shaft retaining nut.
- Grub screw.
- Associated locking hardware.

These components are generally located at the rear of the coupler assembly.

Step 2 – Loosen the Grub Screw

Using the appropriate Allen key:

- Loosen the grub screw slightly.
- Do not remove it completely.

The grub screw's purpose is to prevent the retaining nut from loosening during operation.



Step 3 – Adjust the Main Nut

Using a suitable socket or spanner:

- Tighten the retaining nut gradually.
- Continuously check shaft rotation.

Continue tightening until:

- Free play is eliminated.
- The coupler rotates smoothly.
- No binding is present.

Avoid making large adjustments at once.

Small adjustments generally produce the best results.

Step 4 – Check Rotation

After adjustment:

- Rotate the coupler through its movement range.
- Confirm smooth operation.
- Confirm articulation remains unrestricted.

The coupler must rotate freely.

If binding occurs, the adjustment is too tight.

Step 5 – Secure the Adjustment

Once satisfactory adjustment has been achieved:

- Tighten the grub screw against the retaining nut.
- Ensure the nut cannot rotate.
- Verify all components remain secure.

The grub screw acts as the locking mechanism and must always be re-tightened after adjustment.

Step 6 – Reinspect Operation

Repeat the movement assessment.

Confirm:

- ✓ No excessive free play.
- ✓ Smooth articulation.
- ✓ No binding.
- ✓ Secure locking hardware.

If these conditions are achieved, normal operation may resume.



Avoid Over-Tightening

Excessive adjustment can be just as detrimental as excessive looseness.

Over-tightening the retaining nut may:

- Restrict articulation.
- Increase operating loads.
- Accelerate nylon bush wear.
- Cause premature component wear.
- Create stiffness during operation.

The correct adjustment is achieved when free play has been removed while retaining smooth movement.

When Adjustment Is Not Enough

Adjustment alone may not always correct excessive movement.

If free play remains after proper adjustment, inspect the nylon bushes for wear.

Bush replacement may be required if:

- Bushes are ovalised.
- Bushes are cracked.

- Bushes are excessively worn.
- Excessive clearance remains after adjustment.
- The shaft cannot be adjusted without binding.

Inspecting Nylon Bushes

The nylon bushes are designed as sacrificial wear components.

Their purpose is to:

- Support the main shaft.
- Maintain alignment.
- Provide smooth operation.
- Minimise wear to major coupling components.

During inspection, check for:

- Cracks.
- Chipping.
- Distortion.
- Ovalisation.
- Excessive looseness.
- Surface degradation.



Any of these conditions may indicate replacement is necessary.

Inspecting the Main Shaft

Whenever the bushes are inspected, the shaft should also be examined.

Check for:

- Wear marks.
- Scoring.
- Corrosion.
- Burrs.
- Surface damage.
- Abnormal wear patterns.

A damaged shaft may accelerate bush wear and should be repaired or replaced as required.

After Bush Replacement

If the main shaft has been removed and bushes replaced:

1. Clean the shaft thoroughly.
2. Clean the coupler bore.

3. Apply a light coating of grease to the shaft and bush contact surfaces.
4. Reassemble the coupling.
5. Adjust the retaining nut.
6. Lock the adjustment using the grub screw.
7. Verify smooth operation.

Once reassembled, the coupler should rotate freely while exhibiting no noticeable free play.

Post-Adjustment Inspection

After any adjustment or bush replacement, perform a final inspection and operational check.

Confirm:

- ✓ Main shaft secure.
- ✓ Grub screw tightened.
- ✓ Smooth articulation.
- ✓ No excessive movement.
- ✓ No abnormal noises.



- ✓ All hardware present and secure.
- ✓ Coupler functions normally throughout its range of movement.

Adjustment Summary

Regular inspection of the main shaft assembly is one of the simplest and most effective ways to maintain the performance of your McHitch coupler.

