



DRIVE WRENCH ASSEMBLY

OPERATION & SAFETY INFORMATION

SLINGCO PART NOS. SAE08666, SAE09639, SAE10425,
SAE10486, SAE10427, SAE13513, SAE11132, SAE14309

ATTENTION

READ and **UNDERSTAND** all of the instructions and safety information in this manual before operating or servicing this tool.

Failure to read and understand these warnings and safe handling instructions could result in severe personal injury or death.

KEEP THIS MANUAL WITH TOOL.

Thank you for using Slingco® products. This manual must be read and understood prior to operating this product. Special attention should be paid to the section '**Safety Information**'.

This manual should be kept available to all operating and maintenance personnel.

Additional or replacement manuals may be obtained at no charge by contacting your local Slingco office.

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SAFETY INFORMATION

⚠ ATTENTION



DO NOT perform any service or maintenance on this tool other than described in this manual.

Read and follow the operator's manual before using tool.

⚠ WARNING PINCH POINT HAZARD



■ Keep hands away from all potential pinch points while assembling drive wrench.



■ **DO NOT** operate without proper hand protection.

⚠ WARNING



Stay clear of drive assembly while it is in operation. **DO NOT** wear loose clothing as it may become twisted in drive assembly, causing serious injury or even death

⚠ WARNING ELECTRICAL SHOCK HAZARD



■ Locate and stay clear of all overhead and underground lines.

■ Anchor Installation can puncture underground lines.

⚠ WARNING



■ **DO NOT** operate without proper head protection.

■ Failure to wear head protection could lead to serious injury or death.

⚠ WARNING MUST USE EYE PROTECTION



■ **DO NOT** operate without eye protection

■ Failure to wear eye protection could result in serious eye injury from flying debris.

⚠ WARNING MULTIPLE FLYING OBJECTS

- Safety glasses **ARE REQUIRED** when operating this tool!
- Any coworkers/bystanders near the work area **MUST BE WARNED** of broken parts & debris flying at high speeds.
- Anyone remaining near work area, **MUST WEAR SAFETY GLASSES** to prevent severe injury!



SAFETY INFORMATION (CONT.)

WARNING



Bending or overtorquing the tool string is hazardous, and may cause property damage or death!

DO NOT allow visible bending of the tool string, or torque greater than tool rating.

WARNING



Heavy suspended objects can fall. Can cause property damage, severe injury, or even death.

DO NOT stand under Drive Wrench Lock when adjusting coil lock positions.

WARNING



Unexpected high speed backlash may occur. Can cause severe injury or even death.

Stay clear of drive train when in use. May contain stored torsional energy.

WARNING



Inadequate maintenance or improper use may lead to unexpected failure. Inspect often.

Can cause property damage, severe injury, or even death.

WARNING

Slingco Bent Arm Pins with Coil Locks are the only tested & approved means for through-pin attachment of the drive tools.

DO NOT attempt to use any other means of attachment.

PLEASE NOTE

Slingco products have been designed and tested for use with Slingco component parts, accessories, and attachments. Slingco makes no claim as to the appropriateness, nor functionality, of using accessories, parts, or components manufactured by other companies with Slingco products.

SAFETY INFORMATION (CONT.)

WORK AREA SAFETY

1. Keep the area around the equipment clean and free of obstruction.
2. Bystanders should stay clear of the work area to ensure safety.

