



Eclipse Compressor Retrofit Kit

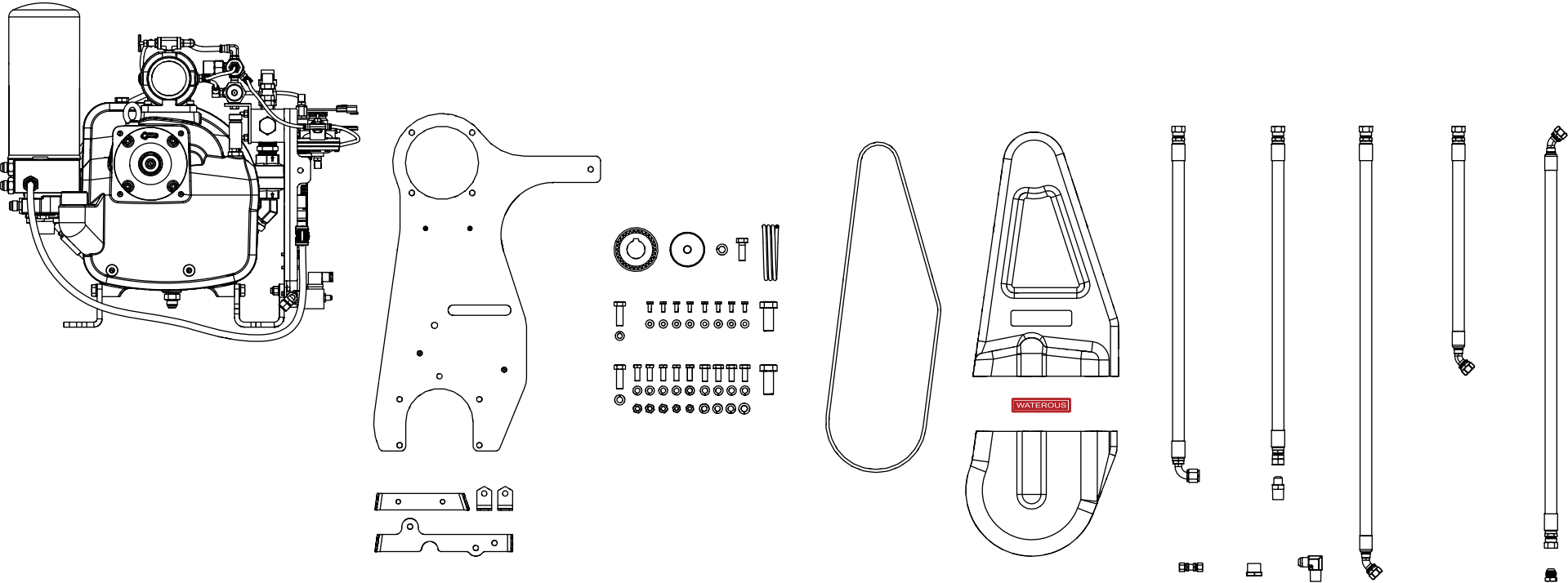


Table of Contents

Safety	4	Installation	30
Safety Precautions	4	Preparing to Install the Retrofit Kit	30
Introduction	5	Tools Required	30
Using this Document	5	Installing the Retrofit Kit	30
Viewing the Document Electronically	5	Installing the Oil Filter Fittings	31
Printing the Document	5	Installing the Oil Cooler Fittings	32
Additional Documentation	5	Installing the Compressor Assembly	33
Symbols	5	Installing the Compressor Oil Drain Hose	35
Compressor Retrofit Components	6	Installing the Oil Cooler Hoses	36
Removal	7	Installing the Bulkhead Fitting	41
Preparing for the Retrofit	7	Installing the Bulkhead Air-Clutch Tube	42
Tools Required	7	Installing the Compressor Plate	43
Preparing the Apparatus	7	Connecting the Air-Clutch tube	45
Best Practices	7	Connecting the Balance Valve Tube—CM and CS Pumps	46
Performing the Retrofit	7	Installing the Belt Cover Brackets	47
Draining the Compressor Oil	8	Installing the Idler Adjustment Block	49
Removing the Air Filter	9	Installing the Idler Adjustment Block Screw	50
Disconnecting the Relay Panel	10	Installing the Air-Clutch	51
Removing the Belt Cover	11	Installing the Compressor Sprocket	54
Removing the Drive Belt	13	Installing the Compressor Belt	55
Removing the Idler Adjustment Block	14	Installing the Lower Belt Cover	57
Removing the Air-Clutch	15	Installing the Upper Belt Cover	58
Removing the Compressor Plate	16	Installing the Belt Cover Label	59
Disconnecting the Balance-Valve Tube—CM Pump	17	Connecting the Relay Panel Wiring	60
Disconnecting the Balance-Valve Tube—CS Pump	18	Connecting the Air Supply	61
Relocating the Balance-Valve Fitting—CS Pump	19	Preparing for Operation	62
Removing the Cooler Hoses	20	Installing the Air Filter	63
Preparing the Cooler Fittings	24	Adding the Compressor Oil	64
Removing the Oil Filter Fittings	25	Calibrating the System—Unload Mode	65
Removing the Compressor Assembly	26	Calibrating the System—Fixed Mode	66
Removing the Relay Panel Assembly	28	Calibrating the System—Auto Mode	68
Removing the Relay Panel Brackets	29		

Safety Precautions

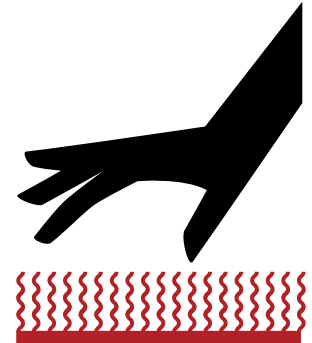
- Read and understand this document before you begin the install.
- Read and understand all the notices and safety precautions.
- Be aware that these instructions are only guidelines and are not meant to be definitive. Contact Waterous when you have questions.
- Do not perform the install if you are not familiar with the tools and skills needed to safely perform required procedures.
- Do not modify the equipment.
- Waterous reserves the right to make modifications to the instructions without notice.



WARNING

Hot Surface

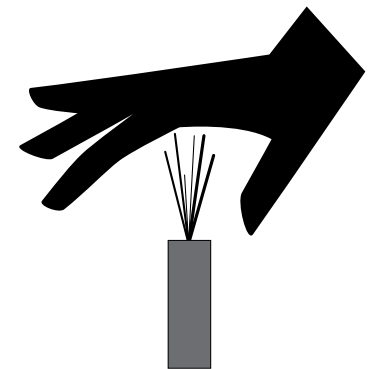
- Hot surfaces can burn you.
- Do not touch the surface during operation—allow it to cool after operating.



WARNING

High Pressure

- Liquid ejected at high pressure can cause serious injury.
- Drain the pump after use and before servicing.



Use this document to install the retrofit kit. Please understand the following conditions:

- Be aware that these instructions are only guidelines and are not meant to be definitive. Contact Waterous when you have questions.
- Understand that your configuration may require additional steps, that are not described in the illustrations or instructions, to perform the install.
- The equipment described in this document is intended to be installed by a person or persons with the necessary skills and knowledge to perform the overhaul.

This document is divided into the following sections:

SAFETY

This section describes general precautions and alert symbols that are in this document.

INTRODUCTION

This section is an overview of the document.

REMOVAL

This section describes the removal procedures.

INSTALLATION

This section describes installation procedures.

Using this Document

Use the guidelines below when viewing this document.

Viewing the Document Electronically

- View this document in landscape orientation.
- Use the table of contents to navigate directly to that section.
- Text **with this appearance** is linked to a reference.

Printing the Document

- The document is best viewed when printed in color.
- The *print on both sides* and *flip on long edge* features provide the best results.
- Use a 3-ring binder to store the document.

Additional Documentation

Additional documentation is available through the MyWaterous login at Waterousco.com. Use your serial number to gain access to the service parts list associated with your system. Dimensional drawings are available through the Waterous Service department.

Symbols

Symbols are used to illustrate additional tools or operations that are required to complete the instruction.



Discard—This symbol tells you to discard or recycle the part in accordance with local regulations.



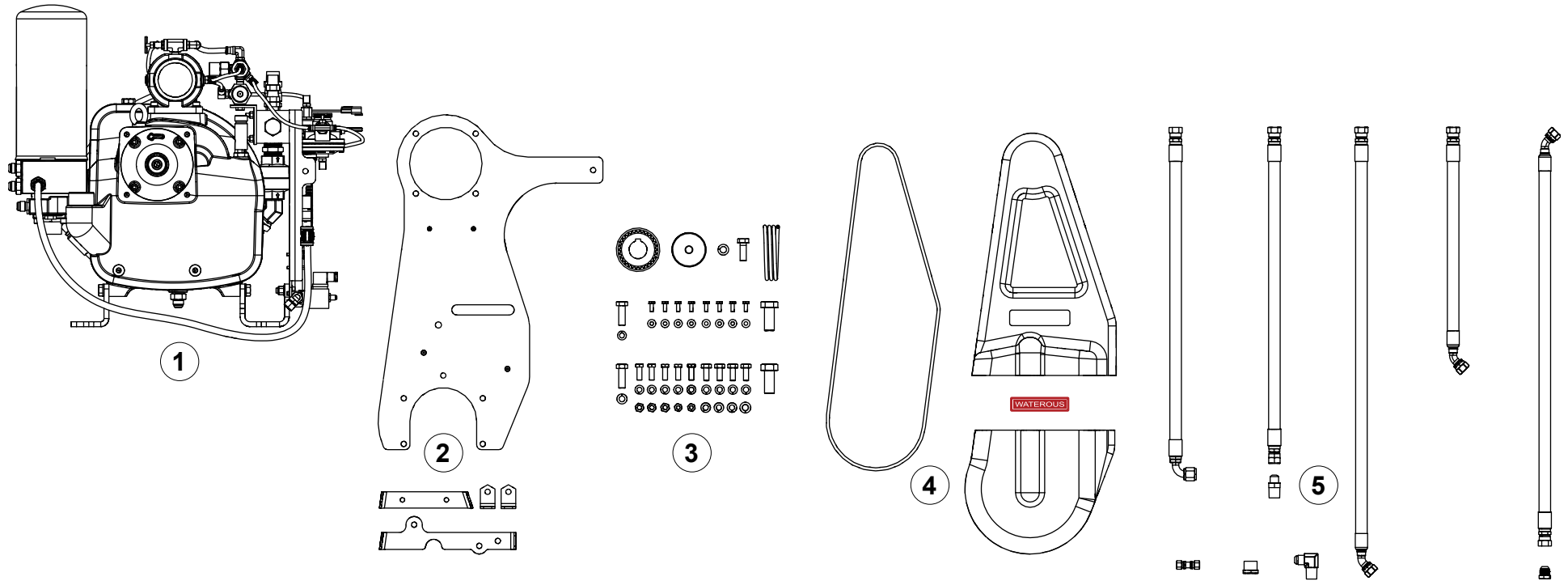
Torque to specification—This symbol tells you to torque the hardware to the specified value.



Threadlocker—This symbol tells you to apply an appropriate Threadlocker to the part.

Compressor Retrofit Components

The retrofit kit includes the compressor and other components needed to update or repair your Eclipse system.



Description

- 1 The compressor subassembly contains the compressor and associated components.
- 2 An updated compressor plate is included.
- 3 A new pulley, tubing, and hardware are included.
- 4 A new belt, belt covers, and label are included.
- 5 A new set of hoses and fitting are also included.

Preparing for the Retrofit

- Read and understand the instructions before disassembling the equipment.
- Gather the necessary tools, cleaning cloths, brushes, and penetrating fluids.
- Understand that your configuration may require additional steps that are not described in the illustrations or instruction to perform the disassembly.
- This retrofit is intended to be performed by a person or persons with the basic knowledge of servicing similar equipment. Contact Waterous with questions.

Tools Required

- Typical automotive mechanics hand tools.
- Suitable support and lifting equipment.
- Clean lint-free cloth or similar.

Preparing the Apparatus

- Park the apparatus on a level surface in a well-lit area.
- Engage the parking brake.
- Shut off the engine and remove the key from the ignition switch.
- Allow the apparatus to cool before servicing.
- Relieve any pressure in equipment associated with the retrofit.

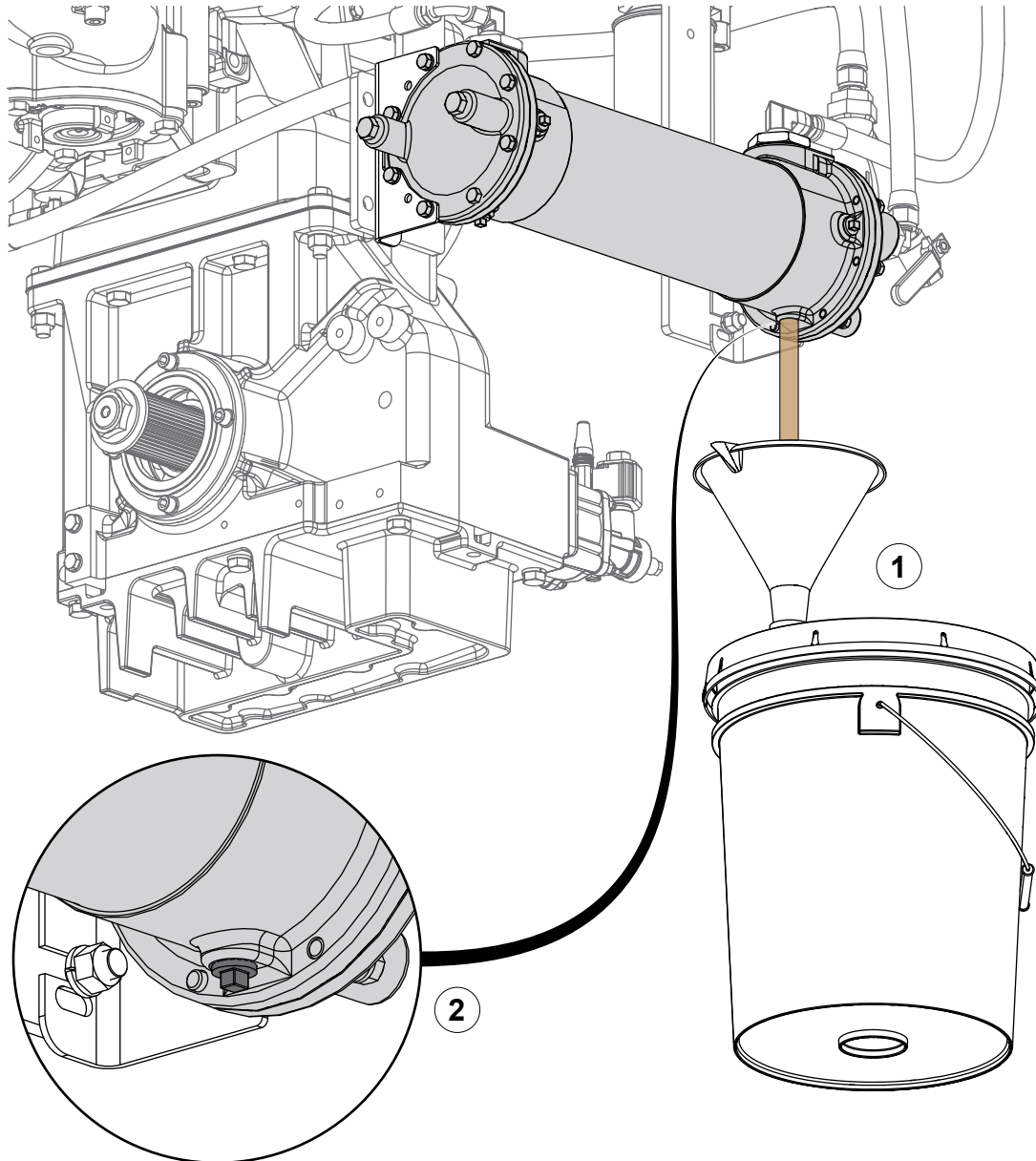
Best Practices

- Remove any dirt, sand, grease, or oil from equipment associated with the retrofit.
- Only use a clean lint-free cloth, a debris free work surface, and properly maintained tools to perform the disassembly.
- Do not reuse the self-locking nuts.
- Apply penetrating oil to screws and nuts before disassembly.
- Read, understand, and follow all safety instructions. Contact Waterous with questions.

Performing the Retrofit

- Review this instruction before beginning. Use that information and the understanding of your system to plan the retrofit.
- Capture information such as component orientation, wire connections, hose or plumbing arrangements, or any components that require removal or relocation before performing the retrofit.
- Know that every application is unique and may require additional steps not described in this instruction to complete the retrofit.

Draining the Compressor Oil

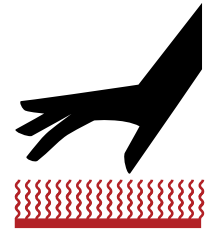


Use the illustration and instructions to drain the oil in the compressor. Before starting the retrofit, make sure that you allow the components to cool if recently operated and purge the pressure from the system before starting the retrofit.

! WARNING

Hot Surface

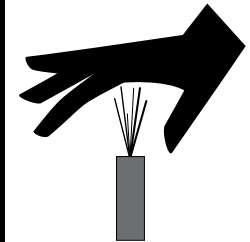
- Hot surfaces can burn you.
- Do not touch the surface during operation—allow it to cool after operating.



! WARNING

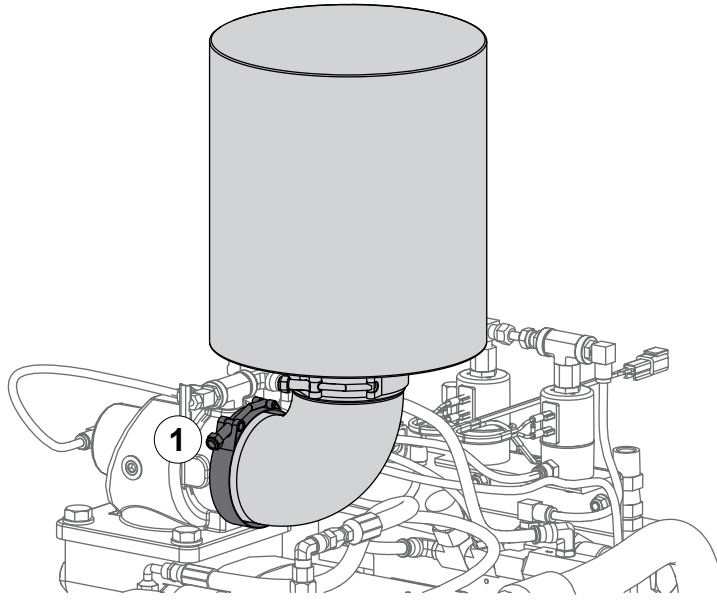
High Pressure

- Liquid ejected at high pressure can cause serious injury.
- Drain the pump after use and before servicing.



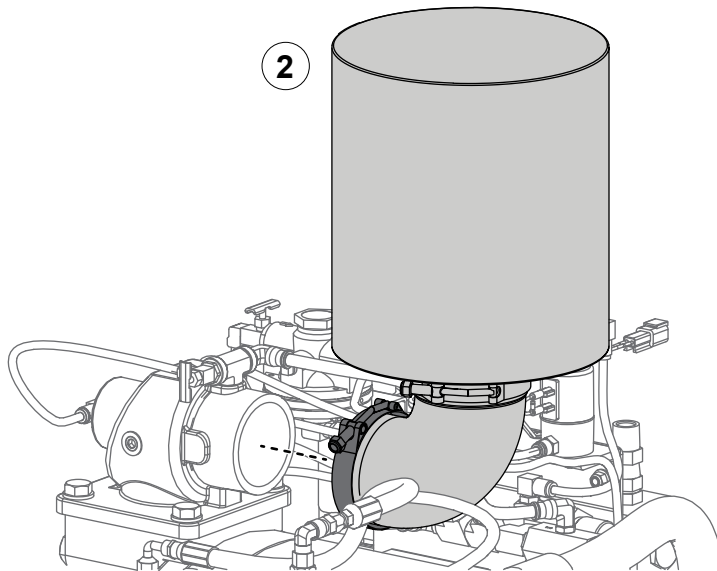
- 1 Place a suitable container under the compressor to collect approximately 2.5 gal.(9.5 L) of oil.
- 2 Remove the drain plug to allow the oil to drain. After draining the oil, install the drain plug.