Remember:

- Small amounts of wear are normal.
- Excessive movement should never be ignored.
- Always adjust before assuming replacement is required.
- Do not over-tighten the retaining nut.
- Replace worn bushes promptly.
- Re-tighten the grub screw after every adjustment.

Correct shaft adjustment will help maintain smooth articulation, quiet operation, and long service life for your McHitch coupling system.

Nylon Bush Inspection and Replacement

The nylon bushes fitted within the McHitch coupler are designed to provide smooth operation of the main shaft while minimising wear to major coupling components.

As the bushes are a serviceable wear item, they will gradually wear through normal use. Environmental conditions, towing frequency, trailer weight, terrain, and maintenance practices can all affect their service life.

Regular inspection of the bushes forms an important part of routine maintenance and will help ensure smooth articulation, correct shaft alignment, and long-term coupler performance.

Understanding the Role of the Bushes

The nylon bushes perform several important functions within the coupler assembly.

They:

- Support the main shaft.
- Maintain shaft alignment.
- Reduce metal-to-metal contact.



- Allow smooth articulation.
- Minimise noise and vibration.
- Protect major coupler components from excessive wear.

Because the bushes are designed to absorb wear, they may require replacement periodically throughout the life of the coupler.

Bush Wear Indicators

Bush wear occurs gradually and is often first noticed as increased movement within the coupling.

Common signs of bush wear include:

- Excessive up-and-down movement.
- Side-to-side movement.
- Rattling during towing.
- Clunking noises over bumps.
- Increased movement at the coupler head.
- Difficulty maintaining adjustment of the main shaft.
- Visible wear during inspection.

If any of these symptoms are present, inspect the bushes before continuing extended use.

Bush Inspection Procedure

Step 1 – Prepare the Trailer

- Park the trailer on firm, level ground.
- Chock the wheels.
- Support the drawbar using the jockey wheel.
- Ensure the coupler is unloaded.

Step 2 – Check for Free Play

Grasp the coupler head firmly and attempt to move it:

- Up and down.
- Side to side.
- Forward and backward.

Observe any movement present within the main shaft assembly.

Step 3 – Check Shaft Adjustment

Before assuming the bushes are worn, verify that the main shaft nut has been correctly adjusted.



A loose adjustment nut may produce symptoms similar to worn bushes.

Step 4 – Inspect Visually

Where visible, inspect the bushes for:

- Cracks.
- Chipping.
- Distortion.
- Uneven wear.
- Excessive clearance.

If the bushes appear damaged or worn beyond acceptable limits, replacement is recommended.

Bush Replacement Overview

Bush replacement is a straightforward service procedure that can restore proper coupler operation and eliminate excessive movement caused by wear.

If you are unsure about any aspect of the procedure, seek assistance from a qualified service technician.

Tools and Materials Required

- Correct size spanners or sockets.
- Allen key for grub screw removal.
- Soft-faced hammer (if required).
- Clean rags.
- Suitable cleaning solvent.
- Replacement McHitch nylon bushes.
- High-quality grease for reassembly.

Bush Removal Procedure

Step 1 – Clean the Area

Before disassembly:

- Remove mud.
- Remove dirt.
- Remove grease build-up.
- Clean exposed threads.

A clean working area helps prevent contamination during reassembly.



Step 2 – Remove the Grub Screw

Locate the grub screw fitted to the main shaft retaining nut.

Using the correct Allen key:

- Loosen the grub screw.
- Remove if required.

Retain all components for reassembly.

Step 3 – Remove the Retaining Nut

Remove the main shaft retaining nut along with any associated washers or retainers.

Place components aside in the order they were removed.

Step 4 – Withdraw the Main Shaft

Carefully withdraw the shaft from the coupler body.

Take care not to damage surrounding components during removal.

Step 5 – Remove Bushes

Remove the existing nylon bushes from the coupler body.

Inspect the bushes for wear patterns that may indicate additional issues within the assembly.

