

Coupler Tool

Owner's Manual

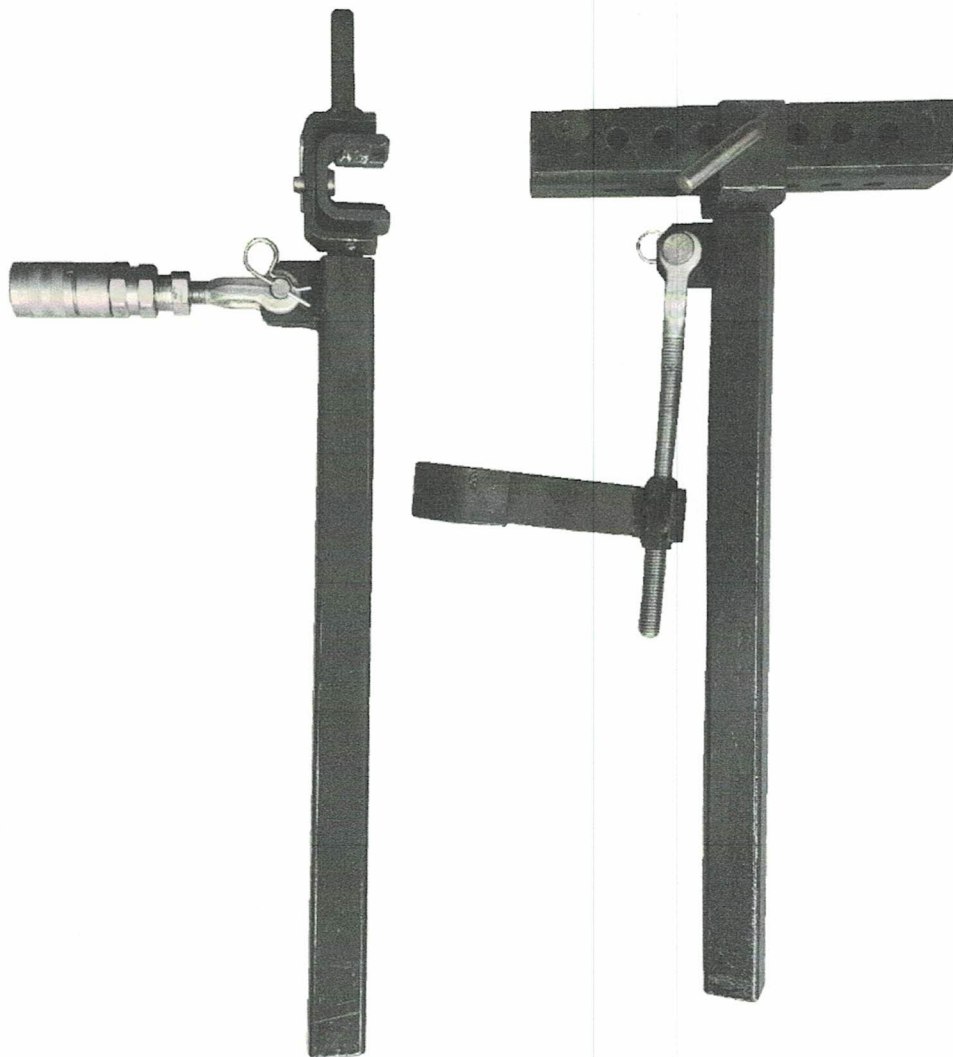
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Patent File # 16/727,318

Safety:

ALWAYS wear the proper approved PPE (Personal Protective Equipment) when using this tool or when working with hydraulic components and equipment.

It is recommended that the user of this tool read, understand and follow all of the instruction within this manual and wear safety glasses or goggles and protective gloves whenever using this tool. Additional PPE may be required in specific application.

ESCAPING FLUID under pressure can cause serious injury.

DO NOT modify this tool for any reason. Modifications to the tool can result in serious injury and will void the warranty.

NEVER use this tool for any other purpose than its intended design and always follow all recommended operational instruction. Failure to do so can result in injury and/or damage to the tool or equipment.

NEVER use the tool if it becomes damaged or worn as this can result in injury and/or damage to the equipment.

ALWAYS inspect the tool and the component being installed prior to the use of the tool for damage or wear. Report, make repairs or replace damaged or worn components prior to use.

KEEP hands and fingers clear of pinch points at the Installation Head and Anchor Pivots.