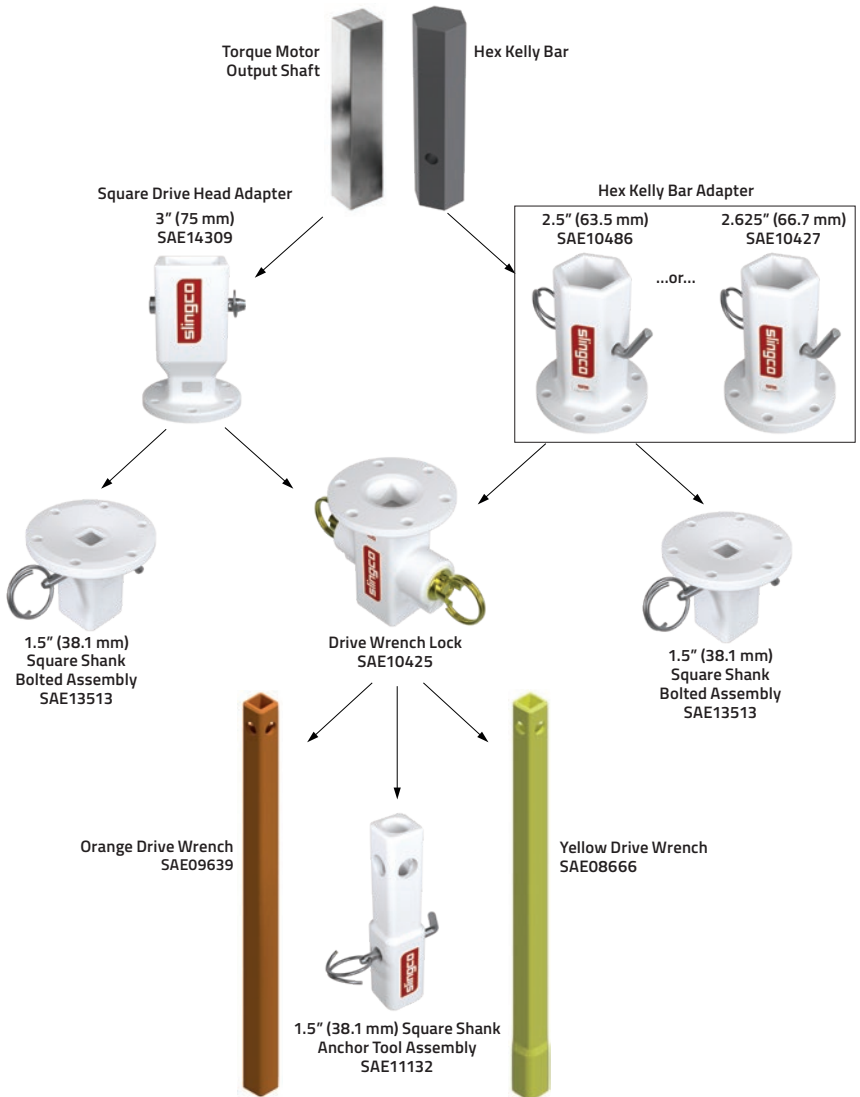
PERSONAL SAFETY

1. Stay alert while using the equipment to prevent serious injury. Do not use under the influence of drugs, alcohol or medications.
2. Do not wear loose hair or clothes that may get caught while the equipment is in operation.
3. Work safely. Ensure firm footing, be properly secured and do not over-extend yourself while operating equipment.

TOOL USE AND CARE

1. **DO NOT** use this tool if there are any abnormalities or damage to any of its components.
2. Inspect the tool before and after every use. Do not use this tool if it is damaged in any way. Ensure that all pins are secure. Be sure to inspect all hydraulic hoses and couplers for cracks, leaks, and wear.
3. When having the tool repaired, always use factory Slingco replacement parts. Tools must be serviced and/or repaired by Slingco or a factory authorized service center.

PARTS LIST FOR DRIVE ASSEMBLY



TORQUE RATING OF TOOLS

Part No.	Torque rating ft-lb (N-m)
SAE10486	10,000 (13,558.18)
SAE10427	10,000 (13,558.18)
SAE10425	10,000 (13,558.18)
SAE09639	10,000 (13,558.18)

Part No.	Torque rating ft-lb (N-m)
SAE08666	10,000 (13,558.18)
SAE11132	7,000 (9,490.73)
SAE13513	7,000 (9,490.73)
SAE14309	10,000 (13,558.18)

PARTS LIST FOR DRIVE ASSEMBLY

- SAE08666 Yellow Drive Wrench
- SAE09639 Orange Drive Wrench
- SAE10425 Drive Wrench Lock Assembly
- SAE10427 2-5/8" Hex Kelly Bar Adapter
- SAE10486 2-1/2" Hex Kelly Bar Adapter
- SAE11132 1-1/2" Square Shank Anchor Tool Assembly
- SAE13513 1-1/2" Square Shank Bolted Assembly
- SAE14309 3" (75 mm) Square Drive Head Adapter
- SAE11531 Drive Wrench Lock Pin Assembly Parts Kit for SAE10425
- SAE11532 Hex Kelly Bar Adapter Bent Arm Pins and Coil Lock Kit for SAE10486 and SAE10427
- SAE11533 Fastener Kit for SAE14309, SAE10486, SAE10427, SAE13513 and SAE10425
- SAE14491 Square Shank Adapters, Bent Arm Pin and Coil Lock Kit for SAE11132 and SAE13513.
- SAE14484 Square Drive Head Adapter Replacement Pin for SAE14309
- LAB12436 Label Kit for SAE09639
- LAB12437 Label Kit for SAE08666
- LAB12519 Warning Label for SAE10425, SAE10486 and SAE10427, SAE14309
- LAB12520 Warning Label for SAE13513 and SAE11132

ASSEMBLING COMPONENTS

KELLY BAR ADAPTER ASSEMBLY

The Drive Wrench Lock Assembly and 1.5" (38 mm) Square Shank Bolted Assembly are attached to the Hex Kelly Bar Adapter via the bolt circle on the flange of the Adapter.