Inspection Before Reassembly

Before installing new bushes, inspect all associated components.

Main Shaft

Inspect for:

- Scoring.
- Corrosion.
- Burrs.
- Uneven wear.
- Surface damage.

Minor imperfections should be addressed before reassembly.

A damaged shaft can rapidly wear new bushes.

Coupler Bore

Inspect the coupler body bore for:

- Dirt.
- Corrosion.
- Damage.
- Debris.



Clean thoroughly before bush installation.

Installing New Bushes

Step 1 – Clean Components

Thoroughly clean:

- Coupler bore.
- Main shaft.
- Retaining hardware.

All dirt and contamination should be removed before reassembly.

Step 2 – Lubricate Contact Surfaces

Apply a light, even coating of grease to:

- Bush contact surfaces.
- Main shaft.
- Coupler bore.

Do not apply excessive grease.

Step 3 – Install Bushes

Fit the new bushes into the coupler body.

Confirm they are seated correctly and aligned properly.

Step 4 – Reinstall Main Shaft

Insert the main shaft carefully through the newly installed bushes.

The shaft should move freely without forcing.

Reassembly Procedure

Step 1 – Refit Hardware

Reinstall:

- Washers.
- Retainers.
- Main adjustment nut.

Ensure all components are fitted in their original positions.

Step 2 – Adjust the Main Shaft

Adjust the retaining nut until:

- Free play is eliminated.
- Smooth articulation is maintained.
- No binding occurs.

Refer to the Main Shaft Adjustment section for detailed adjustment procedures.



Step 3 – Lock the Adjustment

Tighten the grub screw against the retaining nut to prevent movement during operation.

Step 4 – Remove Excess Grease

Wipe away any excess grease from external surfaces.

Engagement surfaces must remain clean and dry.

Post-Replacement Checks

After replacing the bushes:

Confirm Smooth Operation

Rotate the coupler through its full range of movement.

Verify:

- Smooth operation.
- No binding.
- No roughness.

Confirm Correct Adjustment

Check for:

- No excessive play.

- No rattles.
- Proper shaft rotation.

Confirm Hardware Security

Inspect:

- Retaining nut.
- Grub screw.
- Washers.
- Associated hardware.

All components should be secure before returning the coupler to service.

Bush Service Life

Bush life can vary significantly depending on:

- Trailer weight.
- Distance travelled.
- Road conditions.
- Off-road usage.
- Maintenance practices.
- Environmental exposure.



There is no fixed replacement interval suitable for all applications.

Regular inspections remain the best method of determining serviceability.

When to Replace Bushes

Replace the bushes if:

- ✓ Cracks are visible.
- ✓ Bushes have become ovalised.
- ✓ Excessive movement remains after adjustment.
- ✓ Bushes show significant wear.
- ✓ Bush damage is evident during servicing.
- ✓ Articulation quality has deteriorated.

Prompt replacement of worn bushes will help protect more expensive components and maintain the safe operation of the coupling system.

Inspection and Replacement Summary

The nylon bushes are designed as sacrificial wear components and play a vital role in maintaining correct coupler operation.

Remember:

- Inspect bushes regularly.

- Adjust the shaft before assuming replacement is required.
- Replace bushes showing signs of wear or damage.
- Inspect the shaft whenever bushes are removed.
- Use only suitable replacement components.
- Re-adjust the shaft following installation.
- Verify smooth operation before towing.

Properly maintained bushes contribute significantly to the safety, performance, and service life of your McHitch coupling system.



Universal Joint Inspection and Maintenance

The universal joint is the core component that gives McHitch couplers their exceptional articulation capabilities.

Unlike conventional ball couplings, the McHitch universal-joint design allows the tow vehicle and trailer to move independently while maintaining a secure mechanical connection. Proper maintenance of the universal joint is essential for safe operation, smooth articulation, and long service life.