Removing the Air Filter

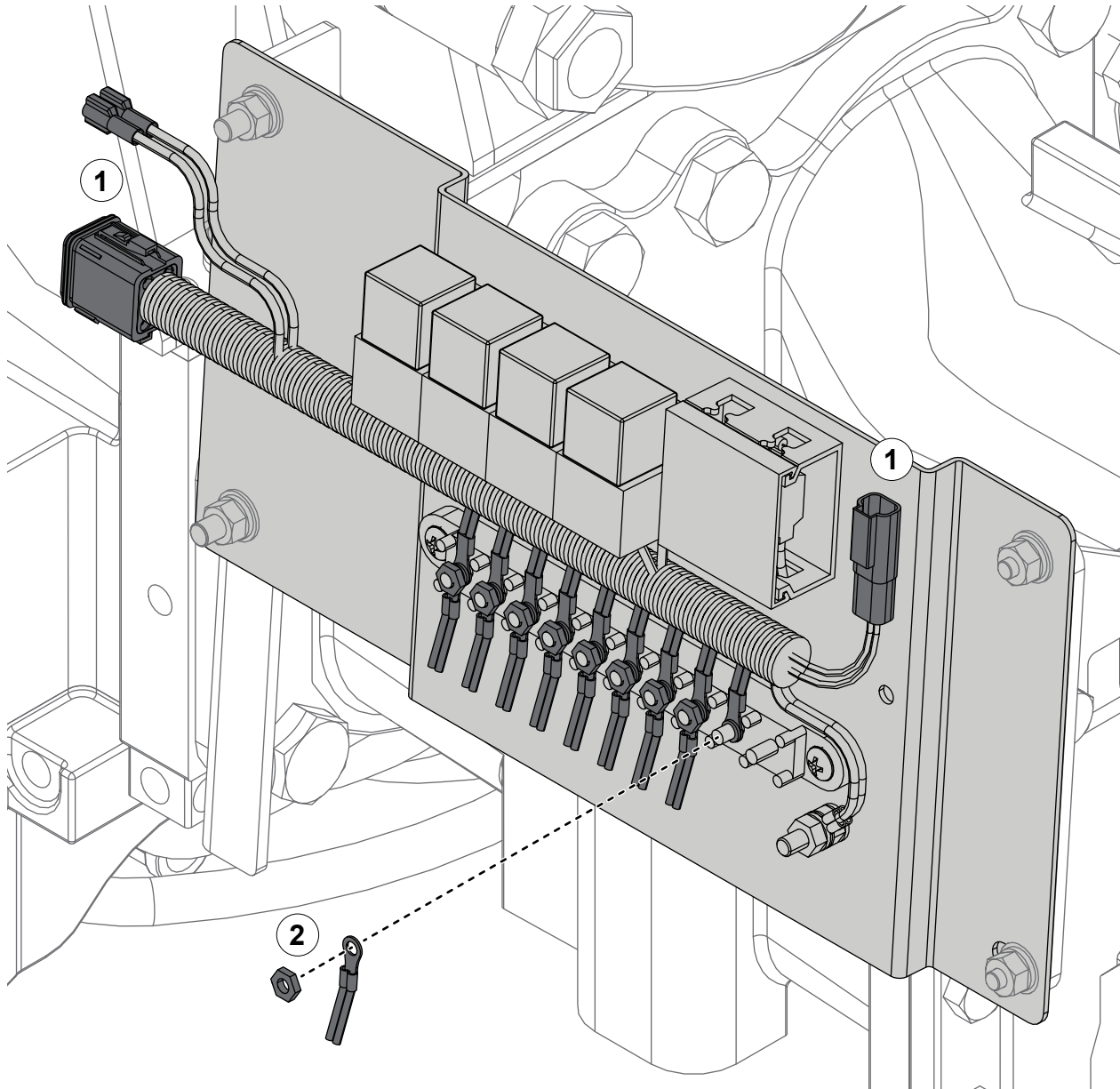


Use the illustrations and instructions to remove the air filter assembly.

- 1 Loosen the T-bolt that secures the air filter assembly to the air-inlet on the compressor.
- 2 Remove and set aside the air filter assembly.



Disconnecting the Relay Panel

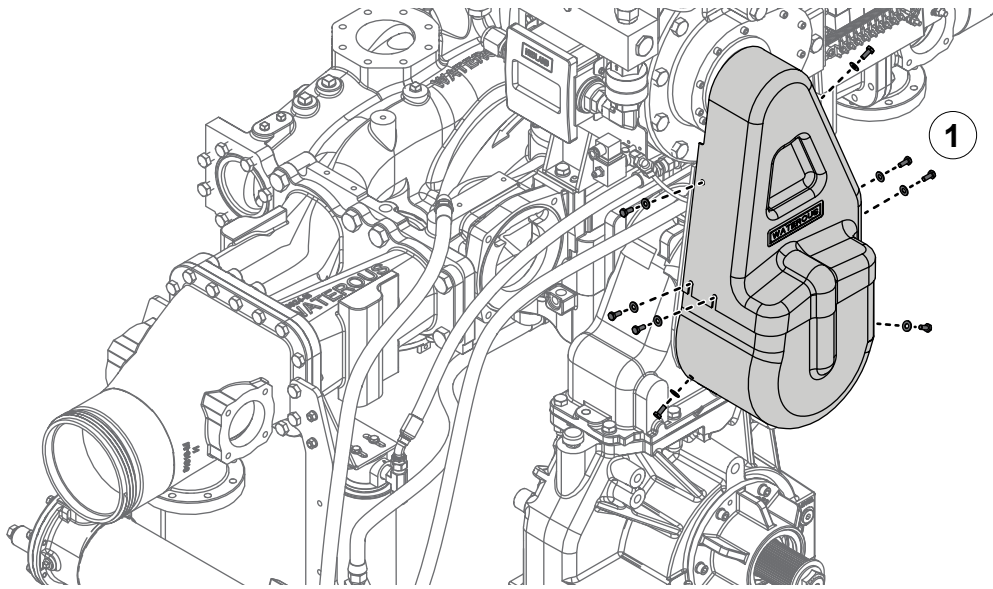


Use the illustration and instructions to disconnect the relay panel.

Note: Make sure that you record the wire connections that you remove from the relay panel. Use that information when you connect the wiring to the replacement relay panel.

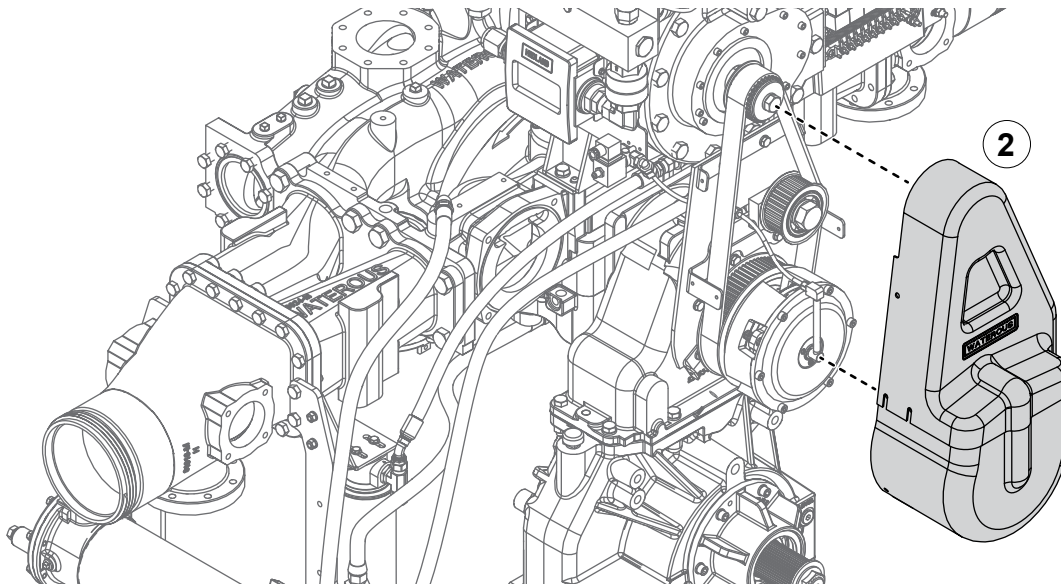
- 1 Disconnect any wire harnesses connected to the relay panel.
- 2 Disconnect apparatus wiring connected to the terminal block.

Removing the Belt Cover

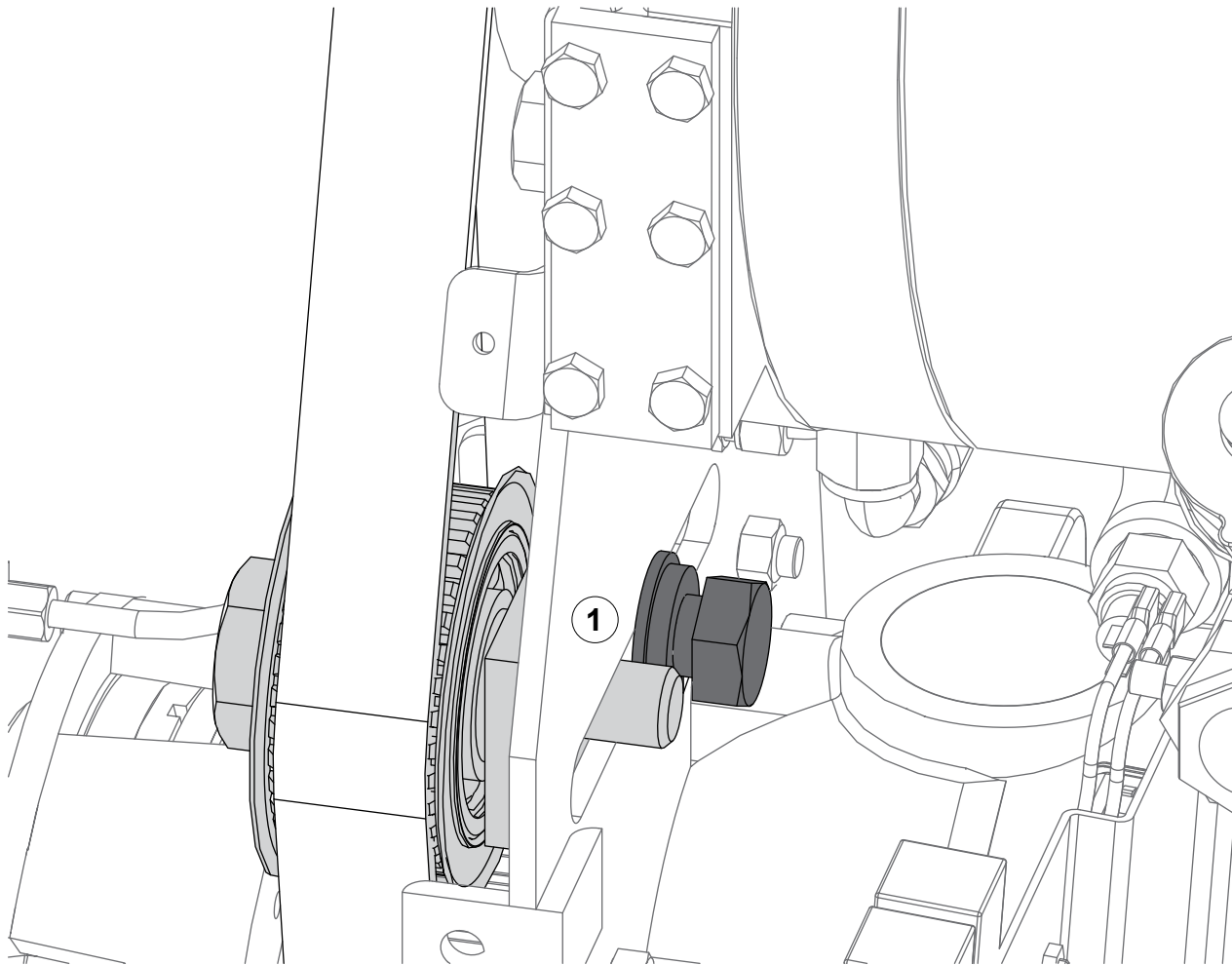


Use the illustrations and instructions to remove the belt cover.

- 1 Remove the belt cover hardware and discard or recycle it in accordance with local regulations.
- 2 Remove the belt covers and discard or recycle them in accordance with local regulations.



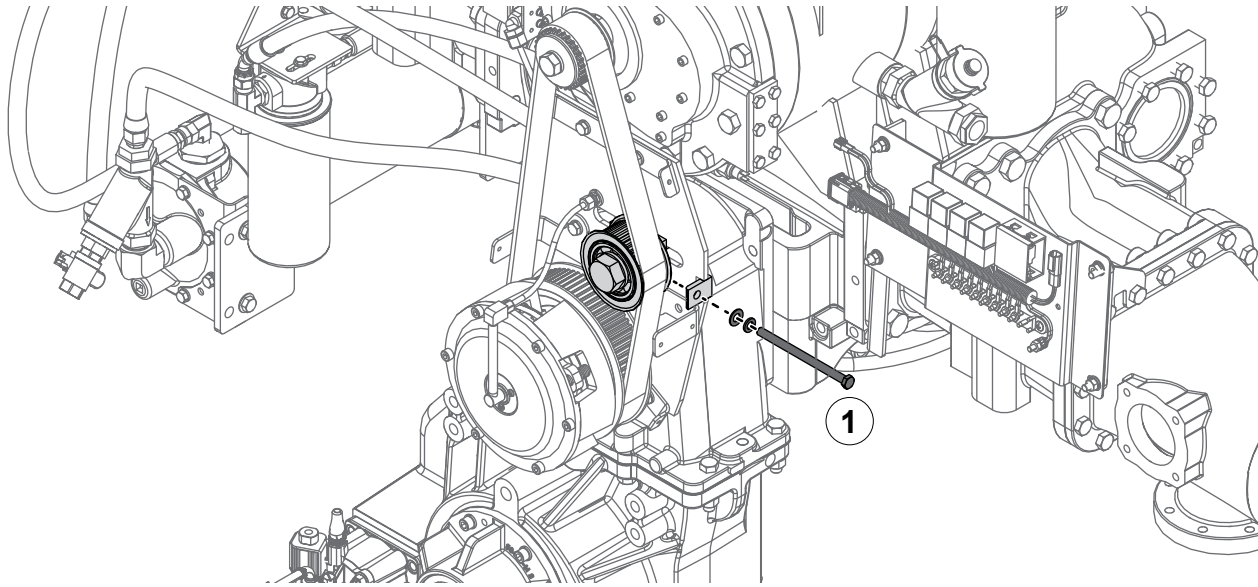
Loosening the Belt Tension



Use the illustration and instruction to loosen the idler adjustment block to loosen the belt tension.

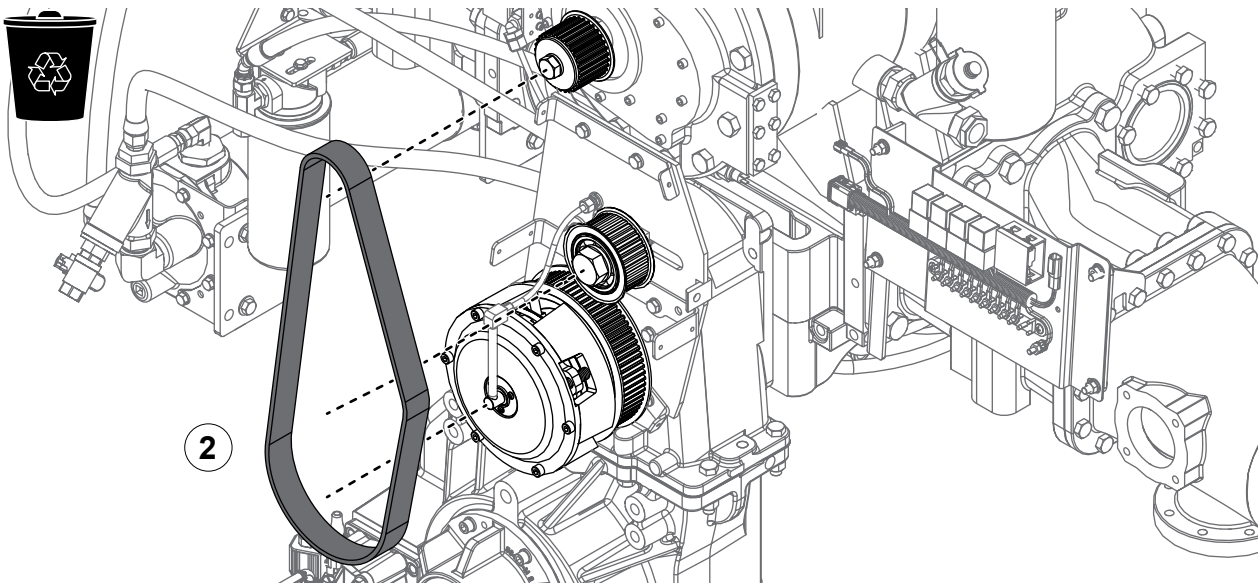
- 1 Loosen the hardware that locks the idler adjustment block position.

Removing the Drive Belt

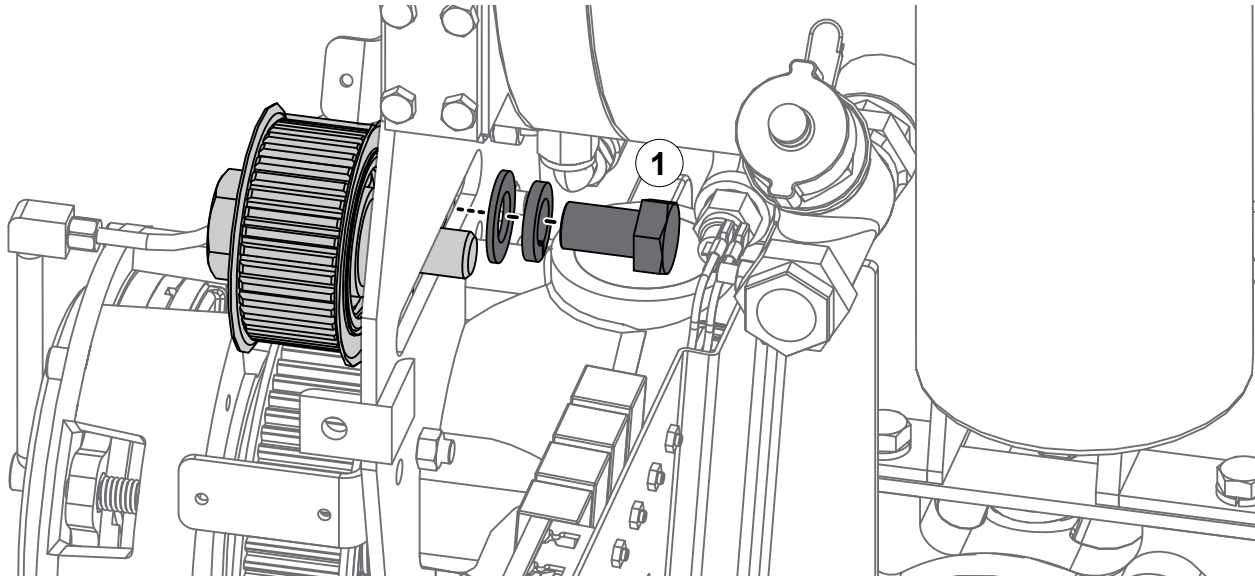


Use the illustrations and instructions to remove the drive belt.

- 1 Remove and set aside the tensioning screw from the idler adjustment block.
- 2 Remove the drive belt and discard or recycle it in accordance with local regulations.