ALWAYS perform coupler installation slowly and steadily and keep full control over the tool and coupler components during the installation process.

Training Videos

In YouTube search: McDonald Tool Company, LLC

or from the address bar:

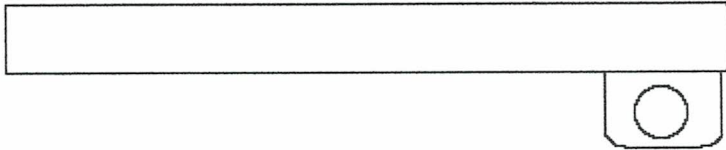
<https://www.youtube.com/watch?v=0wyxfiRKWi4&t=33s>

<https://www.youtube.com/watch?v=PSU0C7D0TKg&t=3s>

<https://www.youtube.com/watch?v=KfDnrEfokol>

Components of the Coupler Tool:

1. Handle:

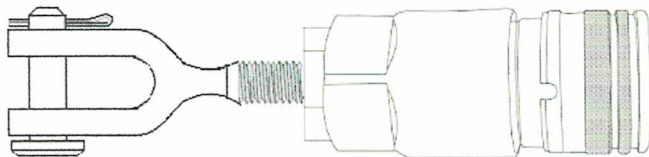


The handle is 18 inches long and provides a pivot point for the tools anchoring attachment.

In the anchor end of the handle is the attaching point for the swiveling head and coupler adapter. It is a 3/4 inch threaded insert in the end of the handle.

2. Anchor Attachments:

Coupler Anchor Attachment / for machines with case drain:

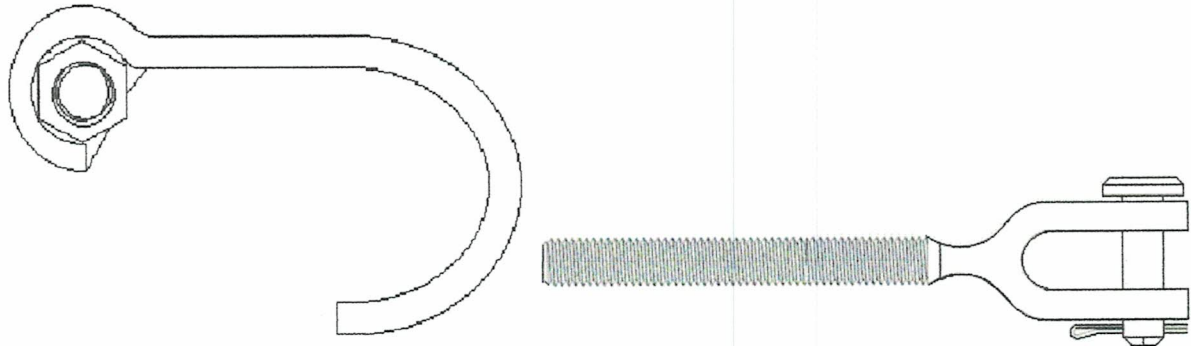


The Coupler Anchor Attachment provides a stable connection between the Tool Handle and the primary equipment that the hydraulic attachment is being installed onto and pins onto either the Handle pivot point or one of the three Angled Swivel Head pivot points.

The 3/8 inch case drain coupler is easily coupled to the case drain connection on the equipment as case drain is always 0 pressure.

It provides approximately 1 inch of adjustment to assist in proper alignment of the coupler to be installed by the Tool.

'J' Hook Anchor Attachment / for machines without case drain:

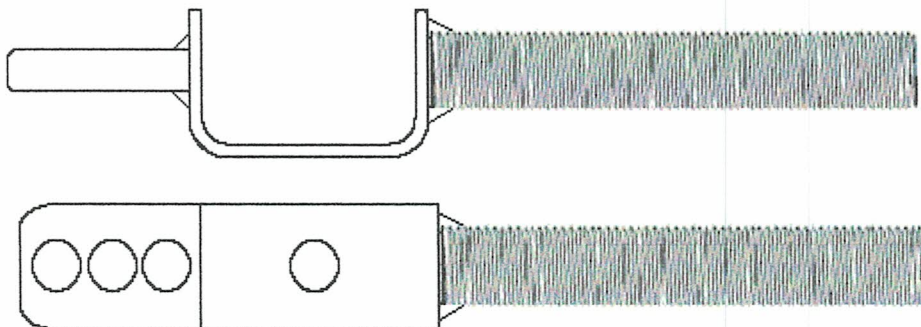


The 'J' Hook Anchor Attachment provides a universal connection between the Tool Handle and the primary equipment that the hydraulic attachment is being installed onto and pins onto either the Handle pivot point or one of the three Angled Swivel Head pivot points via the threaded clevis.