Regular inspection should form part of every owner's maintenance routine, particularly for trailers operating in harsh environments or undertaking frequent off-road travel.

Understanding the Universal Joint

The universal joint allows movement through multiple axes simultaneously.

This enables the coupler to accommodate:

- Pitch movement during climbs and descents.
- Roll movement on uneven terrain.
- Yaw movement during turning and manoeuvring.

These combined movements allow the vehicle and trailer to articulate independently while remaining securely connected.

Without proper maintenance, wear within the universal joint can lead to increased movement, reduced towing performance, and accelerated wear of associated components.

Routine Inspection

The universal joint should be inspected regularly for signs of wear, damage, contamination, or insufficient lubrication.

Inspections should be carried out:

- Before major trips.
- During routine maintenance.
- After severe off-road use.
- Following water crossings.
- Following beach or coastal exposure.
- Whenever abnormal movement or noise is detected.



Visual Inspection

During inspection, examine the universal joint for:

- Excessive corrosion.
- Physical damage.
- Impact marks.
- Missing components.
- Loose hardware.
- Oil or grease contamination collecting excessive dirt.
- Cracked or damaged dust caps.
- Signs of binding.

Any abnormality should be investigated before continuing operation.

Operational Inspection

Manually articulate the coupler through its full range of movement.

The universal joint should:

- Move smoothly.
- Rotate freely.
- Operate without binding.

- Return naturally through its articulation range.

Minor resistance from seals or grease is normal.

Binding, stiffness, roughness, or uneven movement may indicate servicing is required.

Checking for Excessive Movement

Some movement within the universal joint assembly is normal.

However, excessive movement may indicate wear.

Grasp the coupler body and attempt to move the universal joint by hand while observing for:

- Excessive looseness.
- Free play.
- Knocking.
- Clunking.
- Abnormal movement.

If movement exceeds normal operating characteristics, further inspection should be performed.



Universal Joint Lubrication

Regular lubrication is essential for protecting internal bearing surfaces and ensuring smooth operation.

Depending on operating conditions, the universal joint should be lubricated:

- Every 6-12 months under normal recreational use.
- More frequently in severe off-road conditions.
- More frequently following water crossings.
- More frequently in commercial applications.

Heavy dust, mud, sand, and water exposure may require significantly shorter service intervals.

Lubrication Procedure

Step 1 – Clean the Assembly

Before lubricating:

- Remove dirt.
- Remove mud.
- Remove sand.
- Remove old grease from external surfaces.

Cleaning helps prevent contaminants from being introduced into moving components.

Step 2 – Inspect Components

Inspect:

- Dust caps.
- Joint housing.
- Bearing surfaces.
- Service points.

Replace damaged components before lubricating.

Step 3 – Apply Lubrication

Lubricate the universal joint in accordance with the design and servicing requirements of the specific model.

Apply only sufficient lubricant to ensure proper operation.

Excessive lubrication may attract contaminants and should be avoided.

Step 4 – Remove Excess Lubricant

After servicing:

- Wipe away excess lubricant.



- Remove grease build-up.
- Ensure surrounding components remain clean.

Symptoms of Universal Joint Wear

Wear within the universal joint may develop gradually over time.

Common indicators include:

- Increased movement.
- Rattling noises.
- Clunking during towing.
- Uneven articulation.
- Binding.
- Rough movement.
- Difficulty hitching or unhitching.
- Visible wear or corrosion.

If any of these symptoms are observed, the joint should be inspected promptly.

Excessive Slack or Movement

Over time, wear or settling of components may result in noticeable slack within the universal joint assembly.

If excessive movement is present, inspect the joint before continuing use.

Signs of excessive slack may include:

- Noticeable movement when lifting the coupler head.
- Rattling during travel.
- Clunking noises during acceleration or braking.
- Increased movement compared with normal operation.

Dust Cap Adjustment

In some cases, minor slack can be reduced through adjustment of the universal-joint dust caps.