Removing the Idler Adjustment Block

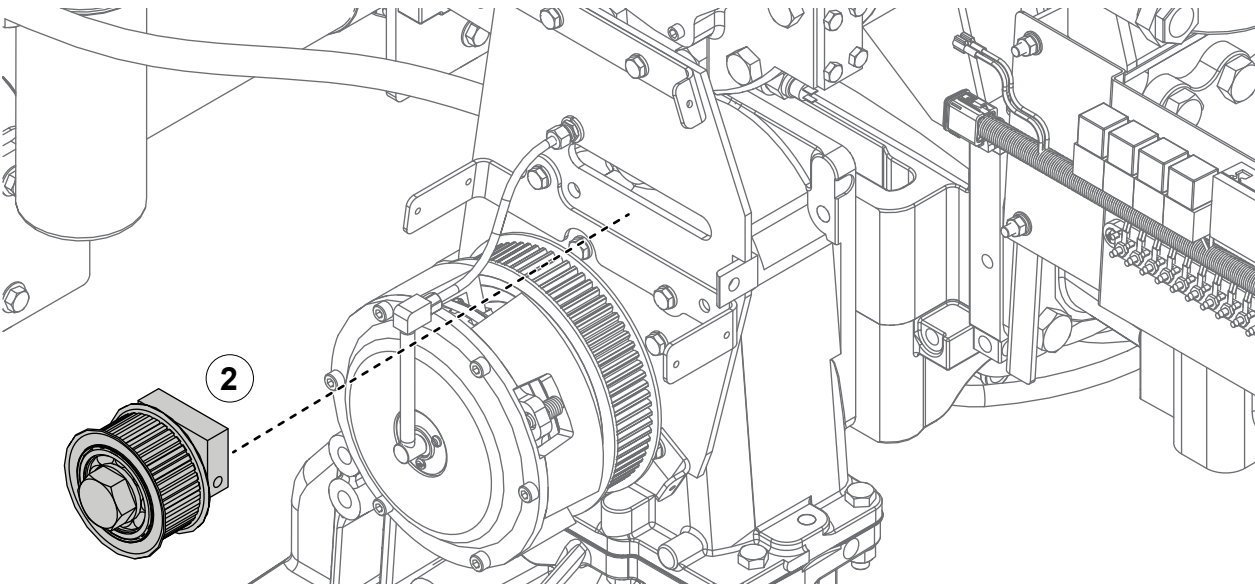


Use the illustrations and instructions to remove the idler adjustment block.

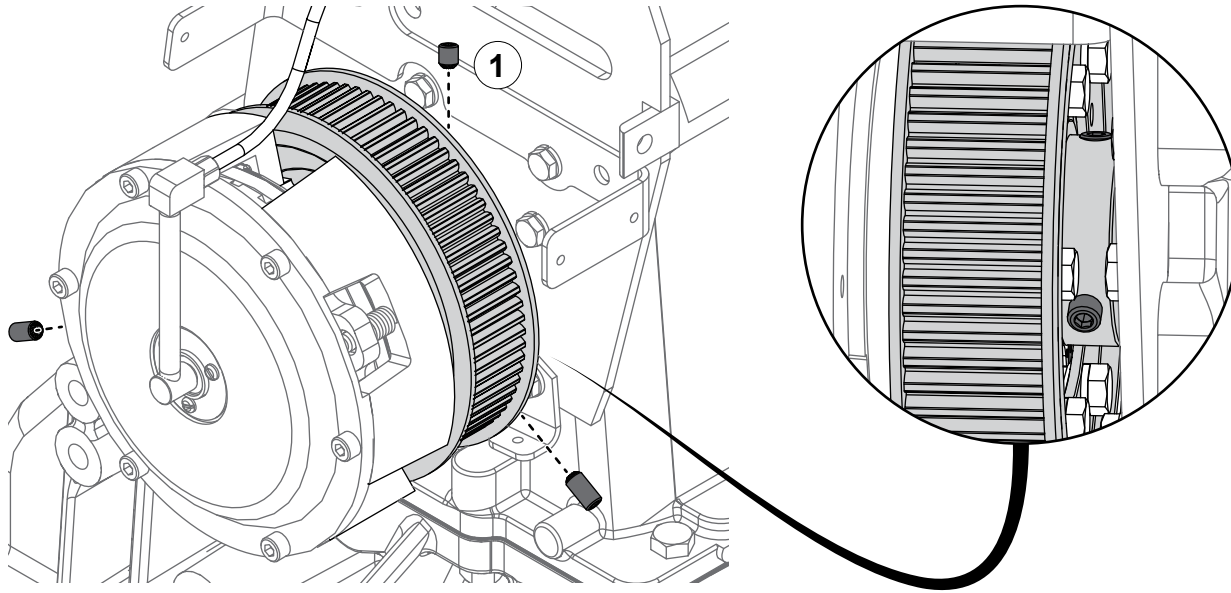
- 1 Remove and set aside the hardware securing the idler adjustment block.

Note: Clean any residual threadlocker remaining on the screw.

- 2 Remove and set aside the idler adjustment block.



Removing the Air-Clutch

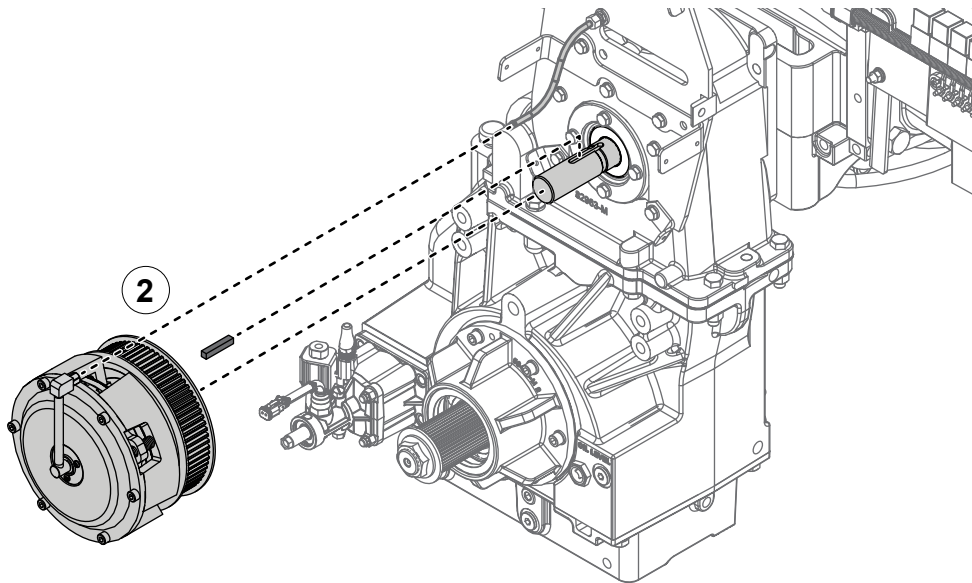


Use the illustrations and instructions to remove the air-clutch.

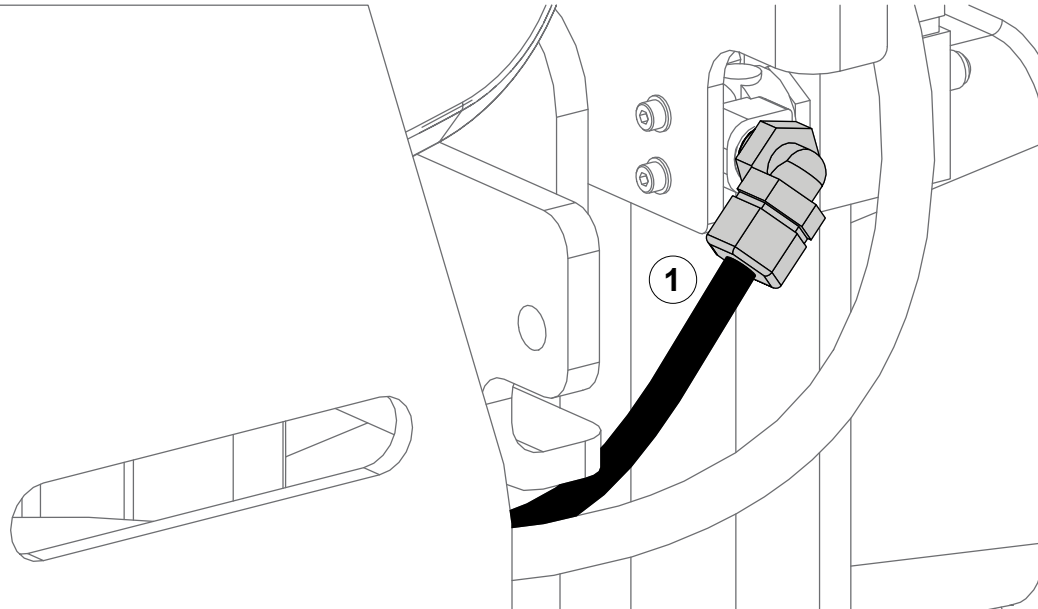
- 1 Locate, remove, and set aside the 3 setscrews securing the air-clutch.

Note: Clean any residual threadlocker remaining on the screws.

- 2 Before removing the air-clutch, disconnect the air-supply tube. Remove and set aside the air-clutch and key.

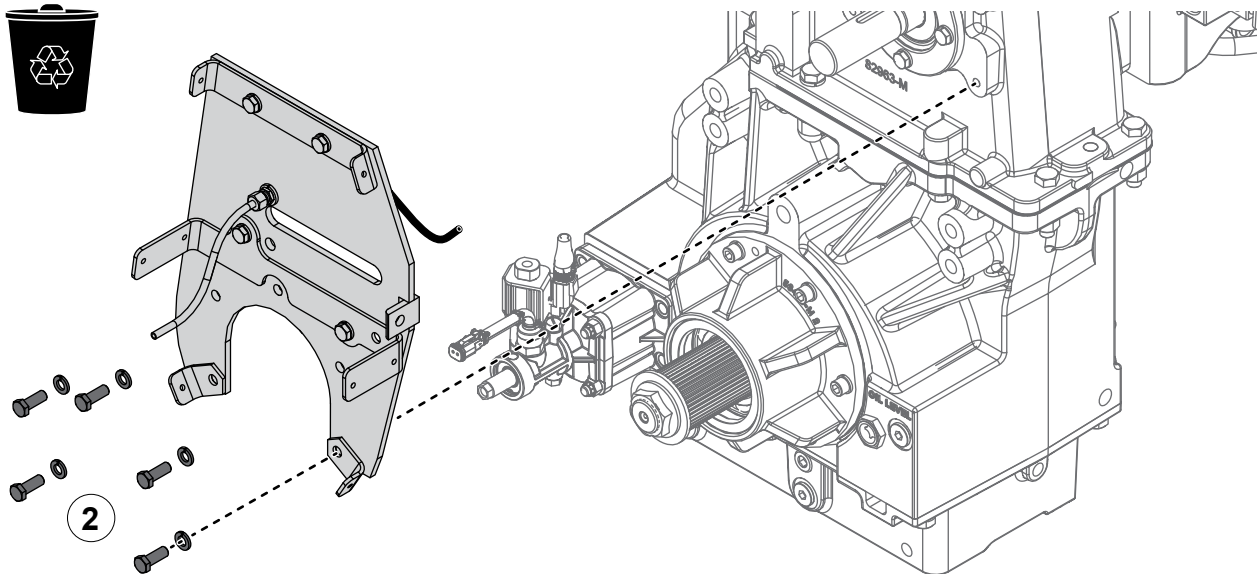


Removing the Compressor Plate

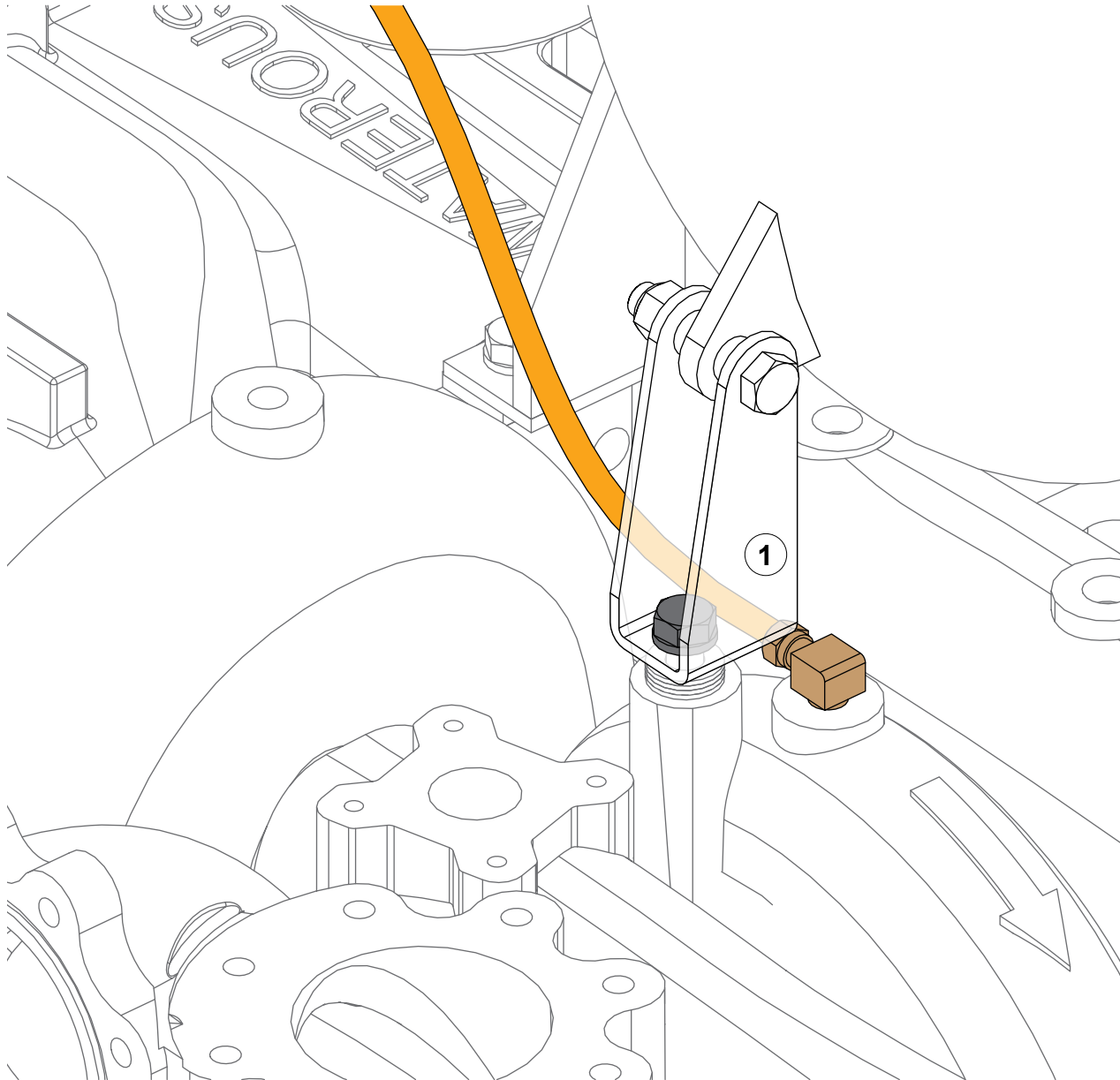


Use the illustrations and instructions to disconnect the air-clutch tube and remove the compressor plate.

- 1 Disconnect the air-clutch tube.
- 2 Remove the hardware and then compressor plate and discard or recycle them in accordance with local regulations.



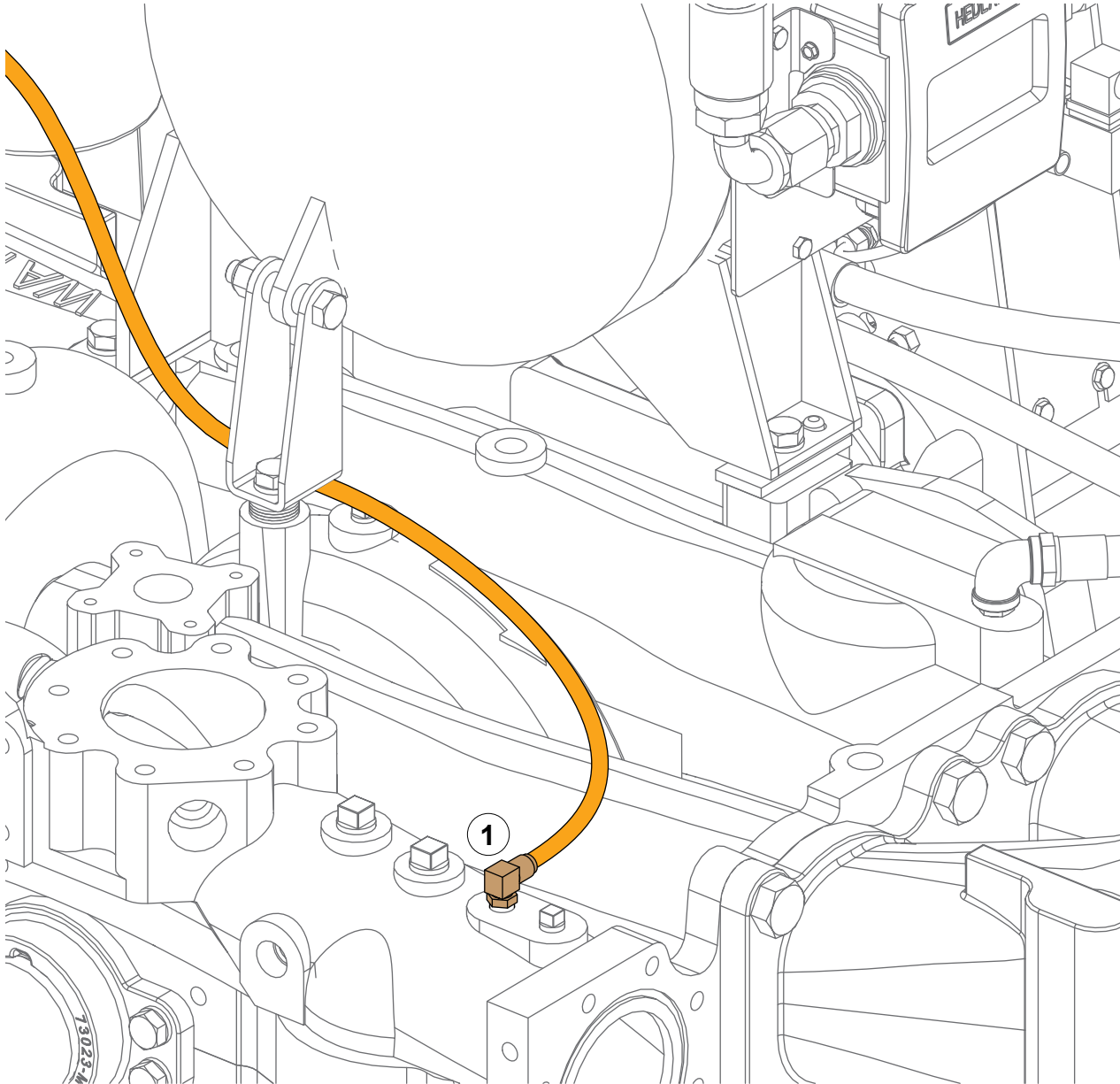
Disconnecting the Balance-Valve Tube—CM Pump



Use the illustrations and instructions to disconnect the balance-valve tube on a CM pump.

- 1 Disconnect the balance-valve tube.