The 'J' Hook is easily hooked behind the primary equipment auxiliary hydraulic coupling bulkhead bracket without a solid connection. This allows for an infinite range of motion to further assist in proper alignment of the attachment coupling being installed.

The 'J' Hook comes with a long enough threaded clevis to allow the operator to adjust the length to grab behind bulkhead brackets as well as auxiliary shut off valves.

3. Angled Swivel Head:



The Angled Swivel Head threads into the threaded insert in the pivot point end of the Tool Handle.

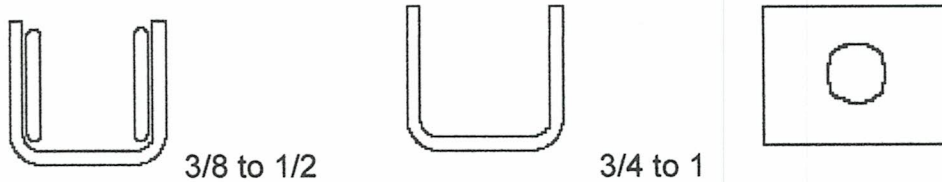
The Angled Swivel Head provides three additional pivot points that either of the Anchors can be attached.

It is also the carrier for one of the three Coupler Installation Heads.

It has an adjustment range of 0 – 2 inches to provide proper alignment of the attachment coupler being installed.

The three additional pivot points provide the user with the ability to get inside protective covers and housings for additional ease of coupler installation without inverting the handle.

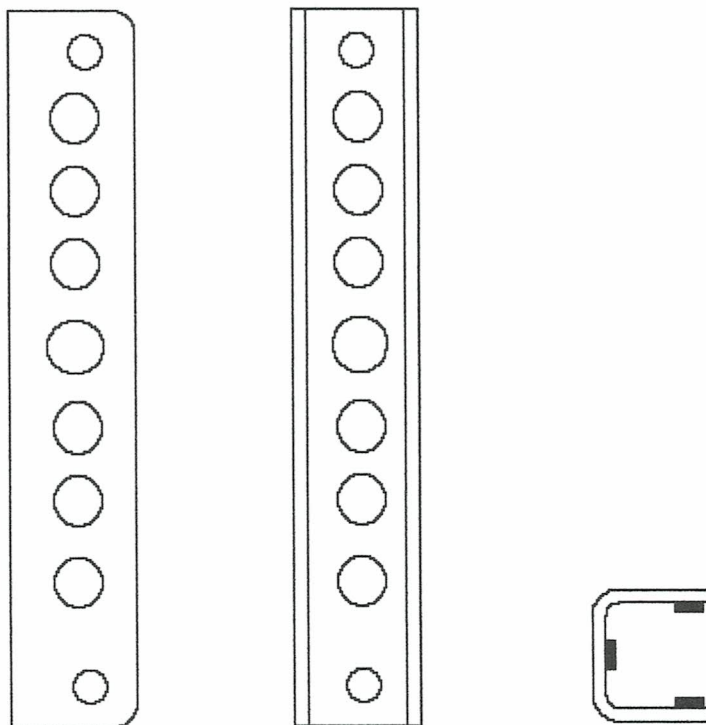
4. Single Duty Coupler Installation Head:



The Single Duty Coupler Installation Head mounts in the Angled Swivel Head with the use of a 1/2 inch clevis pin and hairpin keeper.

There are two Installation Heads available. One will fit 3/8 in to 1/2 inch couplers and the other will fit 3/4 inch to 1 inch couplers. These heads allow for maximum reach from the machine anchoring point to the push point of the Installation Head. The head is allowed to swivel on the clevis pin which helps to keep the attachment coupler in alignment with the equipment coupler.

5. Universal Installation Head:



The Universal Installation Head mounts in the Angled Swivel Head with the use of a 1/2 inch clevis pin and hairpin keeper or into either of the two Standard Swivel heads with the use of a 1/2 inch by 3 inch Bent-Pull Clevis Pin and hairpin keeper.