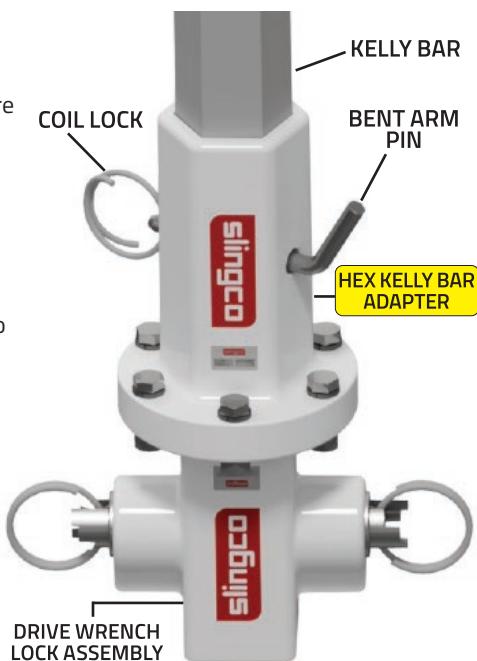
To determine which Hex Kelly Bar Adapter you need, first measure your Kelly Bar across the flats for the correct Adapter size. Then determine the maximum torque load from your digger motor. Be sure not to exceed the maximum torque load rating of the Adapter being used. *(See table on this page.)*

The Hex Kelly Bar Adapters have the size accepted cast onto the outside of the casting. Check that the Adapter you have matches the size of your Kelly Bar.

Check the end of the Kelly Bar for wear. If the Kelly Bar is worn replace it. A minimum of 3" (75mm) of hex or square engagement is required between the Kelly Bar and the attached tool or the Bent Arm Pin may wear prematurely and become damaged. *(Replacement Bent Arm Pins can be ordered by referencing part #SAE11532.)*

Once the correct Hex Kelly Bar Adapter is chosen and the Kelly Bar is checked for wear, slide the Kelly Bar into the socket of the Hex Kelly Bar Adapter.

Pin the Hex Kelly Bar Adapter in place with the Bent Arm Pin provided. Lock the Bent Arm Pin in place with the Coil Lock, which is inserted in the hole of the bent arm pin.



⚠ IMPORTANT

Each connection point is a potential pinch hazard. Adequate hand protection should be worn at all times while operating or assembling the components.

Part No.	Adapter Size in (mm)	Torque rating of tools ft-lb (N-m)	Bolt Circle Diameter in (mm)
SAE10486	2.5 (63.5)	10,000 (13,558.18)	5.25 (133.35)
SAE10427	2.625 (66.8)	10,000 (13,558.18)	5.25 (133.35)

ASSEMBLING COMPONENTS (CONT.)

DRIVE WRENCH AND 1.5" (38 mm) SQUARE SHANK BOLTED ASSEMBLY

Using the included bolts, lockwashers and nuts, bolt the Drive Wrench Lock Assembly (shown in main diagram opposite), or the 1.5" (38 mm) Square Shank Bolted Assembly (shown below main diagram), to the Hex Kelly Bar Adapter.

The bolts provided with each Drive Wrench Lock Assembly and 1.5" (38 mm) Square Shank Bolted Assembly are hex head zinc plated, and are the appropriate length for attachment to another flange of equal thickness.

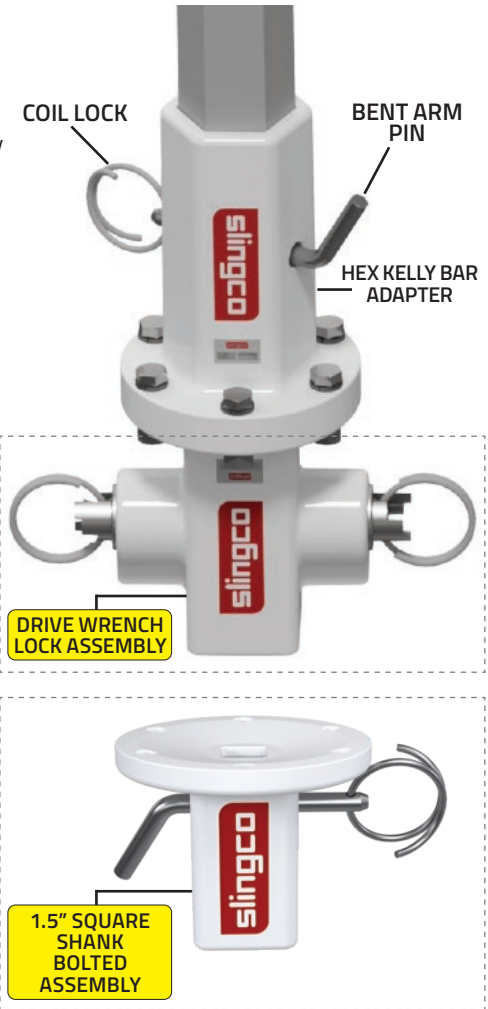
Tighten the bolts using a star pattern to the recommended torque values shown in the table below.