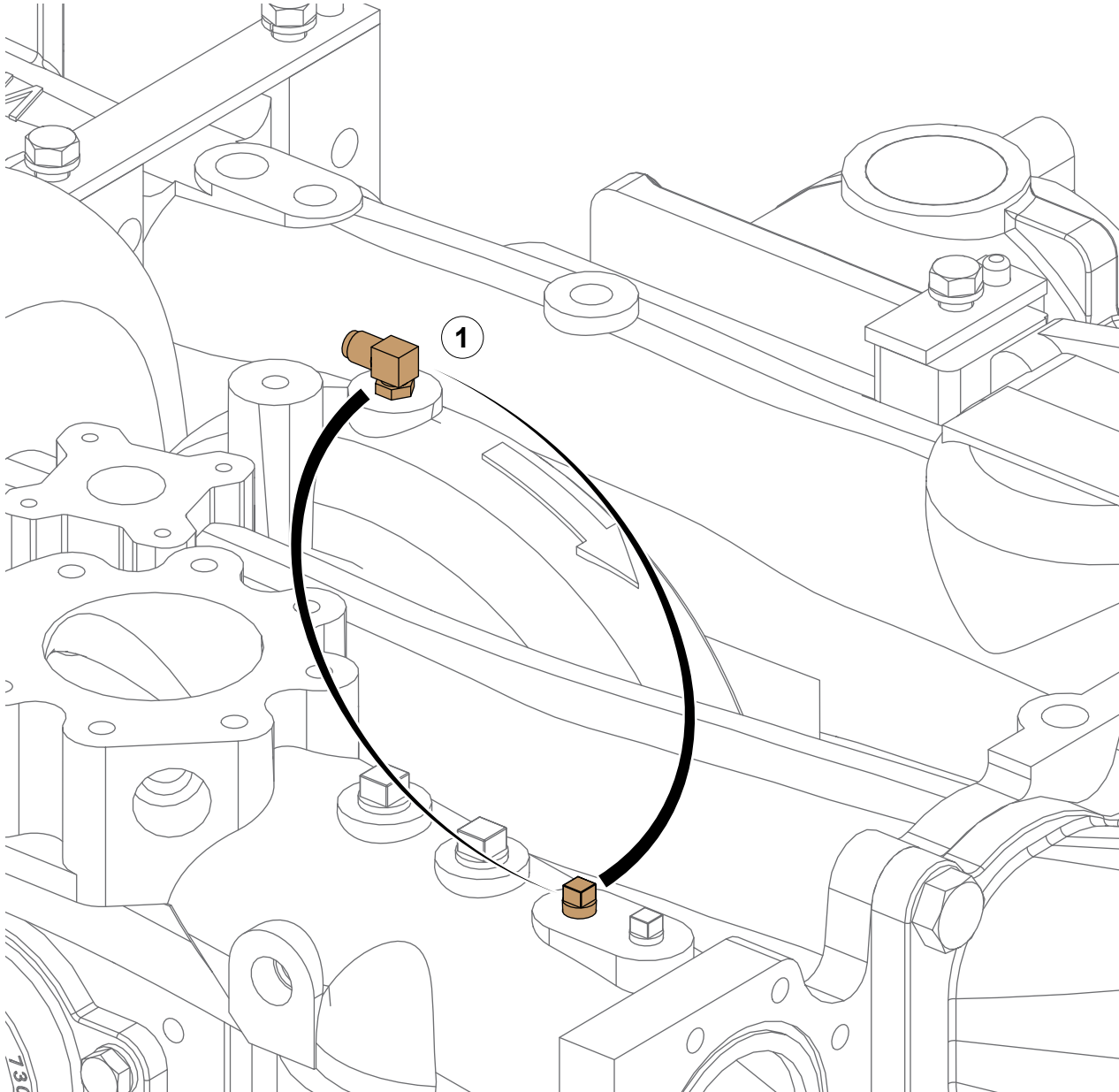
Disconnecting the Balance-Valve Tube—CS Pump



Use the illustrations and instructions to disconnect the balance-valve tube on a CS pump.

- 1 Disconnect the balance-valve tube.

Relocating the Balance-Valve Fitting—CS Pump Only



Use the illustrations and instructions to relocate the balance-valve fitting.

Note: *Only perform this on a CS series pump.*

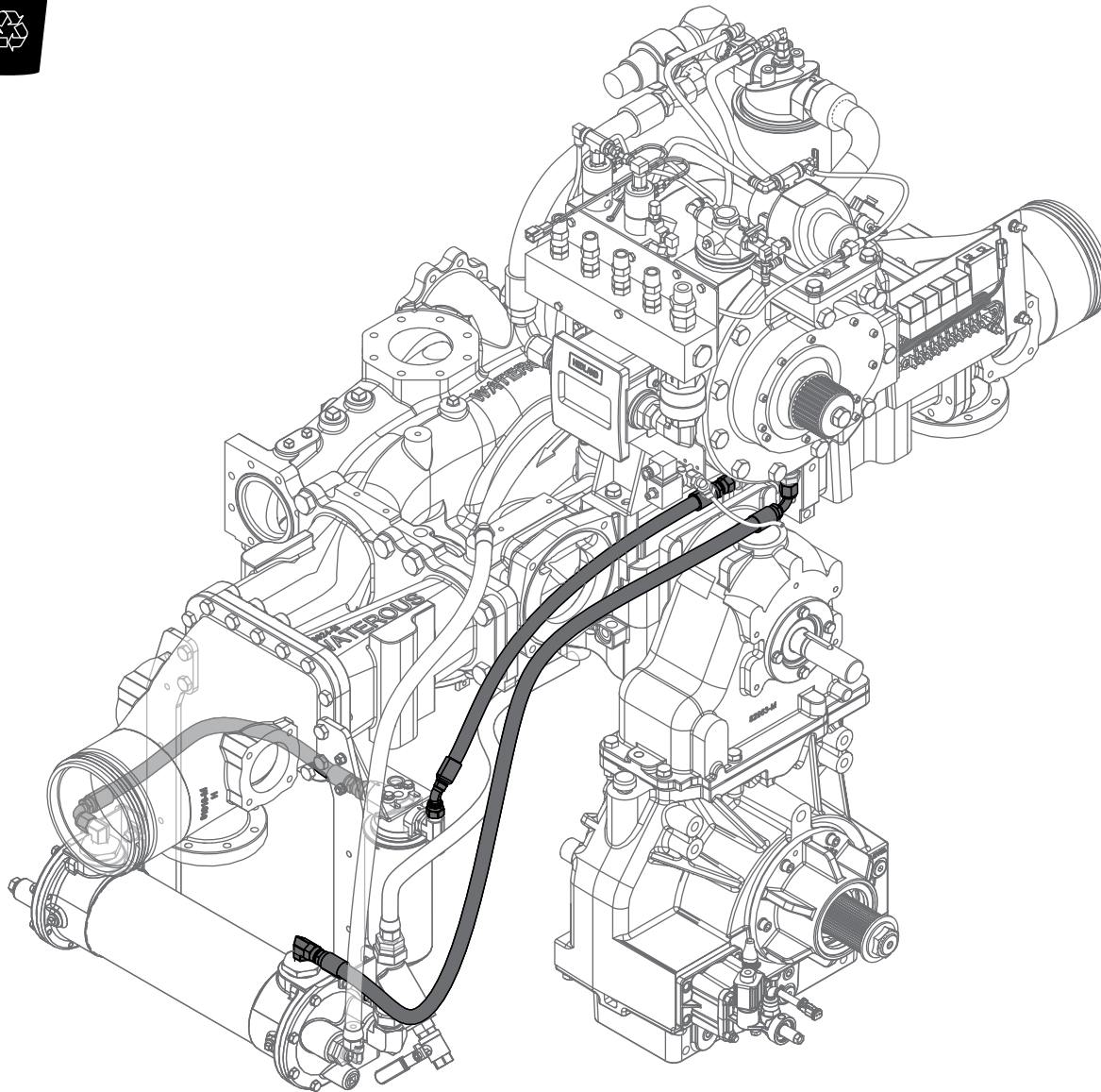
- 1 After disconnecting the balance-valve fitting, switch the fitting and the plug locations. Relocate fitting to the port on the volute and relocate the plug to the port on the pump discharge.

Removing the Cooler Hoses

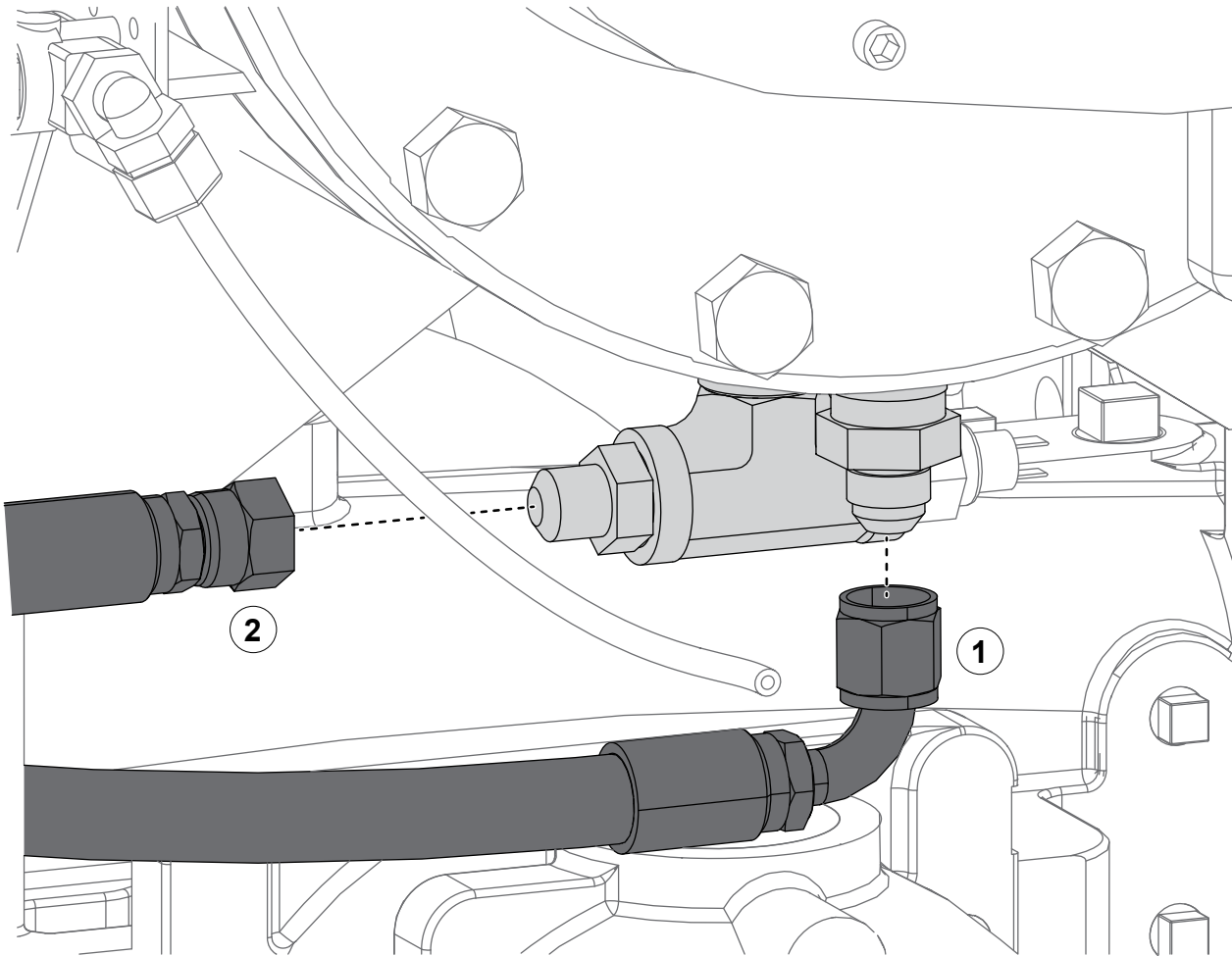


Use the illustrations and instructions on the following pages to remove the cooling hoses.

Note: After you remove the cooler hoses, dispose or recycle them in accordance with local regulations.



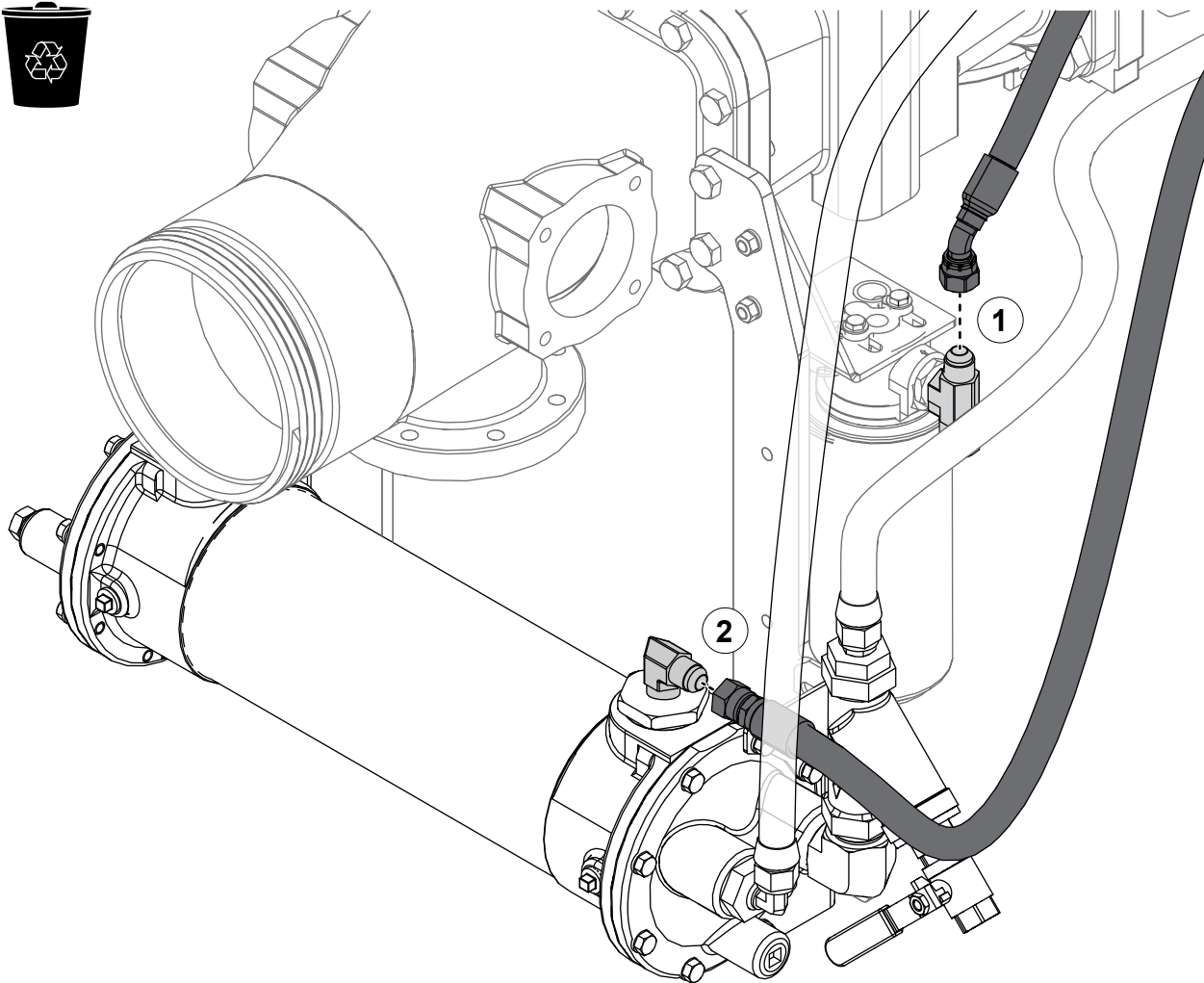
Removing the Cooler Hoses



Use the illustration and instructions to remove the cooler hoses connected to the compressor unit.

- 1 Remove the compressor-to-cooler hose from the compressor.
- 2 Remove the compressor-to-filter hose from the compressor.

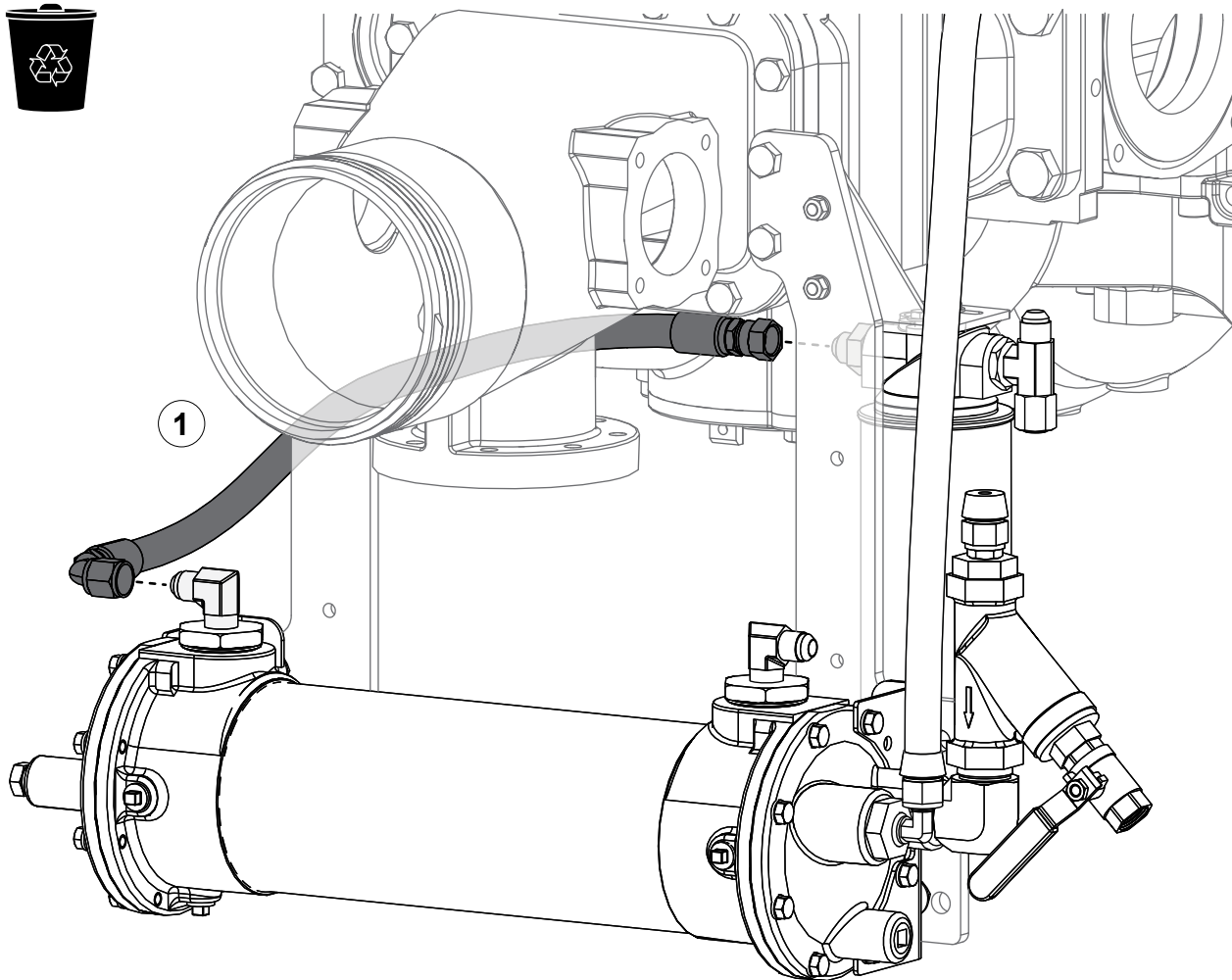
Removing the Cooler Hoses



Use the illustration and instructions to remove the cooler hoses connected to the cooler and oil filter.

- 1 Remove the compressor-to-filter hose and discard or recycle it in accordance with local regulations.
- 2 Remove the compressor-to-cooler hose and discard or recycle it in accordance with local regulations.

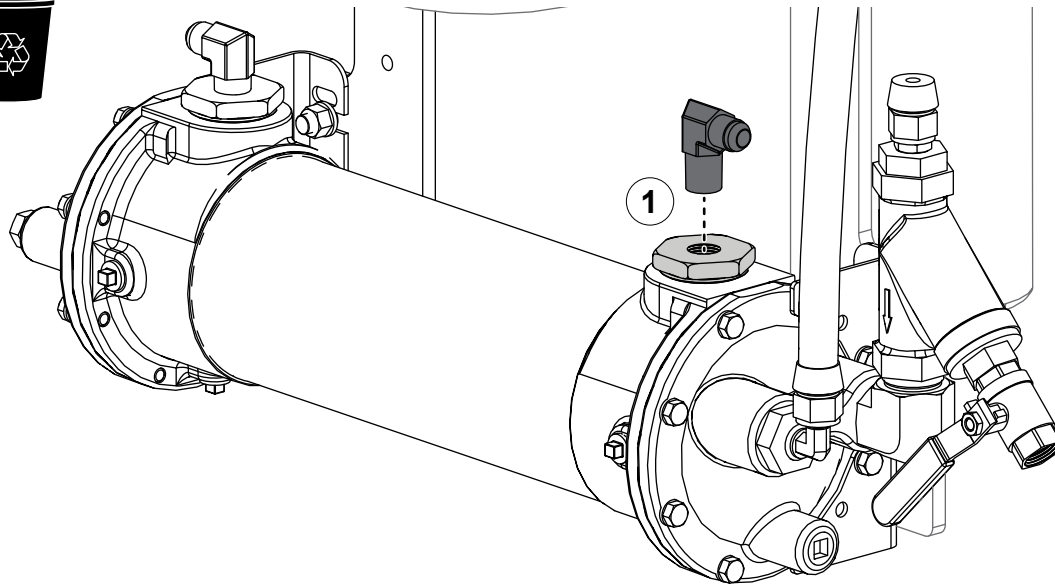
Removing the Cooler Hoses



Use the illustration and instructions to remove the cooling hoses connected to the oil filter and oil cooler.