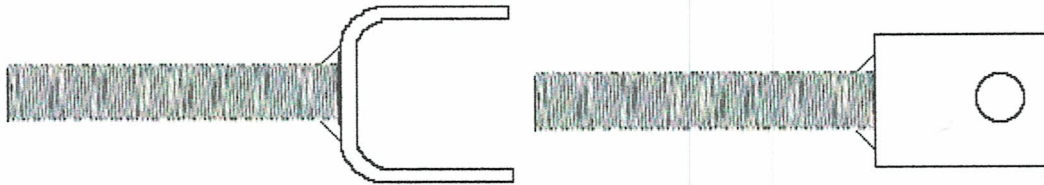
This installation head has 7 available mounting points for any of the 3 Swivel Heads. This allows for up to 14 separate lengths of attachment and/or equipment coupler lengths.

The head has three 5/16 inch Allen Head bolts set into each end of the head as a contact point for the coupler during installation.

The head is allowed to swivel on the clevis pin which helps to keep the attachment coupler in alignment with the equipment coupler.

Optional Component:

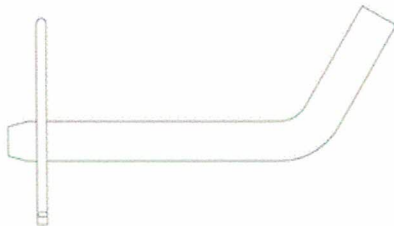
1. Standard Swivel Head / without bushings:



The Standard Swivel Head / without bushings is the carrier for the Universal Installation Head only.

The Standard Swivel Head / without bushings screws into the tool Handle threaded insert at the pivot end and has an adjustment range of 0 – 2 inches to provide proper alignment of the attachment coupler being installed.

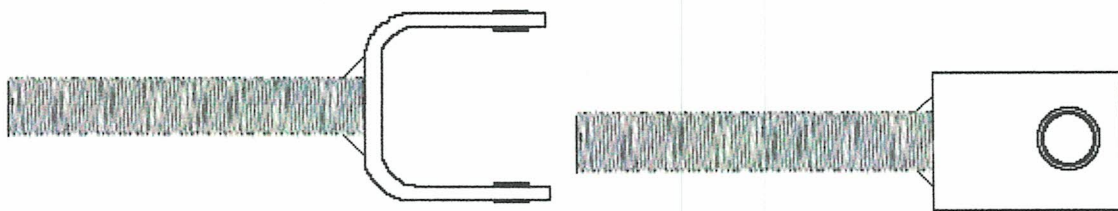
It comes with a Bent-Pull Clevis Pin and retainer for quick and easy length changes of the Universal Installation Head. Pictured below.



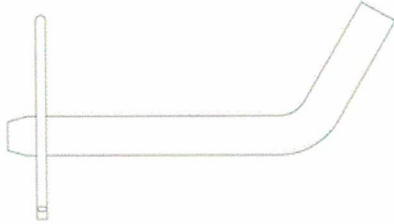
This optional attachment to the tool Handle provides a lower cost option for customers with machine specific needs.

NOTE: The Universal Installation Head is the only head available for the Standard Swivel Head.

2. Standard Swivel Head / with bushings:



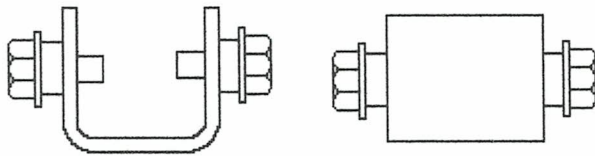
The Standard Swivel Head / with bushings screws into the tool Handle threaded insert at the pivot anchor end and has an adjustment range of 0 – 2 inches to provide proper alignment of the attachment coupler being installed. It comes with a Bent-Pull Clevis Pin and retainer for quick and easy length changes of the Universal Installation Head. Pictured below.



This optional attachment to the tool Handle provides a lower cost option for customers with machine specific needs.

NOTE: The Universal Installation Head or the Swiveling Single Duty Installation Head (Below) are the only heads available for the Standard Swivel Head w/ bushings.

3. Swiveling Single Duty Installation Head:



The Swiveling Single Duty Installation Head is for use with the Standard Swivel Head / with bushings only.

It is held in place in the Standard Swivel Head / with bushings by two 1/2 inch long tipped setscrews and swivels on the two bushings in the Head.