When installing hardware ensure there is a lockwasher on either flange.

DO NOT USE fasteners manufactured by another manufacturer. Only Slingco supplied fasteners should be used!

⚠ IMPORTANT

Each connection point is a potential pinch hazard. Adequate hand protection should be worn at all times while operating or assembling the components.



Part No.	Torque rating of tools ft-lb (N-m)	Bolt Circle Diameter in (mm)	Bolt Diameter in (mm)	Grade	Recommended Bolt Torque Values ft-lb (N-m)
SAE10425	10,000 (13,558.18)	5.25 (133.35)	0.5 (6.35)	5	75 (101.69)
SAE13513	7,000 (9,490.73)	5.25 (133.35)	0.5 (6.35)	5	75 (101.69)

ASSEMBLING COMPONENTS (CONT.)

DRIVE WRENCH AND 1.5" (38 mm) SQUARE SHANK ANCHOR TOOL ASSEMBLY

To install the Drive Wrench or 1.5" (38 mm) Anchor into the Drive Wrench Lock, pull the Coil Locks outward, while twisting counter-clockwise, until they are in the outermost position. Be sure both pins are fully engaged before proceeding.

Insert the Drive Wrench (shown top right) or 1.5" (38 mm) Square Shank Anchor Tool Assembly (shown bottom right).

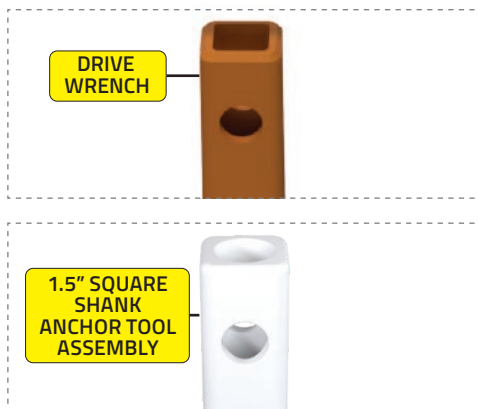
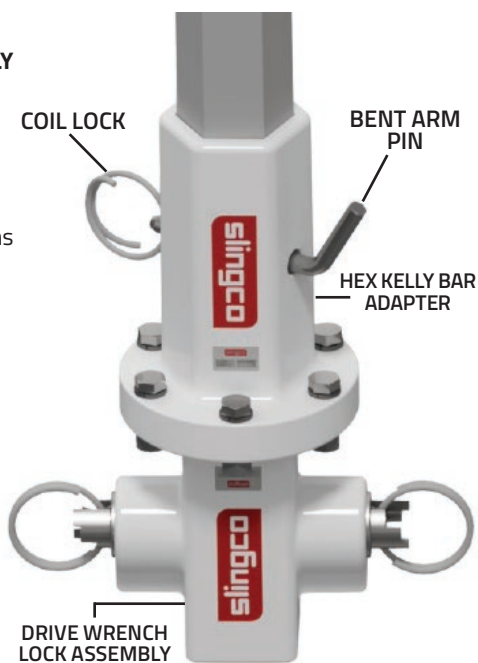
Capture the Drive Wrench or 1.5" (38 mm) Square Shank Anchor Tool Assembly with the Locks by twisting the Coil Lock clockwise until in the inside position.

Note: The Drive Wrench Lock Coil Locks have three positions which they operate. The inside position shown holds both the Drive Wrench and the Anchor Rod.

Note: For the 1.5" (38 mm) Square Shank Anchor Tool Assembly the middle position is not necessary.

To install a square anchor shank into 1.5" (38 mm) Square Shank Anchor Tool Assembly, remove Coil Lock from Bent Arm Pin and remove from tool. Insert Anchor and align the holes of the Anchor and Tool. When this is done, replace the Bent Arm Pin and Coil Lock.

See diagram on page 14.