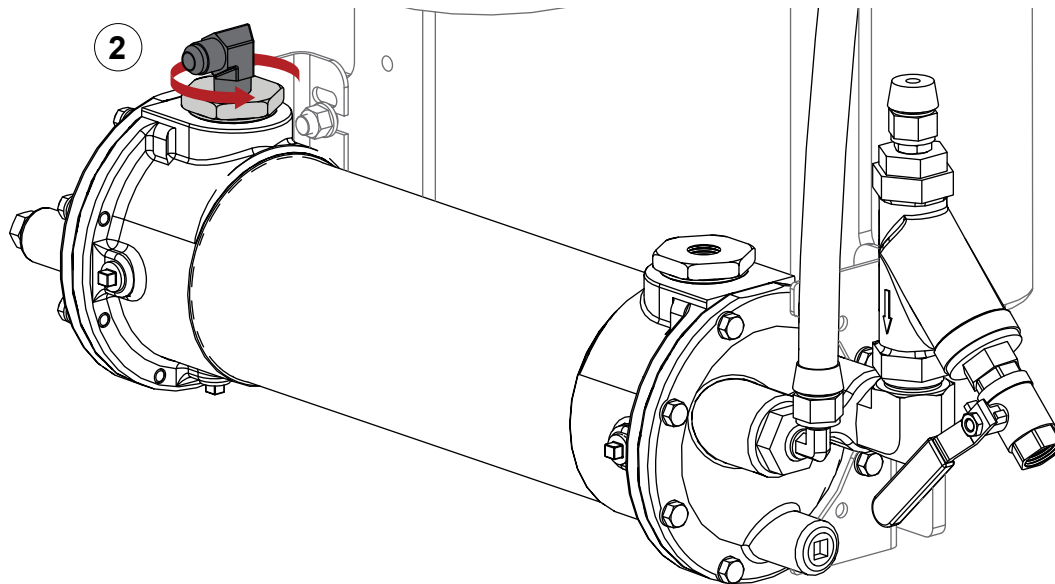
- 1 Remove the filter-to-compressor hose and discard or recycle it in accordance with local regulations.

Preparing the Cooler Fittings

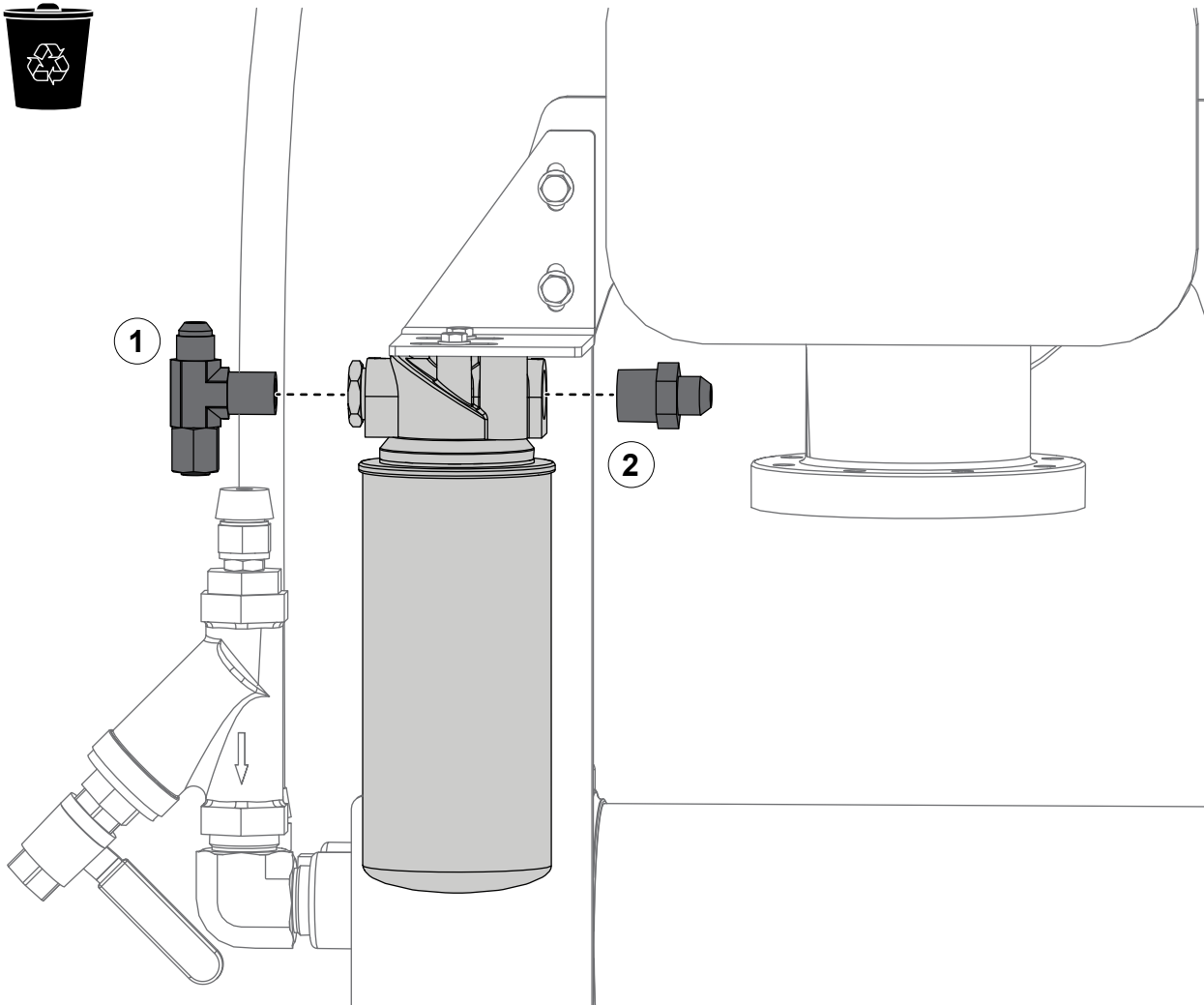


Use the illustrations and instructions to prepare the oil cooler fittings.

- 1 Remove the fitting and discard or recycle it in accordance with local regulations.
- 2 Rotate the fitting 90°.



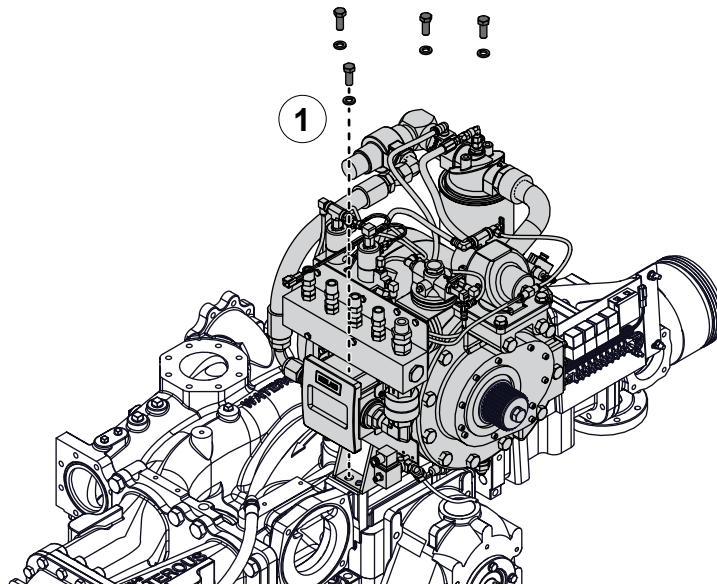
Removing the Oil Filter Fittings



Use the illustration and instructions to remove the oil filter fittings.

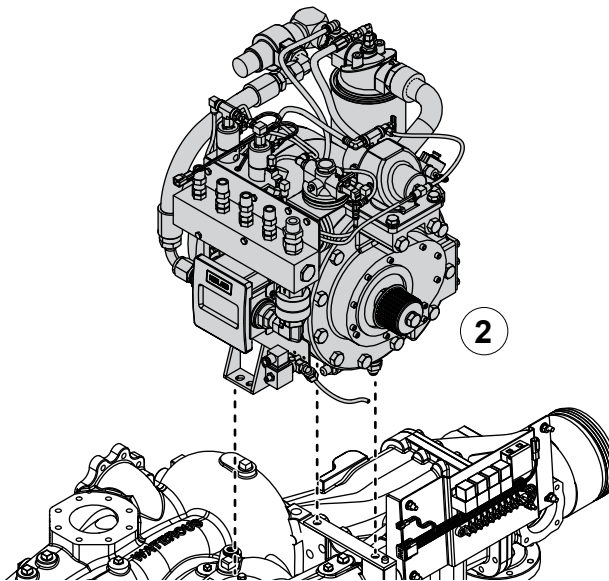
- 1 Remove the T-fitting and discard or recycle it in accordance with local regulations.
- 2 Remove the straight adapter and discard or recycle it in accordance with local regulations.

Removing the Compressor Assembly

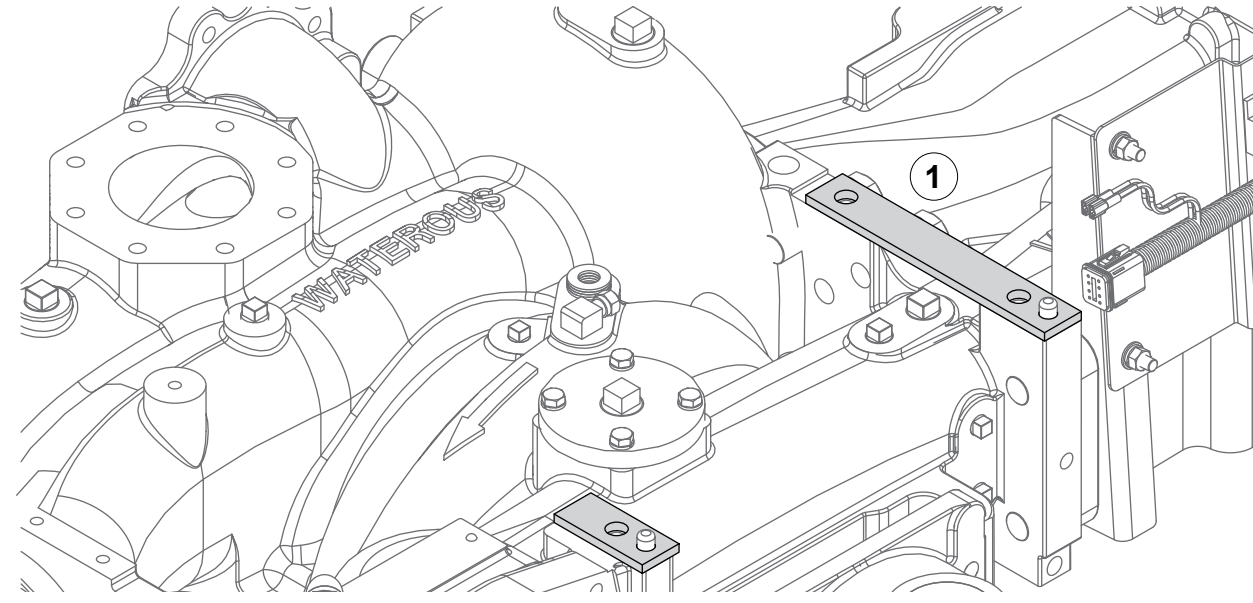


Use the illustrations and instructions to remove the original compressor unit.

- 1 Remove the compressor assembly hardware and discard or recycle it in accordance with local regulations.
- 2 Remove the compressor assembly and discard or recycle it in accordance with local regulations.

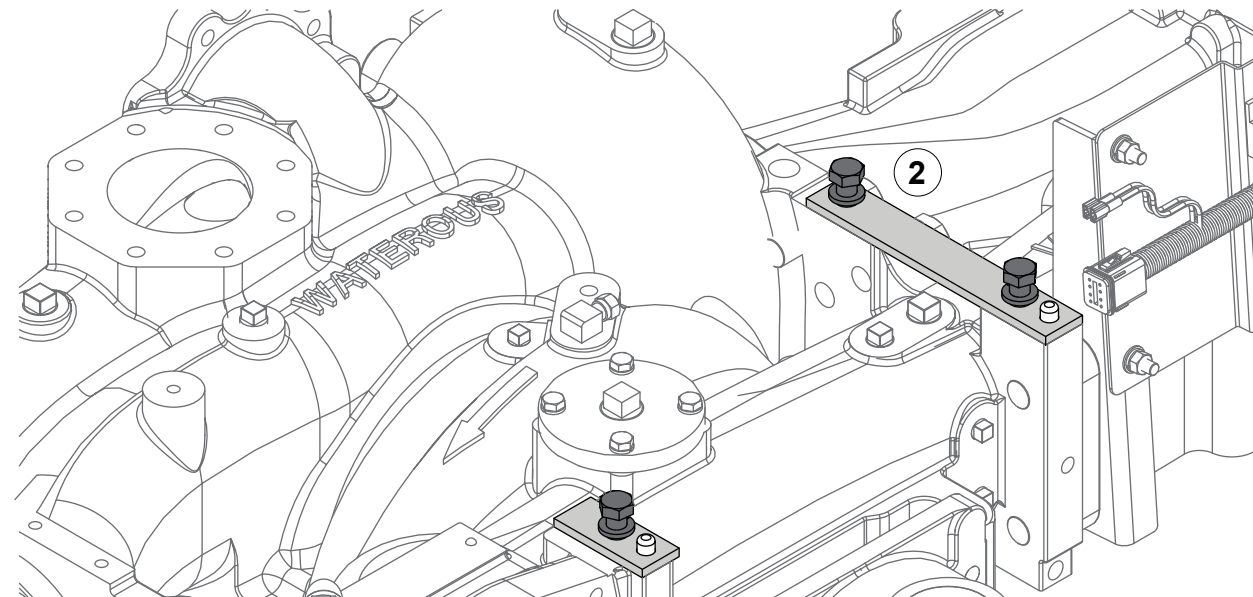


Removing the Compressor Assembly

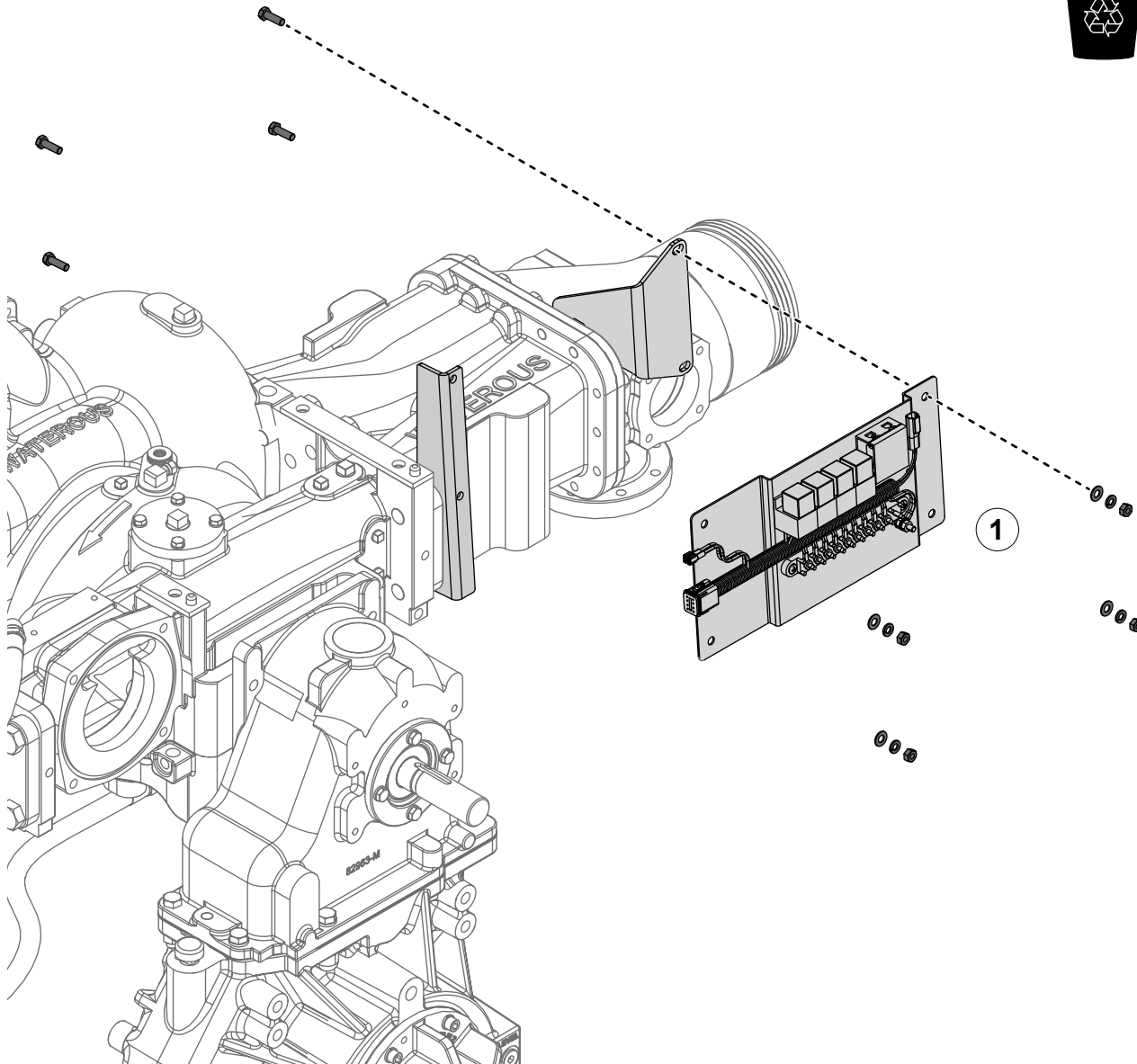


Use the illustrations and instructions to complete the compressor assembly removal.

- 1 Depending on your application, you may have shims installed. If present, preserve the shims for later use.
- 2 Loosely install the compressor mounting hardware to its original location—with or without the presence of the shims.