Adjustment Procedure

1. Park the trailer safely on level ground.
2. Support the drawbar appropriately.
3. Inspect the universal joint.
4. Using suitable tools, tighten the dust caps evenly.



5. Recheck articulation after adjustment.
6. Confirm smooth operation throughout the full range of movement.

Adjustments should be performed gradually.

Avoid Over-Tightening

While minor adjustment may reduce unwanted slack, excessive tightening can cause additional issues.

Over-tightening may:

- Restrict articulation.
- Increase operating loads.
- Accelerate wear.
- Cause binding.
- Reduce coupler performance.

The universal joint should always articulate freely after adjustment.

If smooth movement cannot be maintained, further inspection may be required.

When Adjustment Is Not Enough

Adjustment is not a substitute for component replacement.

If excessive movement remains after adjustment, inspect the universal joint for:

- Bearing wear.
- Cap wear.
- Joint damage.
- Corrosion.
- Impact damage.

Worn components should be replaced before further operation.

Replacement Considerations

Universal joints are serviceable components and may eventually require replacement due to normal wear.

Replacement may be necessary when:

- Excessive free play exists.
- Adjustment is no longer effective.
- Components show visible damage.



- Corrosion has affected operation.
- Smooth articulation cannot be achieved.

Only suitable replacement components should be used.

After Servicing

Following any adjustment, lubrication, or replacement work:

Confirm:

- ✓ Smooth articulation.
- ✓ No binding.
- ✓ No abnormal movement.
- ✓ Hardware secure.
- ✓ Dust caps secure.
- ✓ Full articulation range maintained.
- ✓ No unusual noises during operation.

A short test tow should be performed where practical before undertaking extended travel.

Harsh Operating Conditions

Trailers operating in the following environments may require more frequent universal-joint inspection and maintenance:

- Corrugated roads.
- Off-road tracks.
- Mining operations.
- Agricultural applications.
- Commercial fleets.
- Beach driving.
- Water crossings.
- Dusty environments.

Severe operating conditions can dramatically shorten service intervals and should be considered when planning maintenance schedules.

Universal Joint Service Summary

The universal joint is one of the most important components within your McHitch coupling system.

To maximise performance and service life:

- ✓ Inspect regularly.



- ✓ Lubricate at appropriate intervals.
- ✓ Clean after exposure to harsh conditions.
- ✓ Check for excessive movement.
- ✓ Adjust dust caps where appropriate.
- ✓ Avoid over-tightening.
- ✓ Replace worn components promptly.
- ✓ Investigate abnormal noises or movement immediately.

A well-maintained universal joint will ensure smooth articulation, reliable towing performance, and long-term durability of your McHitch coupling system.

Troubleshooting

This section provides guidance for identifying and resolving common issues that may be encountered during the operation of a McHitch coupling system.

Many issues can be resolved through routine inspection, cleaning, adjustment, or maintenance. If a problem cannot be corrected using the procedures outlined in this manual, discontinue use and have the coupling inspected by a qualified service technician.

If any component appears damaged, cracked, bent, excessively worn, or unsafe, do not tow the trailer until repairs have been completed.

Coupler Difficult to Connect

Possible Causes

- Tow vehicle and trailer are not correctly aligned.
- Incorrect hitching height.
- Dirt, mud, or debris on engagement surfaces.
- Excessive wear of coupling components.
- Coupling components damaged.
- Trailer or vehicle under load on uneven ground.



Corrective Actions

- Re-align the vehicle and trailer.
- Adjust the jockey wheel height.
- Clean all engagement surfaces.
- Inspect for damage or excessive wear.
- Reposition onto firmer or more level ground where possible.
- Retry the connection using slow, controlled movements.

Never use excessive force to connect a McHitch coupler.