Part No.	Torque rating of tools ft-lb (N-m)	Color
SAE08666	10,000 (13,558.18)	Yellow
SAE09639	10,000 (13,558.18)	Orange
SAE11132	7,000 (9,490.73)	White

ASSEMBLING COMPONENTS W/SQUARE AUGER

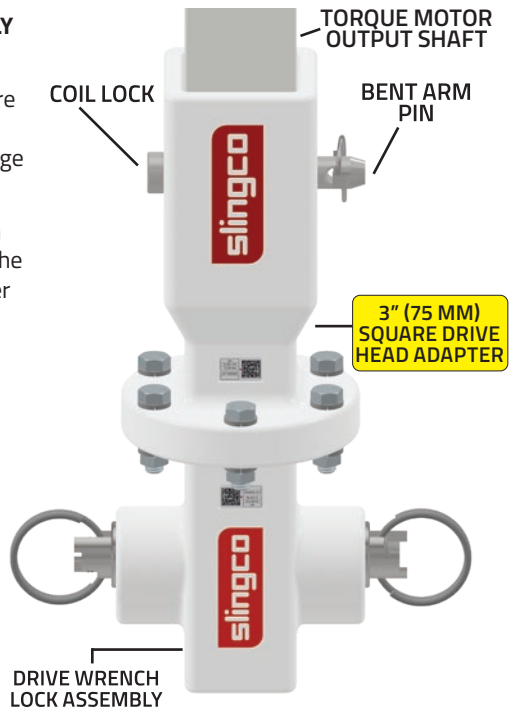
SQUARE DRIVE HEAD ADAPTER ASSEMBLY

The Drive Wrench Lock Assembly and 1.5" (38 mm) Square Shank Bolted Assembly are attached to the 3" (75 mm) Square Drive Head Adapter via the bolt circle on the flange of the Adapter.

Determine the maximum torque load from your torque motor. Be sure not to exceed the maximum torque load rating of the Adapter being used. *(See table on this page.)*

Check the end of the Square Drive Head for wear. If the Square Drive Head is worn replace it. A minimum of 2" (51 mm) of square engagement is required between the Drive Head and the attached tool or the Clevis Pin may wear prematurely and become damaged. *(Replacement Clevis Pins can be ordered by referencing part #SAE14484.)*

Pin the Square Drive Head Adapter in place with the Bent Arm Pin provided. Lock the Bent Arm Pin in place with the Coil Lock, which is inserted in the hole of the bent arm pin.



⚠ IMPORTANT

Each connection point is a potential pinch hazard. Adequate hand protection should be worn at all times while operating or assembling the components.

Part No.	Adapter Size in (mm)	Torque rating of tools ft-lb (N-m)	Bolt Circle Diameter in (mm)
SAE14309	3 (75)	10,000 (13,558.18)	5.25 (133.35)

ASSEMBLING COMPONENTS W/SQUARE AUGER (CONT.)

DRIVE WRENCH LOCK ASSEMBLY AND 1.5" (38 mm) SQUARE SHANK BOLTED ASSEMBLY

Using the included bolts, lockwashers and nuts, bolt the Drive Wrench Lock Assembly (shown in main diagram opposite), or the 1.5" (38 mm) Square Shank Bolted Assembly (shown below main diagram), to the Square Drive Head Adapter.

The bolts provided with each Drive Wrench Lock Assembly and 1.5" (38 mm) Square Shank Bolted Assembly are hex head zinc plated, and are the appropriate length for attachment to another flange of equal thickness.

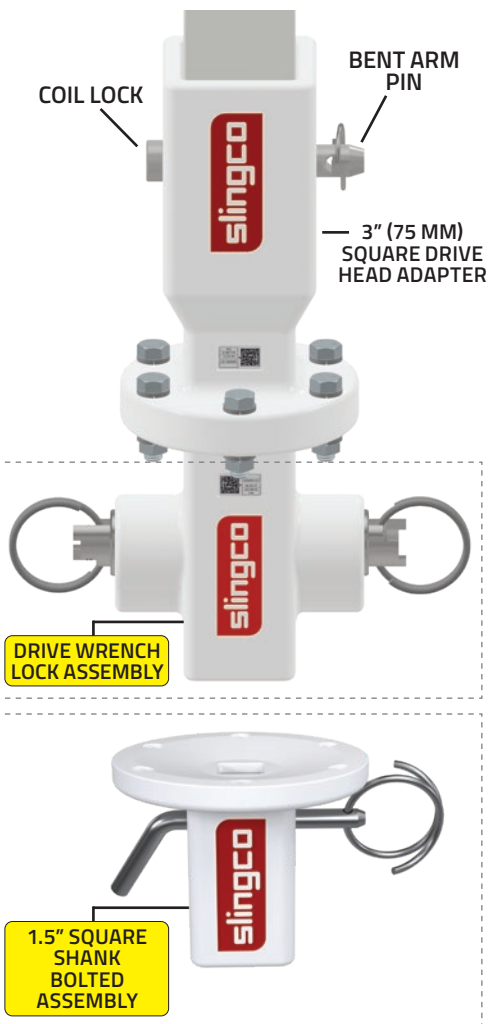
Tighten the bolts using a star pattern to the recommended torque values shown in the table below.