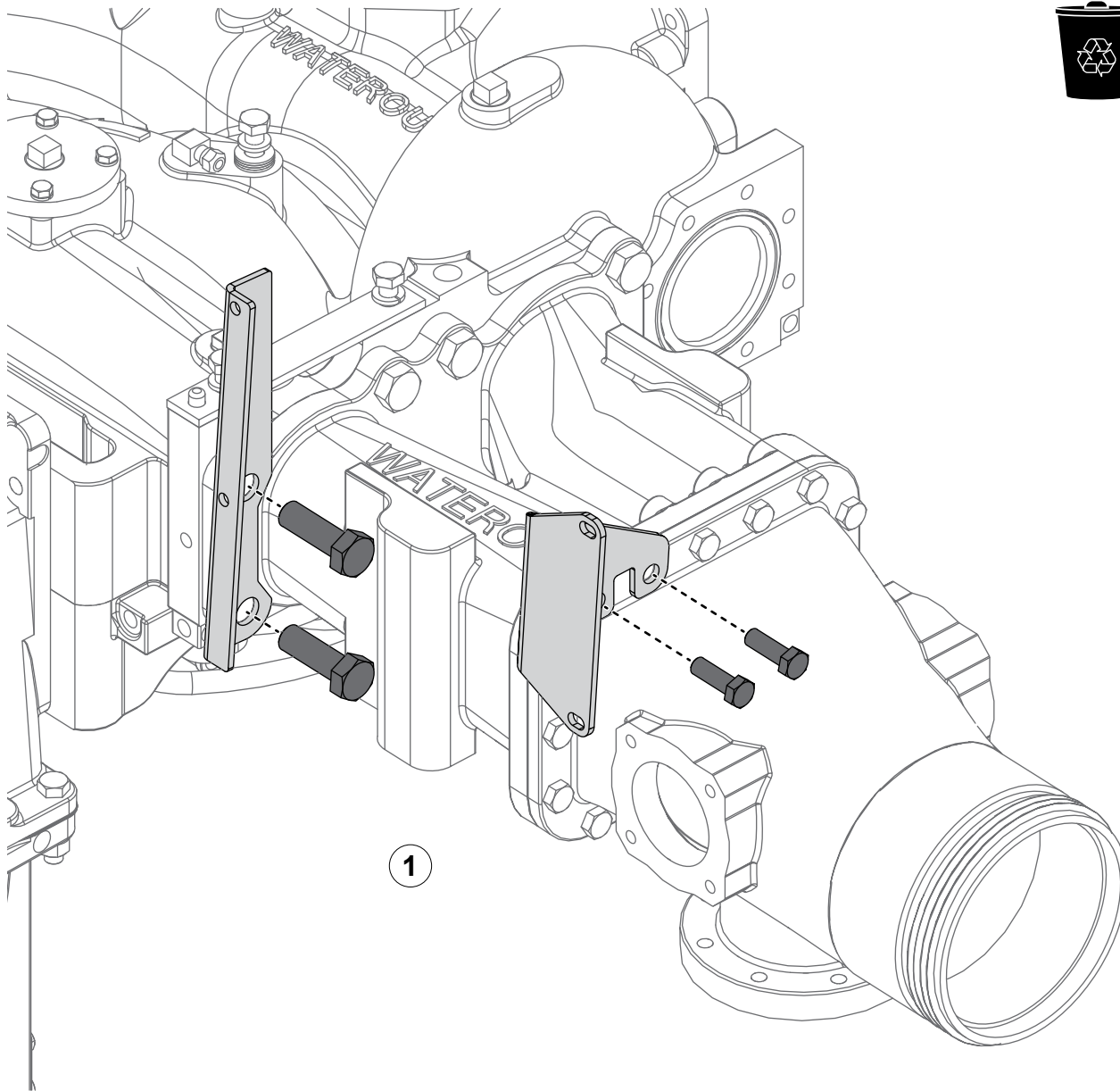
Removing the Relay Panel Assembly



Use the illustration and instruction to remove the relay panel.

- 1 Remove the relay panel along with the hardware and discard or recycle both in accordance with local regulations.

Removing the Relay Panel Brackets



Use the illustration and instruction to remove the relay panel brackets.

- 1 Remove the relay panel brackets along with the hardware and discard or recycle both in accordance with local regulations.

Preparing to Install the Retrofit Kit

- Read and understand the instructions before beginning the install.
- Prepare a workspace suitable to accommodate the install.
- Gather the necessary tools and assembly aides.
- Understand that your configuration may require additional steps that are not described in the illustrations or instruction to perform the assembly.
- This install is intended to be performed by a person or persons with the basic knowledge of servicing similar equipment. Contact Waterous for more information.

Tools Required

- Typical automotive mechanics hand tools.
- Torque wrench capable of 230 ft-lb (312 N·m).
- Suitable support and lifting equipment.

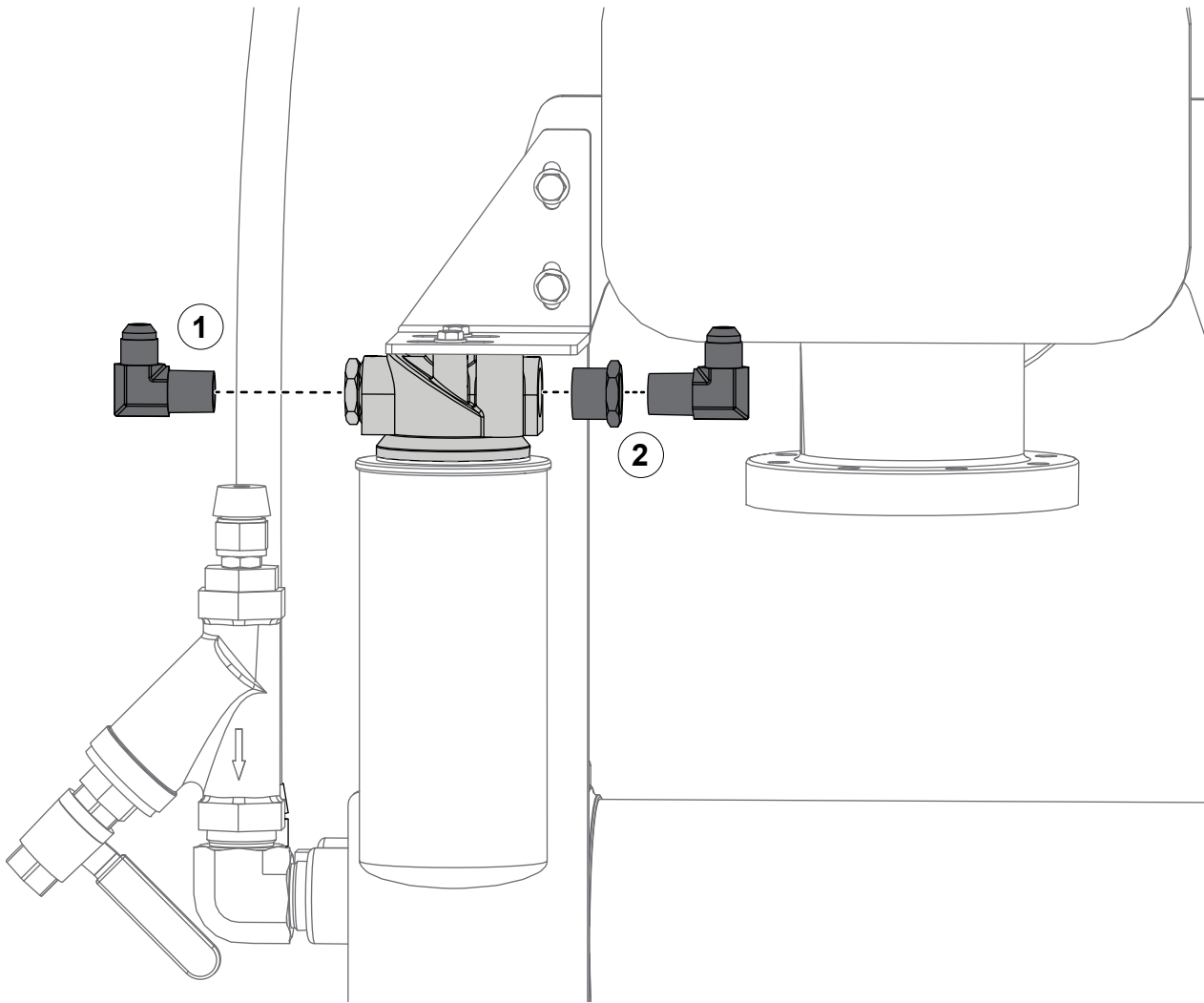
Installing the Retrofit Kit

- Use the information that you recorded during removal process to assist in the installation of the replacement components.
- Refer to the service parts list (SPL) for part identification when required.
- Use established industry practices to install the replacement components.
- Tighten hardware to industry standard torque specification—unless otherwise noted.
- Make sure that you do not over-tighten plugs and fittings.
- When replacing items such as O-rings, bearings, gaskets, oil seals, lubricants, and locknuts, replace them with their equivalent.

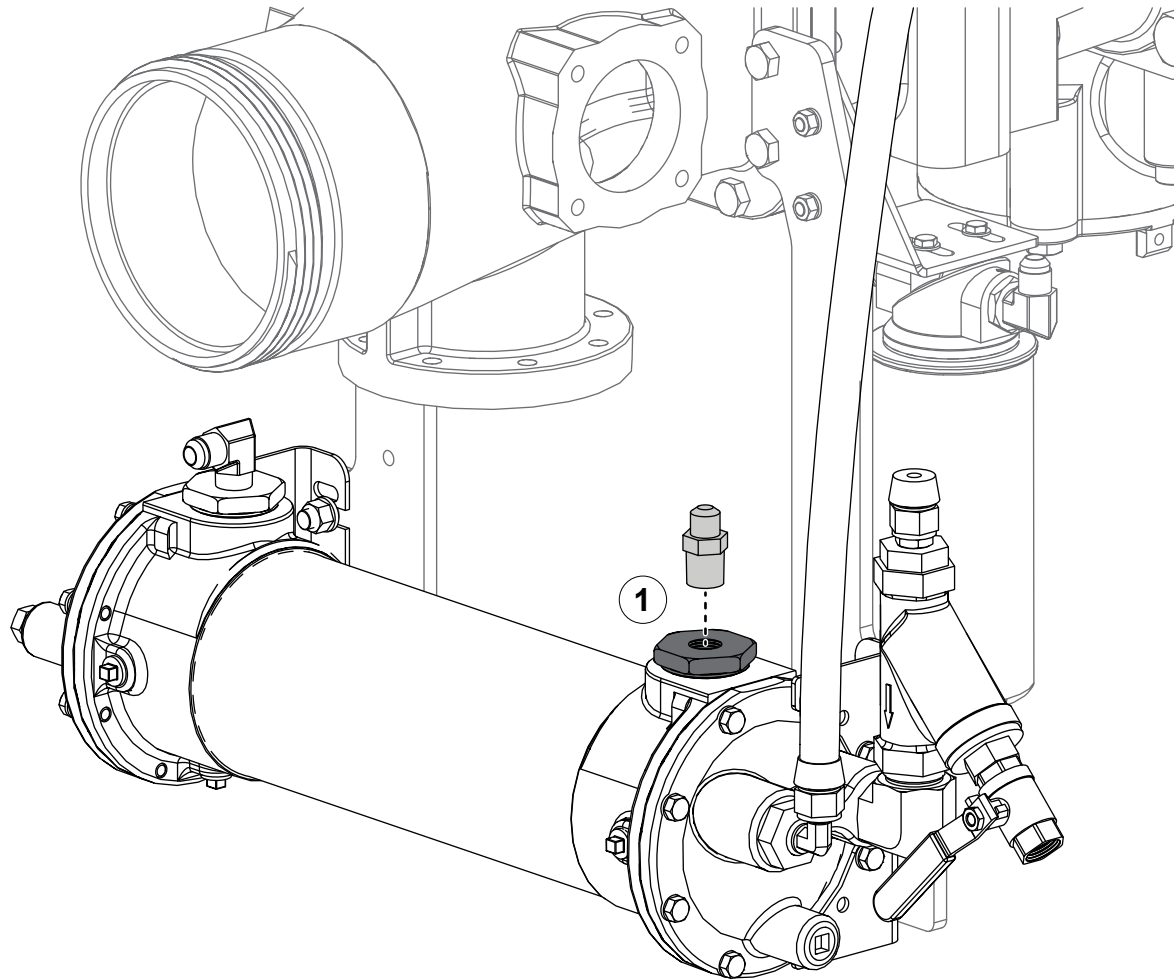
Installing the Oil Filter Fittings

Use the illustration and instructions to install the oil filter fittings.

- 1 Install the 90° 1/2 MNPT X 8 MJIC elbow adapter to the oil filter.
- 2 Install the 3/4 x 1/2 bushing and then the 8 MJIC x 3/4 MNPT straight adapter to the oil filter.



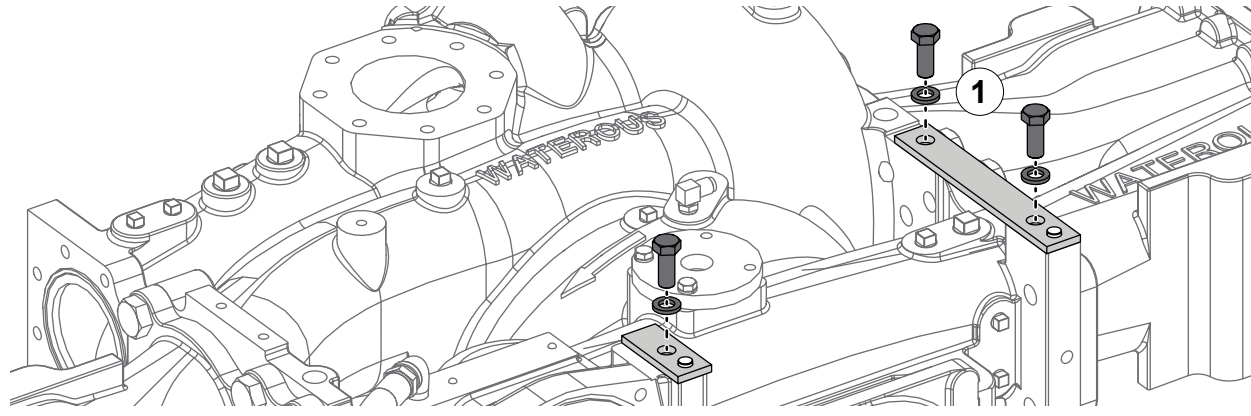
Installing the Oil Cooler Fittings



Use the illustration and instruction to install the oil cooler fittings.

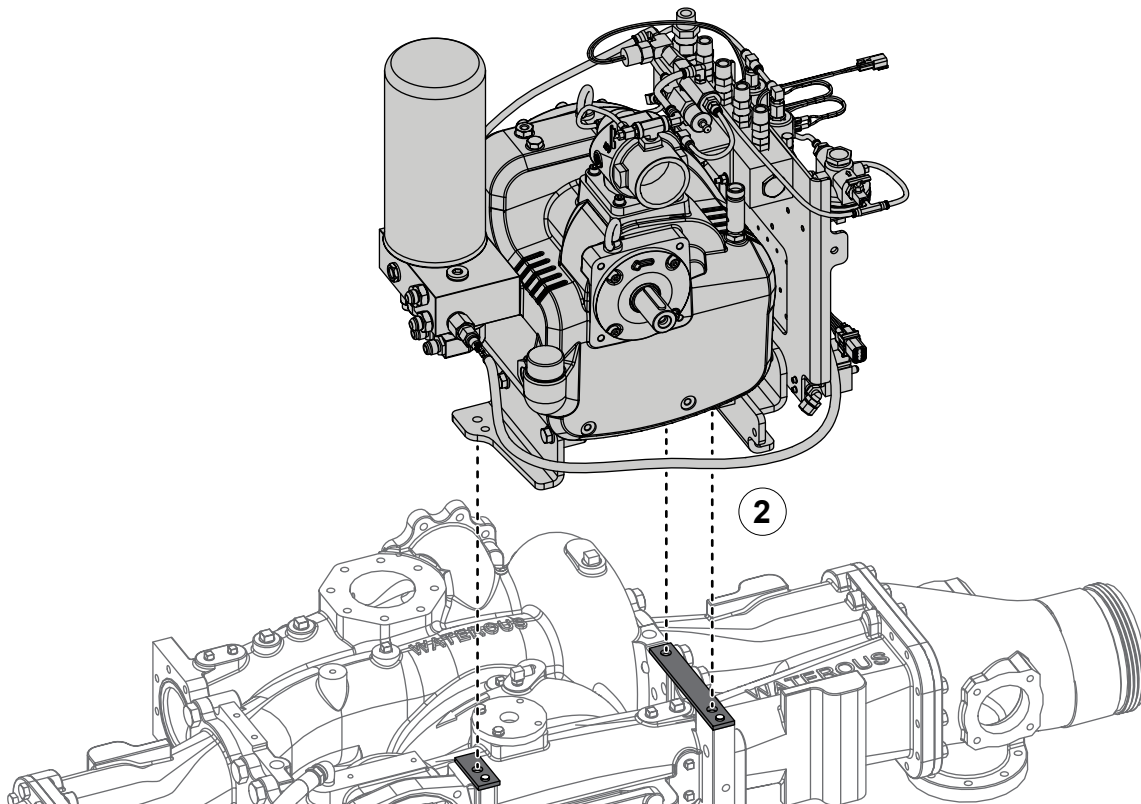
- 1 Install the 8 MJIC x 3/4 MNPT straight adapter to the oil filter.

Installing the Compressor Assembly

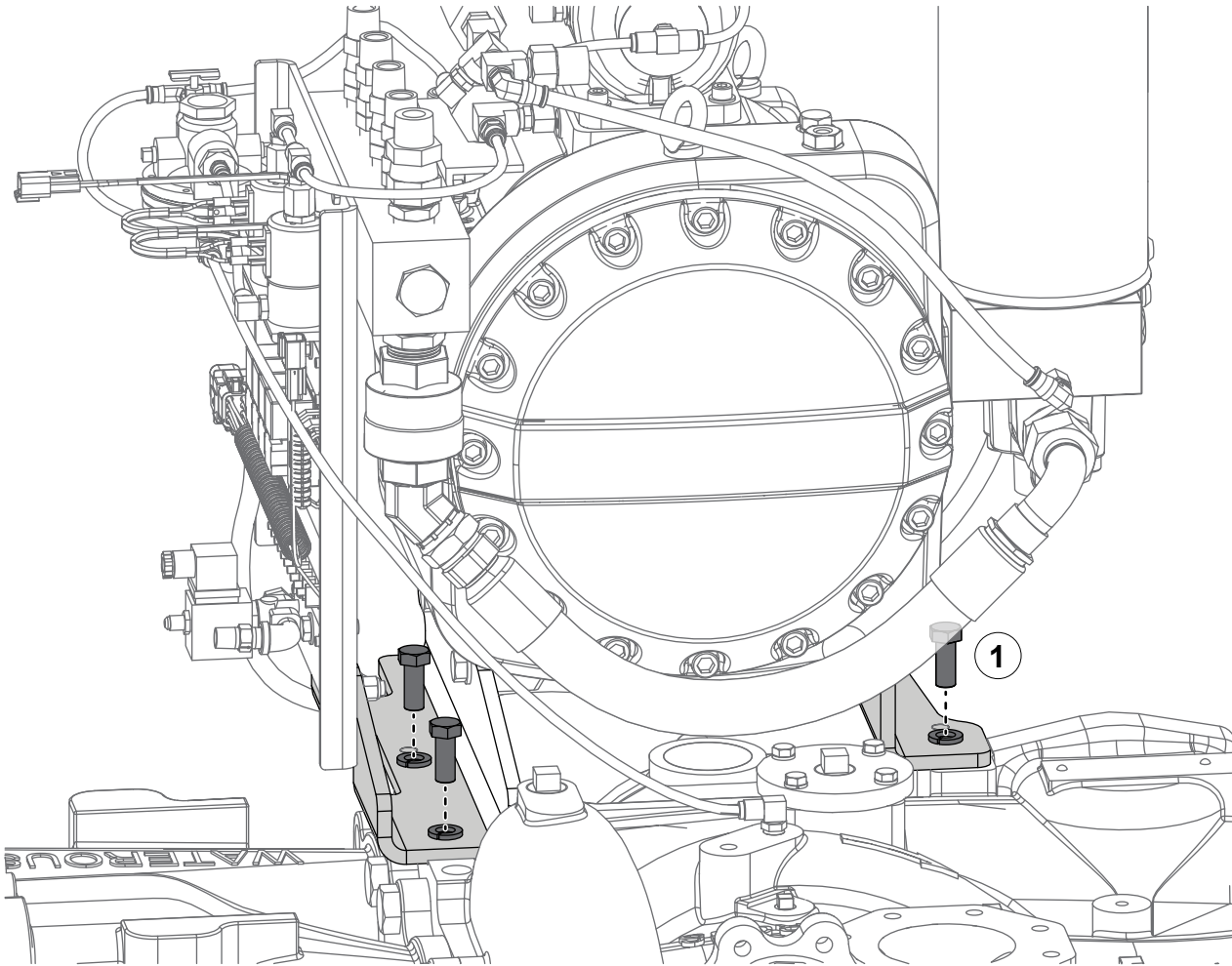


Use the illustrations and instructions to install the oil filter fittings.

- 1 Remove and set aside the hardware that you loosely installed earlier.
- 2 Align the compressor assembly with the mounting location.