Drop-On Coupler Will Not Fully Seat

Possible Causes

- Tow pin and coupler are misaligned.
- Coupler head positioned incorrectly.
- Vehicle or trailer at an uneven angle.
- Contamination on tow pin or seating surfaces.
- Damaged tow pin.

Corrective Actions

- Raise the trailer slightly and reposition.

- Check tow pin alignment.
- Clean the tow pin and coupling surfaces.
- Verify the tow pin is not bent or damaged.
- Lower the coupler slowly and allow it to self-locate.

Do not tighten the coupling head to force a misaligned connection.

Automatic Coupler Will Not Lock

Possible Causes

- Receiver handle not in the correct position before hitching.
- Coupler height incorrect.
- Receiver not fully seated.
- Debris on engagement surfaces.
- Locking mechanism contaminated or damaged.

Corrective Actions

- Confirm the handle starts in the correct position.
- Check receiver and shaft alignment.
- Adjust jockey wheel height as required.
- Clean the receiver and engagement shaft.



- Inspect the locking mechanism for contamination or damage.

The locking handle must engage fully before towing.

Locking Pin Difficult to Insert

Possible Causes

- Coupler not fully engaged.
- Misalignment between locking holes.
- Load remaining on the coupling.
- Dirt or corrosion in locking holes.
- Bent locking pin.

Corrective Actions

- Verify full engagement of the coupling.
- Relieve load using the jockey wheel.
- Re-check alignment.
- Clean locking holes.
- Replace damaged locking pins.

Never hammer a locking pin into position.

Coupler Difficult to Disconnect

Possible Causes

- Trailer load still applied to coupling.
- Uneven ground placing tension on components.
- Binding caused by articulation angle.
- Dirt or corrosion on engagement surfaces.

Corrective Actions

- Support the trailer using the jockey wheel.
- Adjust jockey wheel height until load is removed.
- Straighten the vehicle and trailer where possible.
- Clean contaminated surfaces.
- Attempt disconnection again carefully.

Do not force the locking handle, rotating head, or locking pin.

Automatic Coupler Handle Will Not Move

Possible Causes

- Coupler remains under load.
- Interlock mechanism engaged.



- Dirt or debris within locking mechanism.
- Component damage.

Corrective Actions

- Remove load from the coupling.
- Confirm correct unhitching procedure is being followed.
- Inspect and clean the mechanism.
- Verify no damage is present.

If the handle has been accidentally raised while still coupled, follow the procedure outlined in this manual for releasing the interlock mechanism.

Excessive Movement in Coupler

Possible Causes

- Main shaft adjustment has loosened.
- Nylon bushes worn.
- Universal joint wear.
- Loose hardware.
- General service wear.

Corrective Actions

- Inspect shaft adjustment.
- Tighten and secure the retaining nut as required.
- Inspect nylon bushes.
- Inspect the universal joint.
- Replace worn components.

Excessive movement should always be investigated promptly.

Rattling or Clunking During Towing

Possible Causes

- Main shaft adjustment loose.
- Bush wear.
- Universal joint wear.
- Loose locking components.
- Worn tow pin or receiver components.

Corrective Actions

- Inspect all coupling components.
- Check shaft adjustment.



- Inspect bush condition.
- Verify locking components are secure.
- Replace worn parts as required.

While some operational noise may occur during articulation, new or increasing noise should be investigated.

Coupler Feels Tight or Stiff

Possible Causes

- Over-tightened shaft adjustment.
- Lack of lubrication at service points.
- Corrosion.
- Foreign material within the articulation system.
- Universal joint wear.

Corrective Actions

- Inspect shaft adjustment.
- Check maintenance history.
- Clean and inspect the coupler.
- Lubricate service points as required.

- Inspect the universal joint.

Articulation should always remain smooth and unrestricted.

Uneven Wear of Bushes

Possible Causes

- Damaged shaft.
- Incorrect adjustment.
- Severe operating conditions.
- Contamination within the assembly.
- Lack of maintenance.