NOTE:

The Coupler Tool is completely adaptable for use on any brand or style of Compact Excavator or Skid Steer Loader and will install any attachment coupler with the right anchor, swivel head and installer head combination. This unique versatility affords the user the ability to easily, quickly, safely and environmentally consciously install any auxiliary attachment.

The variety of component options are easily assembled or configured to provide the user with the proper installation of all couplers.

Assembly Instructions:

The Handle is the base of the tool and the point that all configurations begin.

First, choose the best Anchor for the equipment application and pin it to the Tool Handle pivot point.

NOTE: Always secure the Anchor clevis pin with the hairpin keeper to prevent the clevis pin from moving out of place during installation. Failure to secure the clevis pin could cause personal injury or damage to the tool.

Next, choose the best Swivel Head for the application and screw it into the threaded insert in the pivot end of the Handle. *The Anchor can also be pinned to the Angled Swivel Head in one of the three pin holes*.

Now, choose an Installation Head that best fits the attachment coupler to be installed and attach it to the Swivel Head using the appropriate clevis pin.

NOTE: Always secure the Installation Head clevis pin with the hairpin keeper to prevent the clevis pin from moving out of place during installation. Failure to secure the clevis pin could cause personal injury or damage to the tool.

Mounting, Adjustment and Use of the Tool:

Case Drain Applications:

1. Couple the Case Drain Anchor Attachment to the equipment case drain coupling (this is always a 0-pressure coupling so it should snap right into place). Place the attachment coupler to be installed in the Installation Head. Rotate the handle into position with the attachment coupler directly adjacent to the equipment coupler with the handle at slightly less than 90 degrees from the coupler center line.
If the Case Drain Anchor Attachment is being pinned to the Angled Swivel Head in one of the three pin holes. It will be necessary to make all of the same aforementioned alignment adjustments.

NOTE: The tool works on a fulcrum and during installation it is important to remember that the center line of the couplings will change slightly. This means, when properly adjusted at the point of coupling, the tool handle should pass through the 90-degree point at mid stroke in the process. The Installation Head is on a swivel and allows for this change in angle but the Installation Head must be properly aligned to prevent damage.

2. Hold the attachment coupler in place in the Installation Head and align it with the equipment coupler while moving it into place with the Handle.

3. If the alignment is not correct, make adjustments to the Anchor Attachment and/or Swivel Head as need to obtain the correct alignment.

NOTE: DO NOT FORCE THE COUPLER INTO PLACE. PROPER ALIGNMENT IS CRITICAL TO PREVENT DAMAGE TO THE COUPLERS.

4. Once the alignment of the couplers is correct. Begin applying steady and even leverage to the Handle to push the attachment coupler onto the equipment coupler. As the coupler begins to slide into place hold the attachment coupler in alignment with the equipment coupler until the couplers snap and lock together. Wiggling the attachment coupler slightly during this process will assist in the coupler connection and alignment and it will help to keep them from binding.

NOTE: Should the coupler bind at any time in the process. Stop and realign the couplings.

5. If the equipment has a guard or housing that covers the coupler attachment area and prevents the Handle from being turned into position to install one of the couplers it will be necessary to use the Angled Swivel Head and move the Anchor Attachment to one of the three pivot points at the end of the Angled Swivel Head. Repeat the alignment steps 1-3 before continuing with installation.

Bulkhead and Non-Case Drain Applications that require the 'J' Hook Anchor Attachment:

1. Hook the 'J' Hook Anchor Attachment behind the bulkhead or auxiliary line shut off valve and rotate the handle into position with the attachment coupler directly adjacent to the equipment coupler with the handle at slightly less than 90 degrees from the coupler center line.
2. Adjust the 'J' Hook clevis length to obtain the proper distance and Handle alignment.

If the 'J' Hook Anchor Attachment is being pinned to the Angled Swivel Head in one of the three pin holes. It will be necessary to make all of the same aforementioned alignment adjustments.

NOTE: The tool works on a fulcrum and during installation it is important to remember that the center line of the couplings will change slightly. This means, when properly adjusted that at the point of coupling, the tool handle should pass through the 90-degree point at mid stroke in the process. The Installation Head is on a swivel and allows for this change in angle but the Installation Head must be properly aligned to prevent damage.