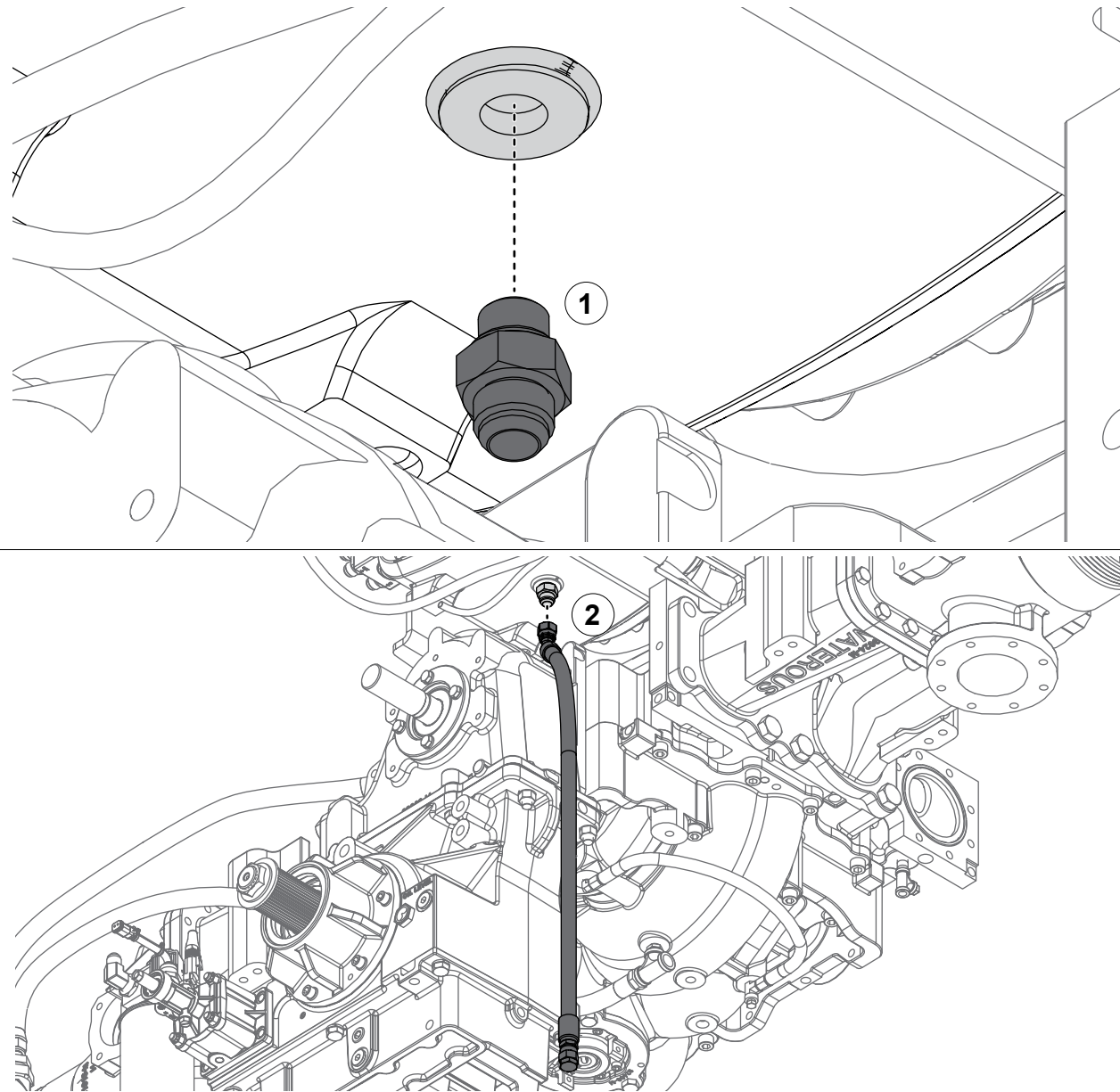
Installing the Compressor Assembly



Use the illustration and instruction to install the compressor assembly.

- 1 Use the hardware that you removed earlier to secure the compressor assembly to the pump body.

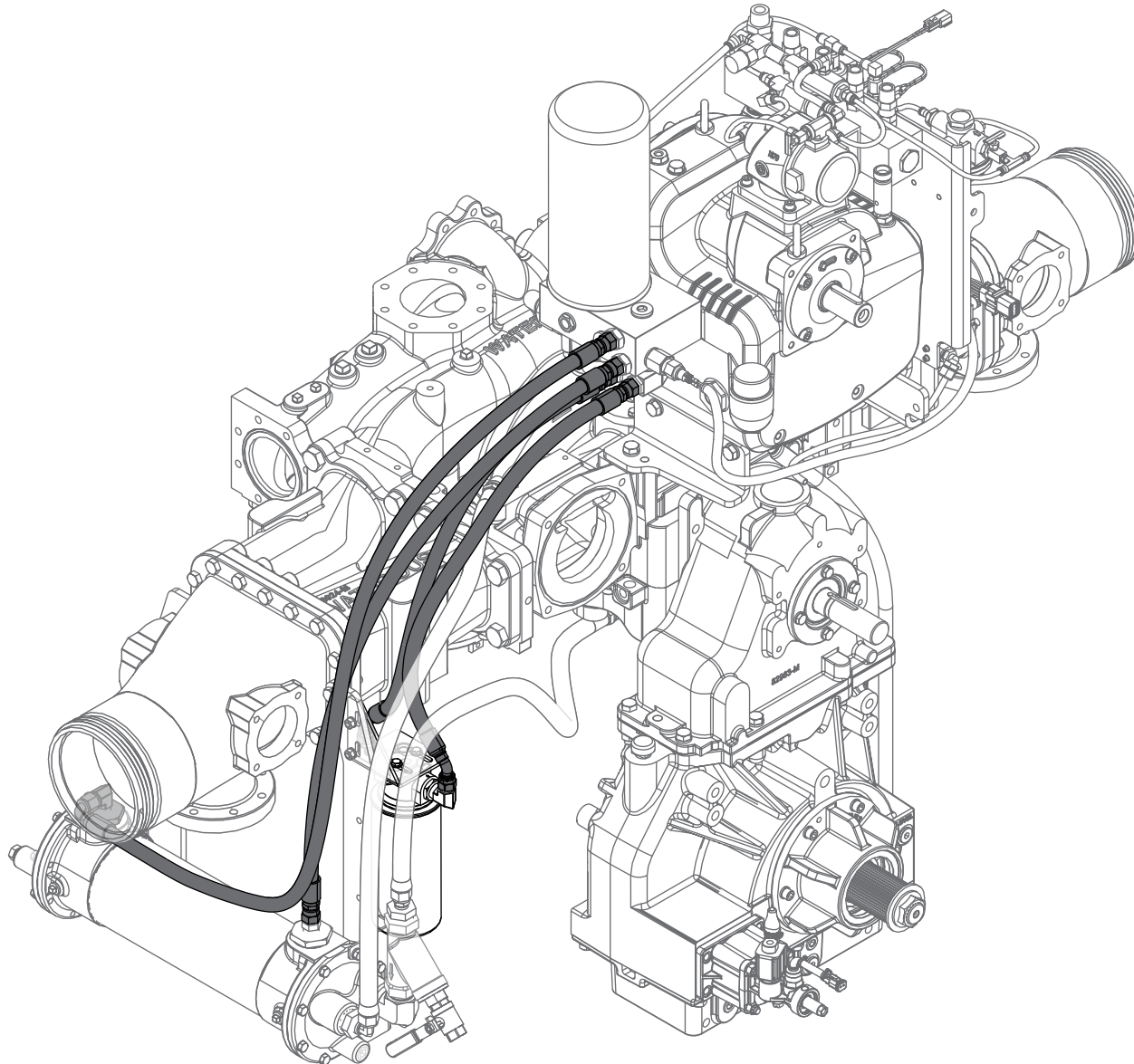
Installing the Compressor Oil Drain Hose



Use the illustrations and instructions to install the oil drain hose.

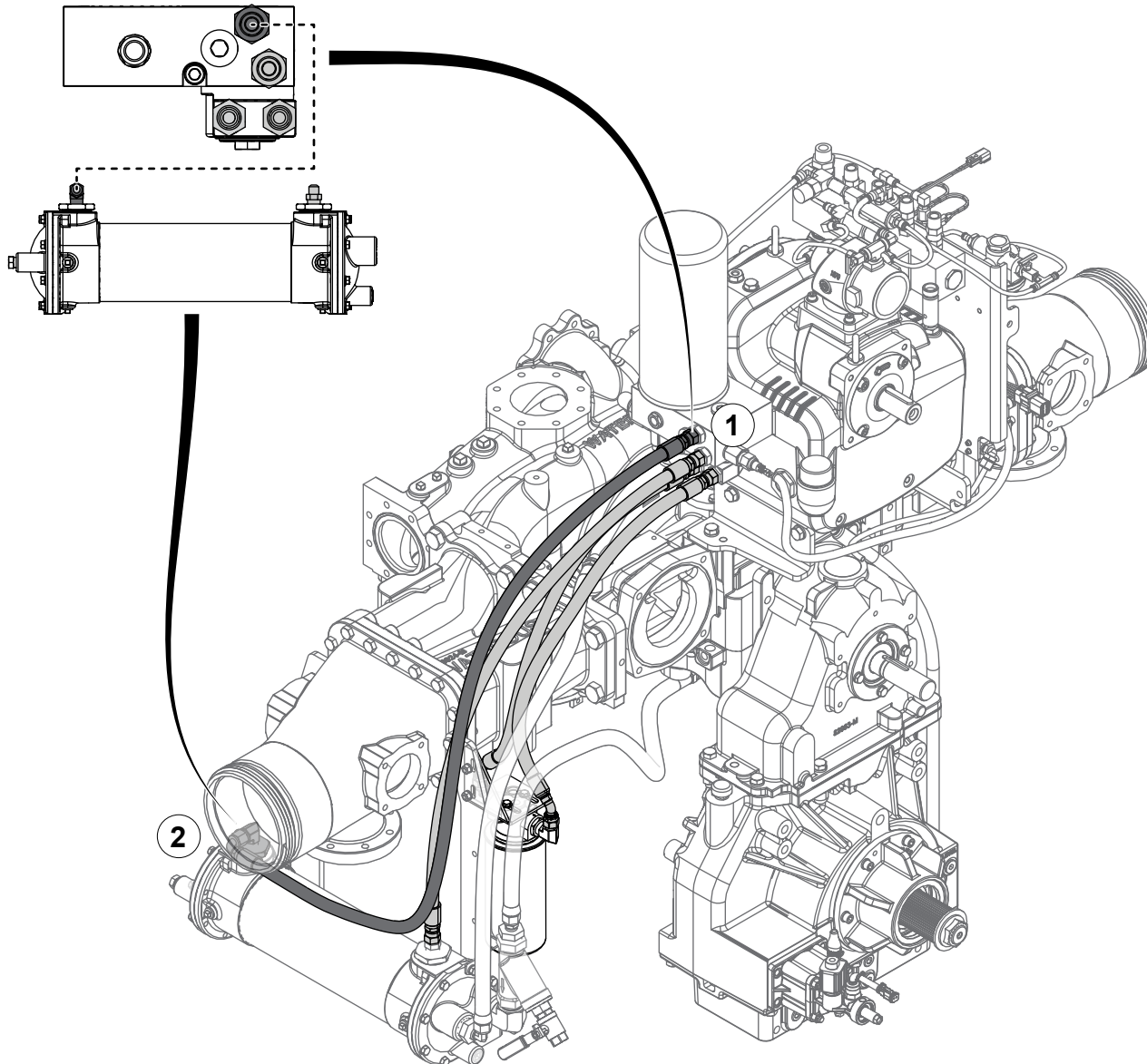
- 1 Remove the shipping plug and install the 1/2 JIC x 3/8 BSPP straight adapter fitting to the compressor assembly.
- 2 Install the drain hose to the fitting.

Installing the Oil Cooler Hoses



Use the illustrations and instructions on the following pages to install the cooling hoses.

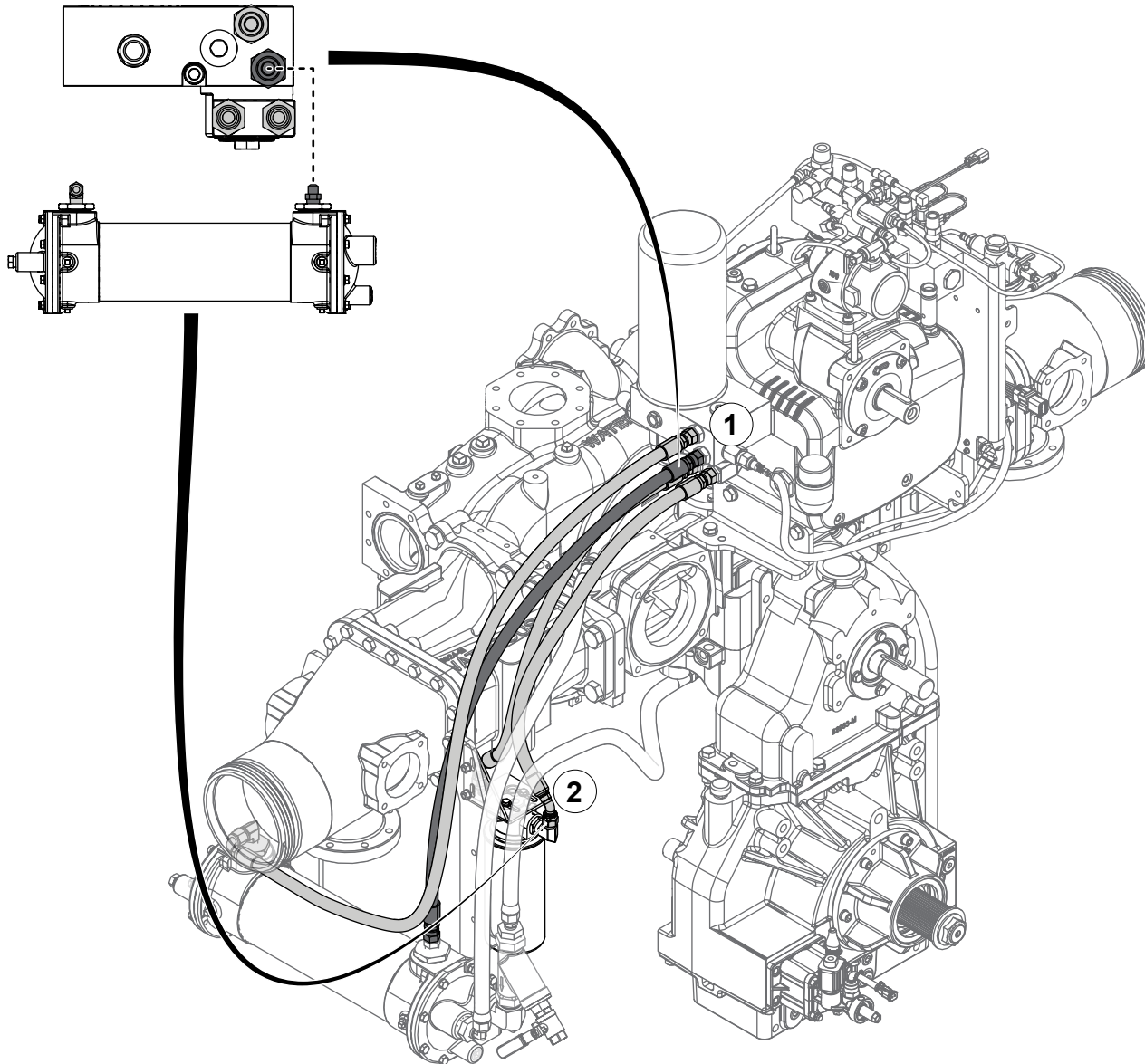
Installing the Oil Cooler Hoses



Use the illustration and instruction to install the 50-inch cooler hose.

- 1 Connect the 8 JIC straight fitting to the manifold.
- 2 Connect the 8 JIC 90° fitting to the oil cooler inlet.

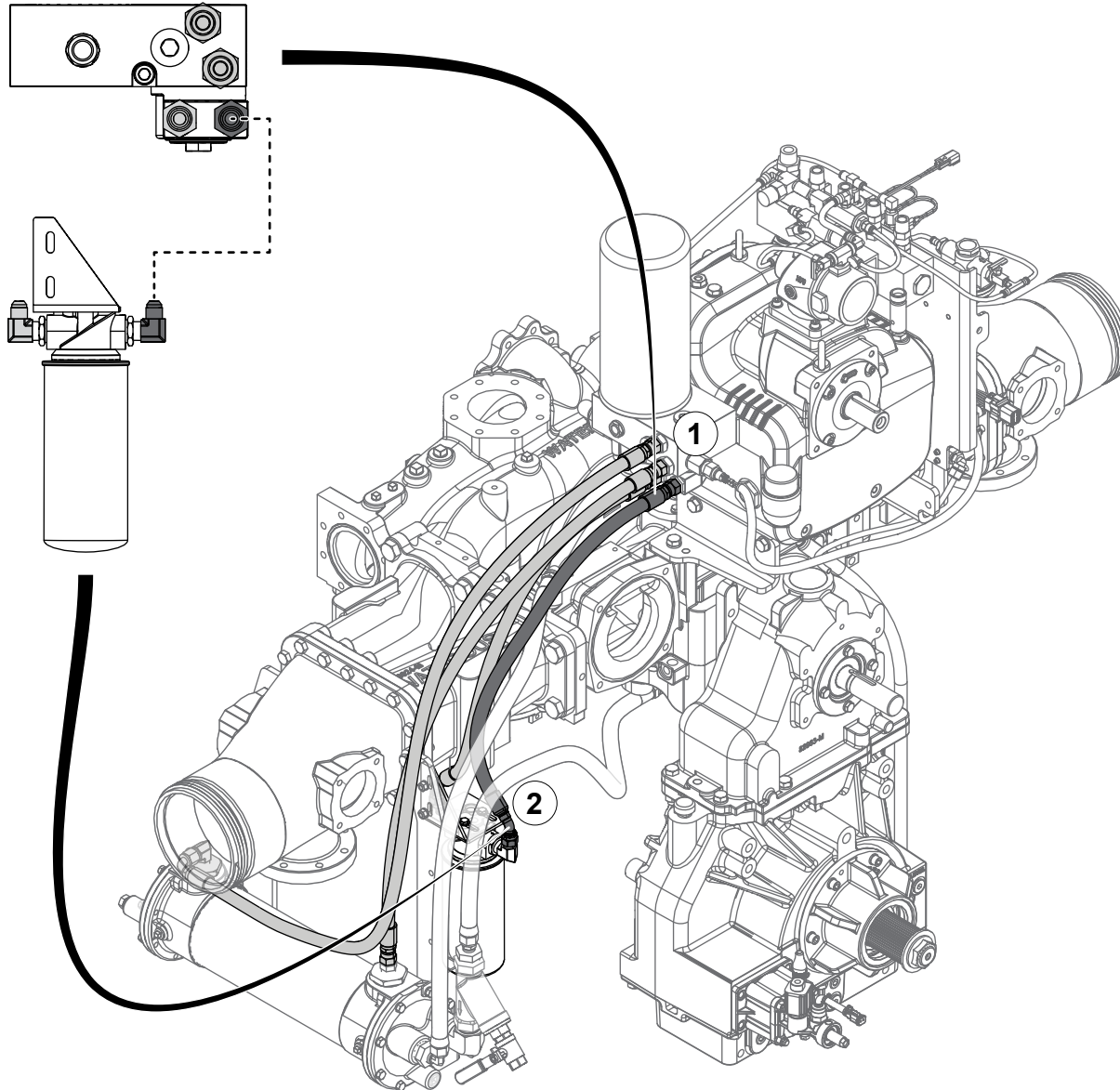
Installing the Oil Cooler Hoses



Use the illustration and instruction to install 38-inch cooler hose.

- 1 Connect the 8 JIC straight fitting to the manifold.
- 2 Connect the 8 JIC straight fitting to the oil cooler inlet.