Corrective Actions

- Inspect shaft condition.
- Replace worn bushes.
- Check adjustment procedures.
- Clean all components thoroughly.
- Reassemble and adjust correctly.

Investigate the cause of wear before installing replacement bushes.



Corrosion on Coupling Components

Possible Causes

- Saltwater exposure.
- Coastal environments.
- Water crossings.
- Inadequate cleaning.
- Long-term outdoor storage.

Corrective Actions

- Clean affected components thoroughly.
- Remove contamination.
- Inspect for damage.
- Replace severely corroded components.
- Increase inspection frequency.

Corrosion that affects strength, operation, or safety should not be ignored.

Difficulty Maintaining Shaft Adjustment

Possible Causes

- Worn nyloc hardware.
- Grub screw not locked correctly.
- Excessive bush wear.
- Heavy vibration.
- Thread damage.

Corrective Actions

- Inspect locking hardware.
- Re-adjust and lock correctly.
- Inspect bush condition.
- Inspect threads for damage.
- Replace worn components.

The adjustment should remain secure between normal service intervals.



Universal Joint Has Excessive Slack **Possible Causes**

- Normal wear.
- Dust cap adjustment required.
- Internal component wear.
- Lack of lubrication.
- High service hours.

Corrective Actions

- Inspect the universal joint.
- Check dust cap adjustment.
- Lubricate as required.
- Replace worn components if necessary.

Do not continue using a universal joint exhibiting significant wear or abnormal movement.

Technical Specifications

The specifications contained within this section provide general information relating to McHitch coupling systems. Specifications may vary between models and product generations. Always refer to the identification markings and documentation supplied with your specific coupling for exact capacity ratings and product details.

Coupler Design

McHitch couplers utilise a universal-joint articulation system designed to provide a secure mechanical connection between the tow vehicle and trailer while allowing movement across multiple planes.

The articulation system allows:

- Pitch movement.
- Roll movement.
- Yaw movement.

This design enables the tow vehicle and trailer to move independently when operating on uneven terrain while maintaining a positive connection between the two.



Articulation

When correctly installed and operated, McHitch couplers provide up to 90 degrees of articulation in all directions.

This articulation allows for:

- Off-road operation.
- Uneven terrain traversal.
- Steep climbs and descents.
- Side-slope operation.
- Tight manoeuvring.
- Reversing.

Actual articulation may be limited by factors external to the coupler, including vehicle design, trailer design, drawbar geometry, towbar configuration, and attached accessories.

Serviceable Components

The McHitch coupling system incorporates serviceable components designed to be inspected and maintained throughout the life of the product.

Serviceable components may include:

- Nylon bushes.
- Universal joints.
- Locking pins.
- R-clips.
- Main shaft hardware.
- Security lock components.
- Receiver assemblies.
- Tow pins.

Service intervals will vary according to operating conditions and usage.



Product Identification

Each coupler should be identified using the product markings or identification information supplied with the unit.

When seeking technical support or replacement parts, record:

- Coupler model.
- Product rating.
- Date of purchase.
- Serial number (where applicable).

Providing accurate product information will assist with technical enquiries and parts identification.

Modifications

McHitch couplers are engineered as complete systems.

Modification of the coupling assembly may:

- Affect operation.
- Reduce strength.
- Alter articulation characteristics.
- Affect compliance requirements.

- Void warranty coverage.

Do not modify any component unless specifically authorised by McHitch.

Specification Changes

McHitch reserves the right to improve products, update designs, modify specifications, or introduce product changes without prior notice.

Current specifications should always be verified at the time of purchase or replacement.



Warranty Information

McHitch products are manufactured to high standards and are thoroughly inspected prior to leaving the factory.

McHitch warrants its products against defects in materials and workmanship for the period specified by the applicable warranty supplied with the product at the time of purchase.