When installing hardware ensure there is a lockwasher on either flange.

DO NOT USE fasteners manufactured by another manufacturer. Only Slingco supplied fasteners should be used!

⚠ IMPORTANT

Each connection point is a potential pinch hazard. Adequate hand protection should be worn at all times while operating or assembling the components.



Part No.	Torque rating of tools ft-lb (N-m)	Bolt Circle Diameter in (mm)	Bolt Diameter in (mm)	Grade	Recommended Bolt Torque Values ft-lb (N-m)
SAE10425	10,000 (13,558.18)	5.25 (133.35)	0.5 (6.35)	5	75 (101.69)
SAE13513	7,000 (9,490.73)	5.25 (133.35)	0.5 (6.35)	5	75 (101.69)

ASSEMBLING COMPONENTS W/SQUARE AUGER (CONT.)

DRIVE WRENCH AND 1.5" (38 mm) SQUARE SHANK ANCHOR TOOL ASSEMBLY

To install the Drive Wrench or 1.5" (38 mm) Anchor into the Drive Wrench Lock Assembly, pull the Coil Locks outward, while twisting counter-clockwise, until they are in the outermost position. Be sure both pins are fully engaged before proceeding.

Insert the Drive Wrench (shown top right) or 1.5" (38 mm) Square Shank Anchor Tool Assembly (shown bottom right).

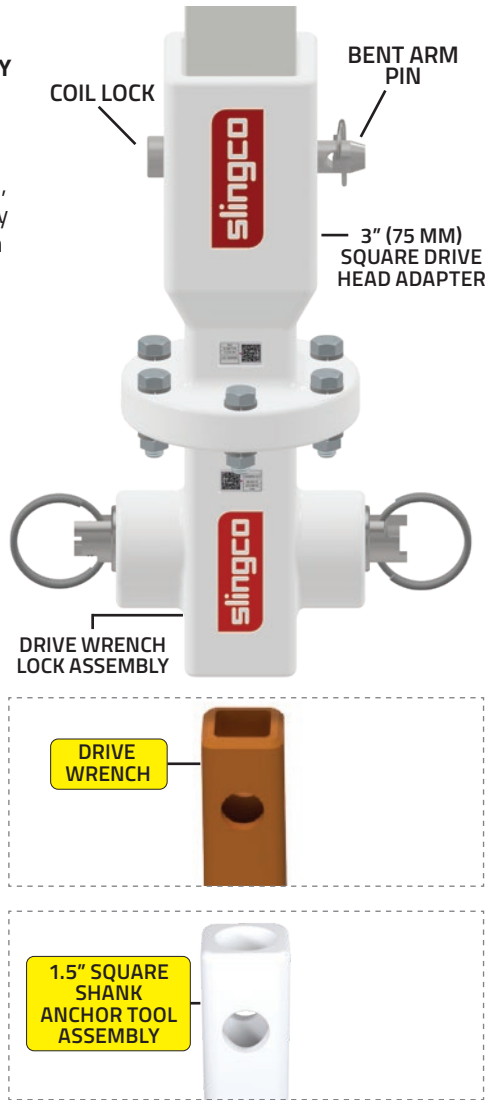
Capture the Drive Wrench or 1.5" (38 mm) Square Shank Anchor Tool Assembly with the Locks by twisting the Coil Lock clockwise until in the inside position.

Note: The Drive Wrench Lock Coil Locks have three positions which they operate. The inside position shown holds both the Drive Wrench and the Anchor Rod.

Note: For the 1.5" (38 mm) Square Shank Anchor Tool Assembly the middle position is not necessary.

To install a square anchor shank into 1.5" (38 mm) Square Shank Anchor Tool Assembly, remove Coil Lock from Bent Arm Pin and remove from tool. Insert Anchor and align the holes of the Anchor and Tool. When this is done, replace the Bent Arm Pin and Coil Lock.