3. Hold the attachment coupler in place in the Installation Head and align it with the equipment coupler while moving it into place with the Handle.

4. If the alignment is not correct, make adjustments to the Anchor Attachment and/or Swivel Head as need to obtain the correct alignment.

NOTE: DO NOT FORCE THE COUPLER INTO PLACE. PROPER ALIGNMENT IS CRITICAL TO PREVENT DAMAGE TO THE COUPLERS.

5. Once the alignment of the couplers is correct. Begin applying steady and even leverage to the Handle to push the attachment coupler onto the equipment coupler. As the coupler begins to slide into place hold the attachment coupler in alignment with the equipment coupler until the couplers snap and lock together. Wiggling the attachment coupler slightly during this process will assist in the coupler connection and alignment and it will help to keep them from binding.

NOTE: Should the coupler bind at any time in the process. Stop and realign the couplings.

Adjustment and Use of the Standard Swivel Head / With and Without Bushings:

1. Install either of the two Standard Swivel Head into the anchor end of the tool Handle by screwing it into the threaded insert. *The swivel Head is adjustable from 0 – 2 inches. Start with it at 0 inches*.
2. Choose the Anchor Attachment that best suites the application and pin it to the Handle and secure it with the hairpin keeper.
3. Attach the Anchor Attachment to the equipment and rotate the handle into position with the attachment coupler directly adjacent to the equipment coupler and the handle at slightly less than 90 degrees from the coupler center line.
4. Place the Universal Installation Head into the Standard Swiveling Head allowing approximately 4 inches from the equipment coupler face and the end on the Installation Head and insert the Bent-Pull Clevis Pin into the corresponding hole to retain it to the Swivel Head. *When using the Standard Swivel Head with bushings make sure to have the bushings in place*.
5. Place and hold the attachment coupler in the Universal Installation Head and align it with the equipment couple and make alignment adjustments to the Anchor or Swivel Head as need.

NOTE: DO NOT FORCE THE COUPLER INTO PLACE. PROPER ALIGNMENT IS CRITICAL TO PREVENT DAMAGE TO THE COUPLERS.

6. Once the alignment of the couplers is correct. Begin applying steady and even leverage to the Handle to push the attachment coupler onto the equipment coupler. As the coupler begins to slide into place hold the attachment coupler in alignment with the equipment coupler until the couplers snap and lock together. Wiggling the attachment coupler slightly during this process will assist in the coupler connection and alignment and it will help to keep them from binding.

NOTE: Should the coupler bind at any time in the process. Stop and realign the couplings.

Adjustment and Use of the Swiveling Single Duty Installation Head:

1. The Swiveling Single Duty Installation Head will only fit into the Standard Swivel Head / With Bushings and is installed by removing the two 1/2 inch long tipped setscrews. Place the Swiveling Single Duty Installation Head into the Swivel Head (insure the bushings are in place) and secure it to the Swivel Head with the two 1/2 inch long tipped setscrews.
2. Once the Installation Head is in place and secured, attach the Anchor Attachment to the equipment and rotate the handle into position with the attachment coupler directly adjacent to the equipment coupler with the handle at slightly less than 90 degrees from the coupler center line.
3. Place and hold the attachment coupler in the Installation Head and align it with the equipment couple and make alignment adjustments to the Anchor or Swivel Head as need.

NOTE: DO NOT FORCE THE COUPLER INTO PLACE. PROPER ALIGNMENT IS CRITICAL TO PREVENT DAMAGE TO THE COUPLERS.

4. Once the alignment of the couplers is correct. Begin applying steady and even leverage to the Handle to push the attachment coupler onto the equipment coupler. As the coupler begins to slide into place hold the attachment coupler in alignment with the equipment coupler until the couplers snap and lock together. Wiggling the attachment coupler slightly during this process will assist in the coupler connection and alignment and it will help to keep them from binding.

NOTE: Should the coupler bind at any time in the process. Stop and realign the couplings.

Warranty:

This product is covered by a limited replacement warranty. The product is warranted to be free of parts and workmanship defects for a period of 90 days from the date of purchase. Should the product or a component of the product be found to be defective, a replacement component or product will be provided at no charge to the purchaser. This warranty is non-transferable and purchaser must provide proof of purchase and return any defective component or product for warranty consideration. Modifications and/or misuse of the tool will void the warranty. Use of the tool for any other purpose other than the intend design will void the warranty.