This warranty applies only to products:

- Used as intended.
- Installed correctly.
- Operated in accordance with this manual.
- Maintained appropriately.
- Not modified or altered without approval.

Warranty Does Not Cover

The warranty does not cover damage resulting from:

- Misuse.
- Abuse.
- Neglect.

- Improper installation.
- Accidents.
- Corrosion caused by environmental exposure.
- Lack of maintenance.
- Impact damage.
- Overloading.
- Unauthorised modifications.
- Normal wear and tear.

Normal service items are generally considered maintenance components and may require periodic replacement during the life of the product.

These may include:

- Nylon bushes.
- Universal joints.
- Locking pins.
- R-clips.
- Security lock components.
- General fastening hardware.



Warranty Claims

Should you believe a warranty issue exists:

1. Discontinue use of the product if safety may be affected.
2. Record the issue and product details.
3. Contact McHitch or an authorised distributor.
4. Provide proof of purchase where required.
5. Follow any inspection or return procedures provided.

Warranty assessment may require inspection of the product before a determination can be made.

Replacement Parts and Technical Support

For replacement components, servicing information, or technical assistance, contact your authorised McHitch dealer or distributor.

When contacting support, have the following information available:

- Coupler model.
- Trailer details.
Photographs where relevant.
- Description of the issue.

Quick Reference Inspection Checklist

The following checklist is intended as a quick-reference guide and should be used in conjunction with the inspection and maintenance procedures contained within this manual.

Before Every Trip

- ☐ Coupler correctly connected.
- ☐ Locking mechanism fully engaged.
- ☐ Locking pin installed.
- ☐ R-clip installed.
- ☐ Security lock installed (if fitted).
- ☐ Safety chains attached.
- ☐ Safety chain shackles secure.
- ☐ Electrical plug connected.
- ☐ Breakaway cable attached (where fitted).
- ☐ Coupler free from visible damage.
- ☐ No excessive corrosion present.



- ☐ Mounting hardware secure.
- ☐ Coupler articulates freely.
- ☐ No unusual looseness or movement detected.
- ☐ Final walk-around inspection completed.

Monthly Inspection

- ☐ Coupler cleaned.
- ☐ Engagement surfaces inspected.
- ☐ Tow pin or receiver inspected.
- ☐ Locking components inspected.
- ☐ Universal joint inspected.
- ☐ Main shaft inspected.
- ☐ Nylon bushes checked for wear.
- ☐ Mounting hardware checked.
- ☐ Excessive movement not present.
- ☐ Corrosion inspected and addressed.

After Off-Road Use

- ☐ Dust removed.
- ☐ Mud removed.
- ☐ Sand removed.
- ☐ Components cleaned and dried.
- ☐ Locking system inspected.
- ☐ Universal joint inspected.
- ☐ Main shaft inspected.
- ☐ Bushes inspected.
- ☐ Receiver or tow pin inspected.
- ☐ Hardware inspected.

Annual Inspection

- ☐ Complete coupler inspection performed.
- ☐ Nylon bushes inspected.
- ☐ Universal joint inspected.
- ☐ Main shaft adjustment checked.
- ☐ Hardware inspected.



- Locking components inspected.
- Wear items assessed for replacement.
- Corrosion inspection completed.
- Service record updated.

Owner's Final Safety Reminder

Your McHitch coupler is one of the most important safety components on your trailer.

Regular inspection, routine maintenance, correct connection procedures, and responsible towing practices are essential for safe operation.

If any component appears damaged, excessively worn, loose, cracked, bent, or otherwise unserviceable, do not tow the trailer until the issue has been rectified.

Thank you for choosing McHitch.

Safe travels.

Before every journey:

- ✓ Inspect the coupling.
- ✓ Verify all locking devices are installed.
- ✓ Confirm safety chains are attached.
- ✓ Confirm electrical and breakaway connections are secure.
- ✓ Ensure the trailer is safely loaded.
- ✓ Perform a final walk-around inspection.