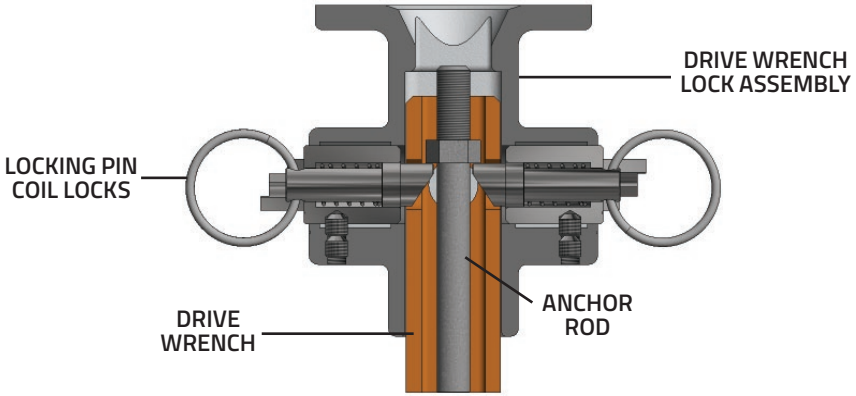
See diagram on page 14.



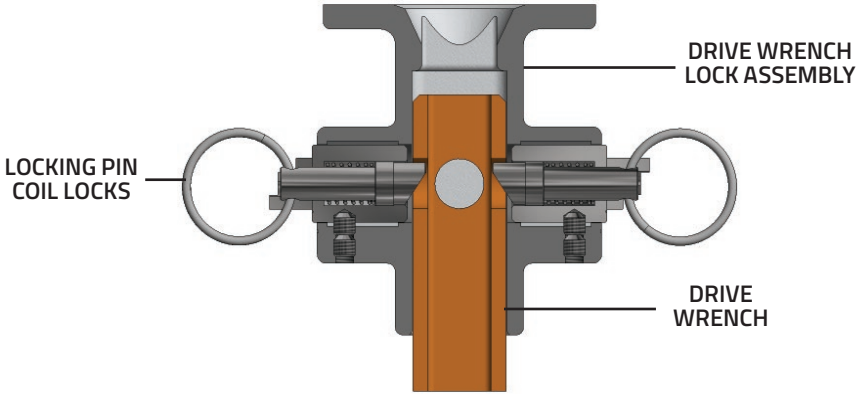
Part No.	Torque rating of tools ft-lb (N-m)	Color
SAE08666	10,000 (13,558.18)	Yellow
SAE09639	10,000 (13,558.18)	Orange
SAE11132	7,000 (9,490.73)	White

DRIVE WRENCH LOCK OPERATION

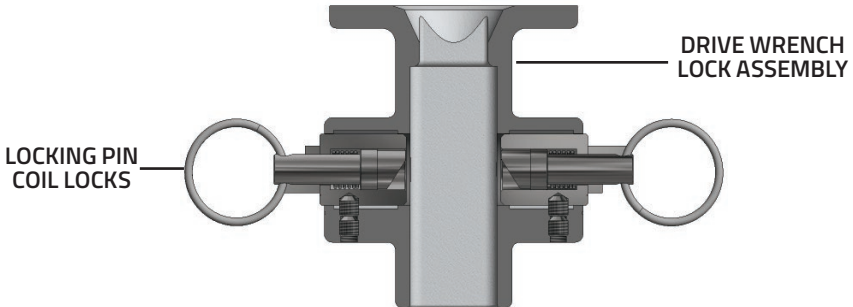
The Drive Wrench Lock Assembly coil locks have three positions which they operate. The inside position shown below holds both the Drive Wrench and the anchor rod.



The middle position shown below releases the anchor rod **ONLY**.



The outside position shown below releases the Drive Wrench. This position is also ready to accept the Drive Wrench.



DRIVE WRENCH LOCK OPERATION (CONT.)

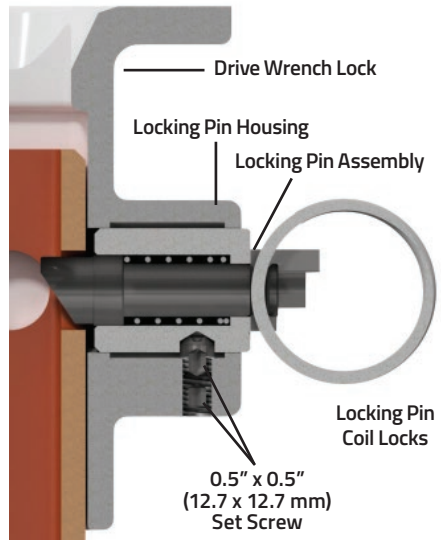
If the Locking Pin Assembly becomes damaged, remove the assembly by disassembling the set screws and pulling on the Locking Pin Coil Locks. Replace the Locking Pin Assembly with SAE11531, new set screws are included.

Insert the Locking Pin Assembly into the Locking Pin Housing. Align the 'V' on the Locking Pin Housing with the 'V' on the Locking Pin Assembly. Once the 'Vs' are aligned, slide the Locking Pin Assembly until the indentation is underneath the Set Screw holes in the Locking Pin Housing.

Coat the thread of the first 1/2" x 1/2" (12.7 x 12.7 mm) set screw with Loctite RC 680 and screw in place. Then coat the second 1/2" x 1/2" (12.7 x 12.7 mm) set screw with Loctite RC 680 and screw in place. The set screw must be seated in the indentation of the Locking Pin Assembly in order to hold it securely in the Drive Wrench Lock Assembly. See image for reference.

Tighten the set screws to a maximum 15-20 ft-lb (20.34-27.12 N-m) torque.

If you have questions regarding the operation of the Drive Wrench Lock Assembly, please contact your local Slingco office.



⚠ WARNING

Any loose parts may dislodge and fly when in operation. **DO NOT OPERATE** with any loose components or parts.

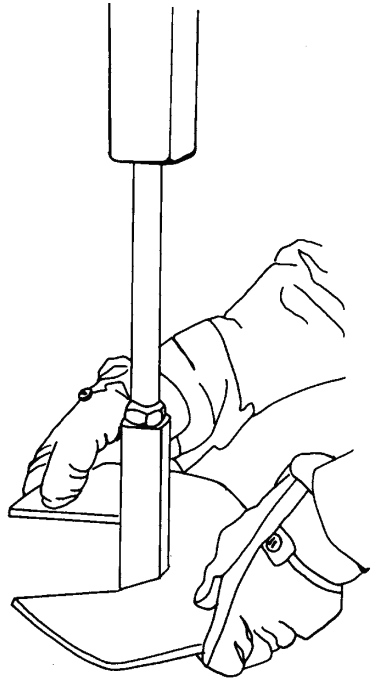
INSTALLING ANCHOR ROD

ANCHOR HUB & ROD INSTALLATION

Align the Anchor Hub with the Drive Wrench so that the two can telescope together.

Lock the Anchor Rod into place with a strong upward motion. This will cause the Anchor Rod to lock into place in the Drive Wrench Lock Assembly. Be sure to check to see if the Drive Wrench and Anchor Rod are securely held into place. If so, the tool string is ready to use.

Ensure that the tools in use are the appropriate size and rating for your particular application. Use the table below for more information.



Part No.	Torque rating of tools ft-lb (N-m)	Drive Wrench Color	Hub Size in (mm)	Shaft Size in (mm)
SAE08666	10,000 (13,558.18)	Yellow	2.5 (63.5)	1.5 (38.1)
SAE09639	10,000 (13,558.18)	Orange	2.25 (77.15)	1.375 (34.93)

⚠ IMPORTANT

Each connection point is a potential pinch hazard. Adequate hand protection should be worn at all times while operating or assembling the components.

MAINTENANCE & INSPECTION

MAINTENANCE & INSPECTION OF DRIVE WRENCH ASSEMBLY COMPONENTS

The Drive Wrench Assembly parts require routine inspection and maintenance.

All parts, bolts, pins and fasteners used in the assembly should be inspected for excessive wear and corrosion prior to each use. Any bent or damaged parts, bolts, pins, and fasteners **SHOULD NOT BE USED AND SHOULD BE IMMEDIATELY REPLACED.**

Failure to maintain the Drive Wrench Assembly could result in system failure below stated ratings, causing damage to the system, as well as potential injury and damage to property.

Each bolt in the Drive Wrench Assembly should be inspected for tightness and torque as noted throughout this manual. **DO NOT USE** until all bolts are securely tightened.

Replacement bolts, pins, and fasteners are available from Slingco. **ONLY SLINGCO REPLACEMENT PARTS SHOULD BE USED.**

During anchor installation, keep Drive Wrench Assembly in alignment with the anchor being installed, in order to prevent uneven wear and damage to the system. Misalignment puts additional stress at the point where the anchor rod connects to the drive wrench. This could potentially split the drive wrench, causing system failure.

If the Drive Wrench becomes extremely twisted, **DO NOT USE AND REPLACE IMMEDIATELY!** The strength of the Drive Wrench is reduced significantly once twisting occurs.

Locking Pin Assemblies and warning labels are available from Slingco if needed. Replace any and all warning labels if they become damaged or inadvertently removed.

To replace labels, clean area with wire brush until clean and all old labels are removed. Once all pieces of old label are removed and surface is clean, place new labels so they are readable by the user.

ATTENTION

READ and **UNDERSTAND** all of the instructions and safety information in this manual before operating or servicing this tool.

Failure to read and understand these warnings and safe handling instructions could result in severe personal injury or death.

KEEP THIS MANUAL WITH TOOL.



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Drive Wrench Assembly Maintenance Manual: MAN10877 - Rve 001 Date September 2023

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