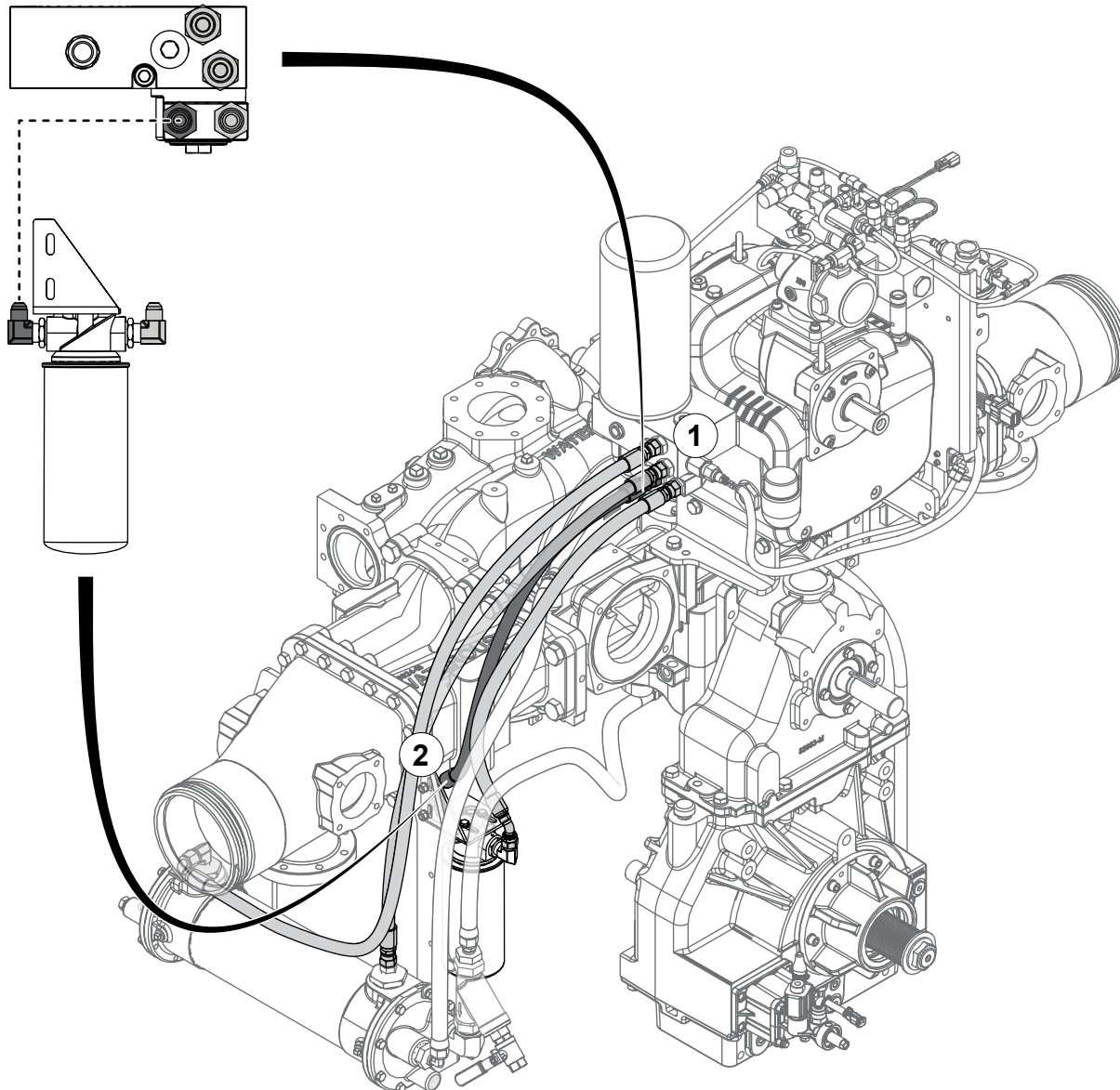
Installing the Oil Cooler Hoses



Use the illustration and instruction to install the 30-inch cooler hose.

- 1 Connect the 8 JIC straight fitting to the manifold.
- 2 Connect the 8 JIC 45° fitting to the oil filter inlet.

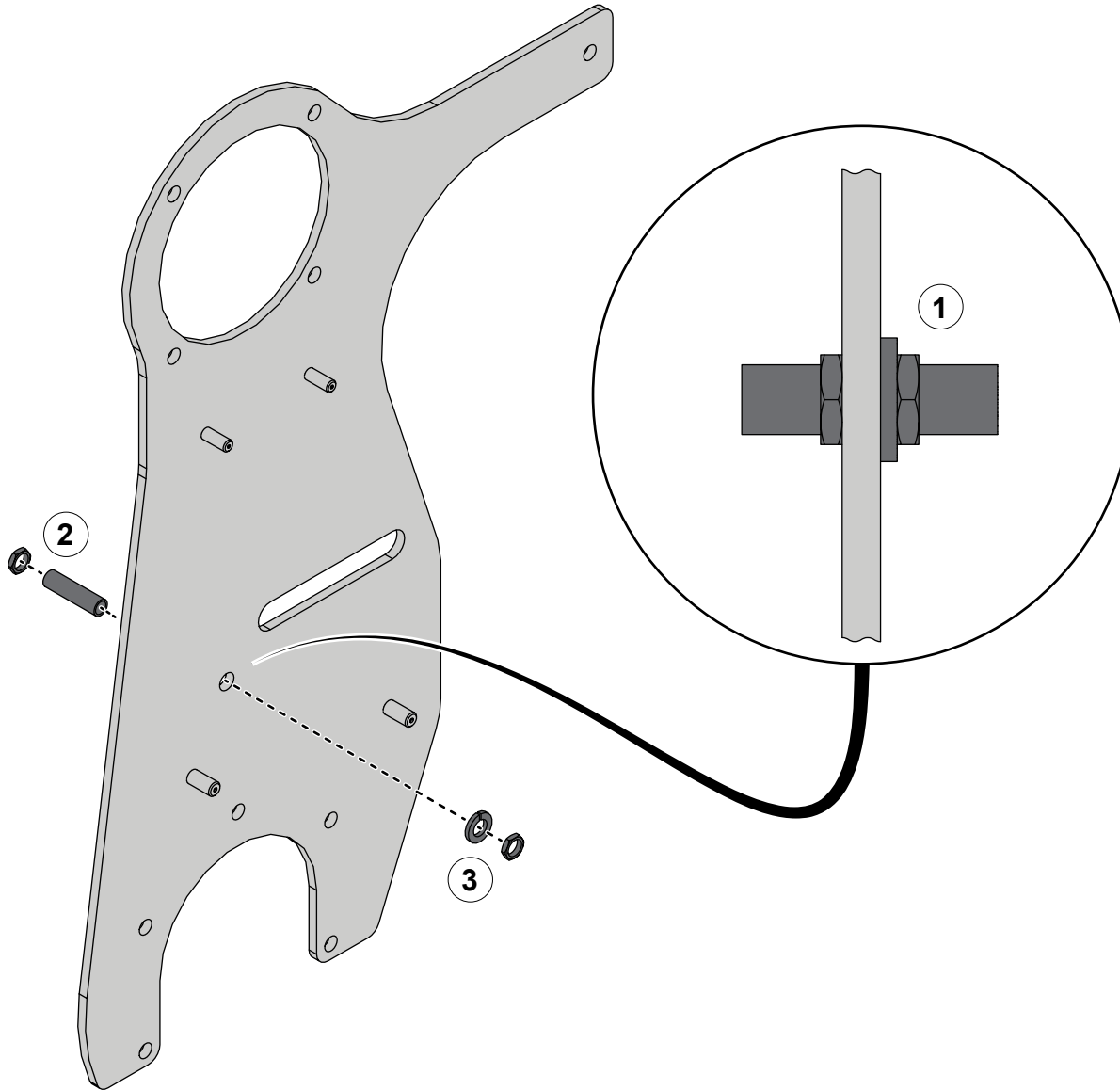
Installing the Oil Cooler Hoses



Use the illustration and instruction to install the 30-inch cooler hose.

- 1 Connect the 8 JIC straight fitting to the manifold.
- 2 Connect the 8 JIC 45° fitting to the oil filter outlet.

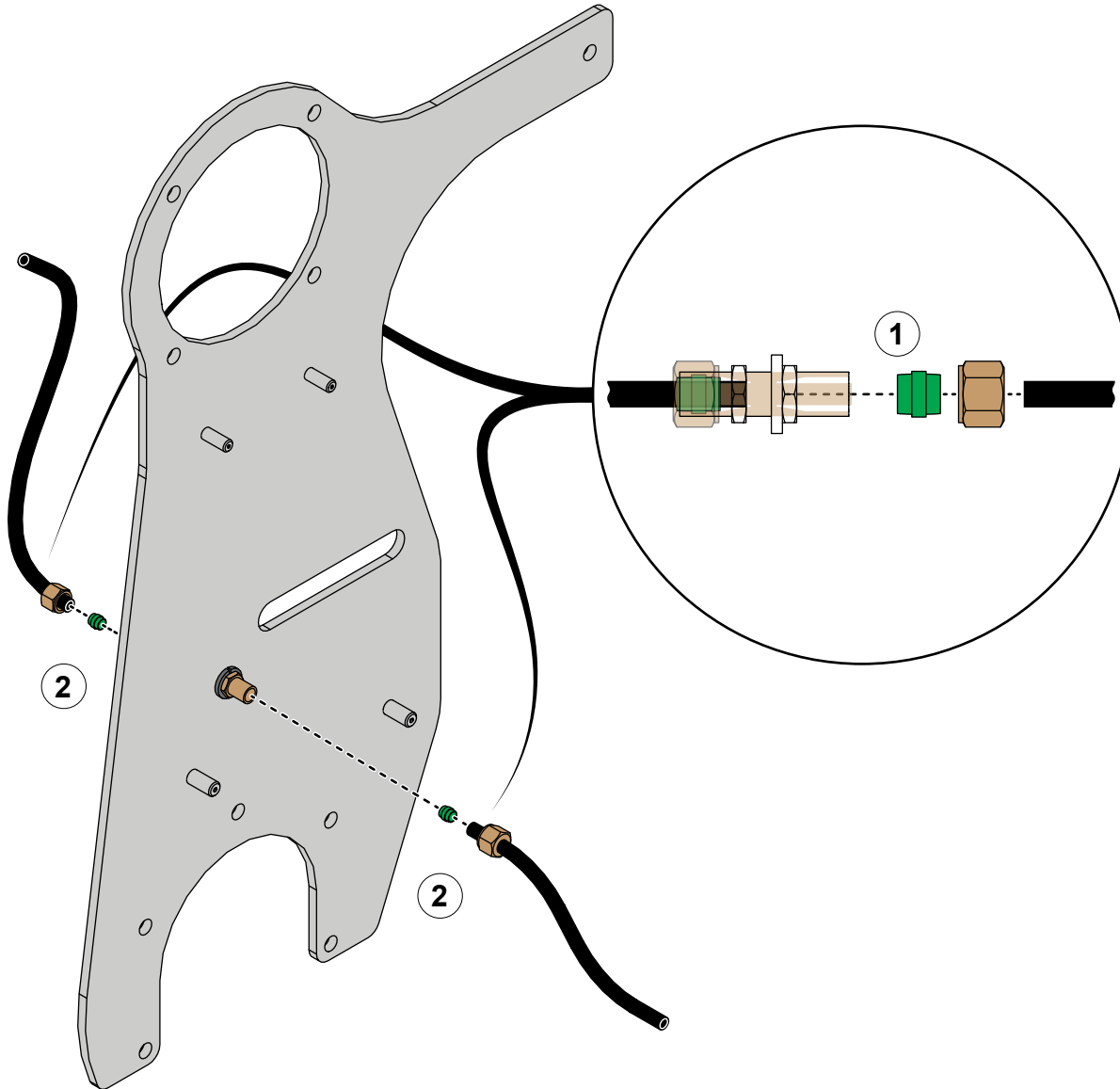
Installing the Bulkhead Fitting



Use the illustration and instructions to install the to install the bulkhead fitting to the compressor plate.

- 1 Use the illustration to guide the installation.
- 2 Insert the threaded stem through the hole in the compressor plate. Use one nut to locate the threaded stem equally on each side of the compressor plate.
- 3 Use the split washer and remaining nut to secure threaded stem to the compressor plate.

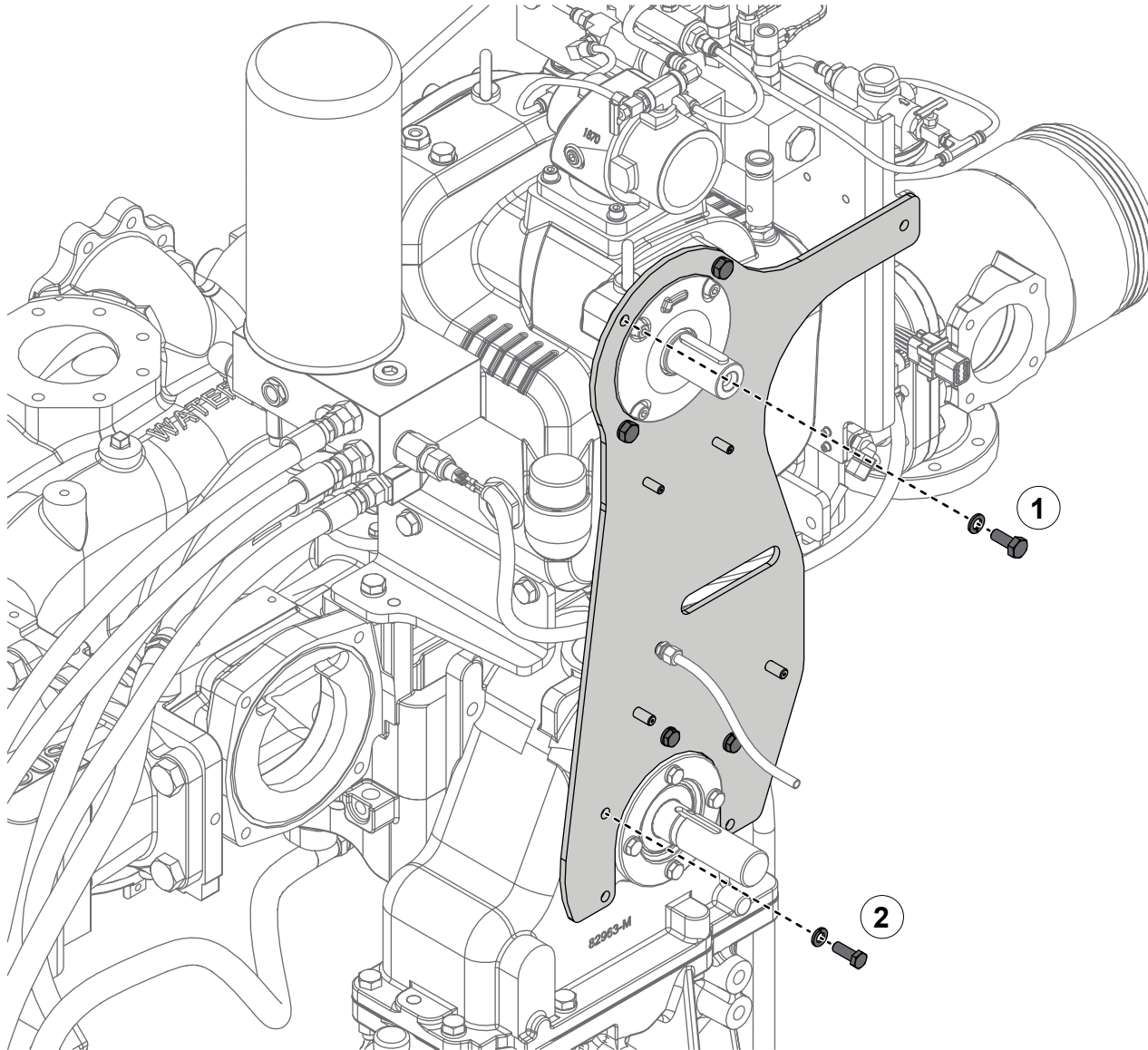
Installing the Bulkhead Air-Clutch Tube



Use the illustration and instructions to install the air-clutch tube to the bulkhead fitting.

- 1 Use the illustration to guide the installation.
- 2 To connect the tube to bulkhead fitting, do the following:
 - Install the nut over the tube.
 - Install the sleeve over the tube.
 - Insert the tube into the stem.
 - Slide the nut over the threaded stem.
 - Tighten the nut to seal the fitting.
 - Repeat the process to the opposite side.

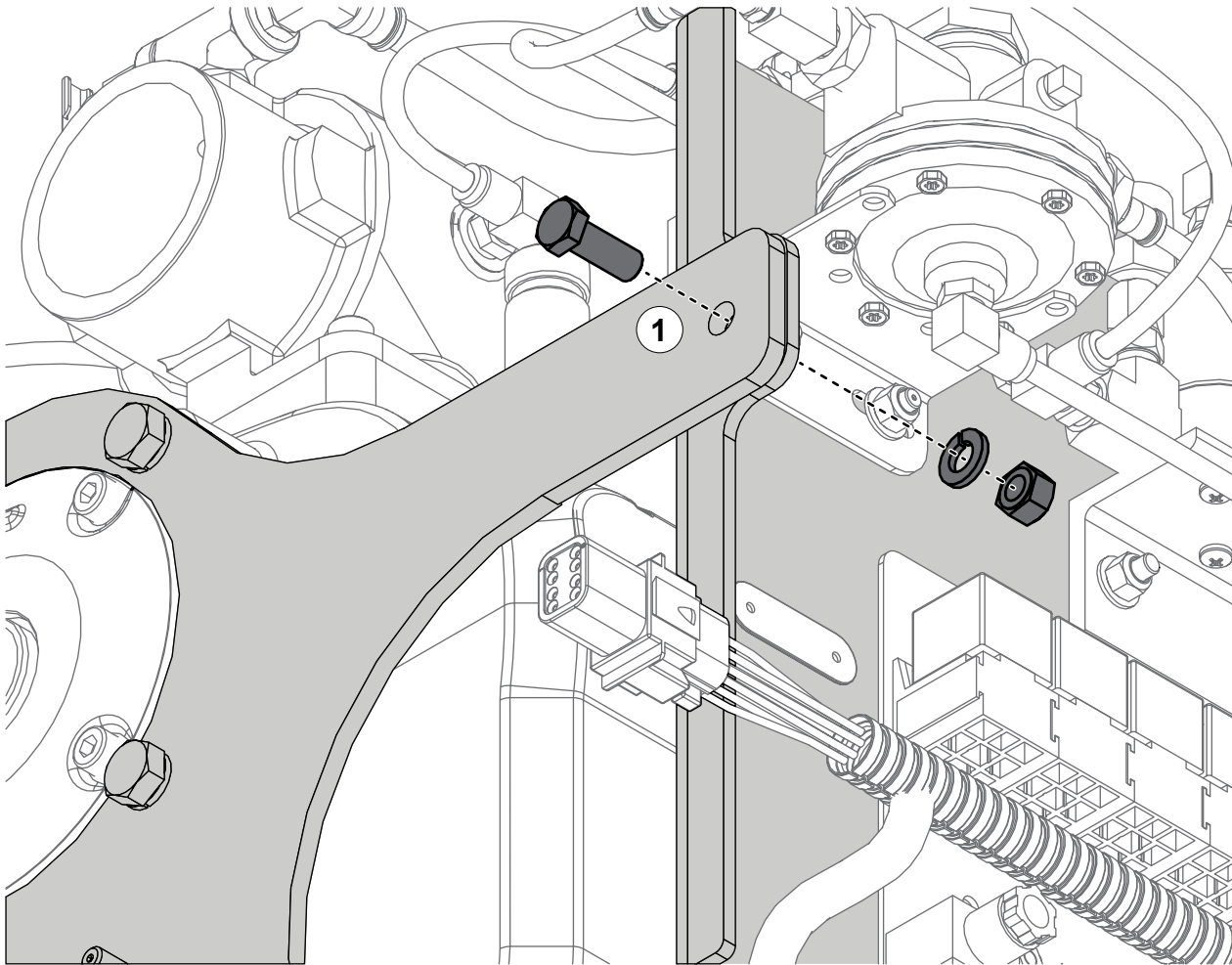
Installing the Compressor Plate



Use the illustration and instructions to install the compressor plate.

- 1 Align the compressor plate with the mounting holes on the compressor and install the M10-1.5 x 25mm screw and 10mm lock washer mounting hardware.
- 2 Align the compressor plate with the mounting holes on the transmission and install the 3/8-16 x 1 inch screw and 3/8 inch lock washer mounting hardware.

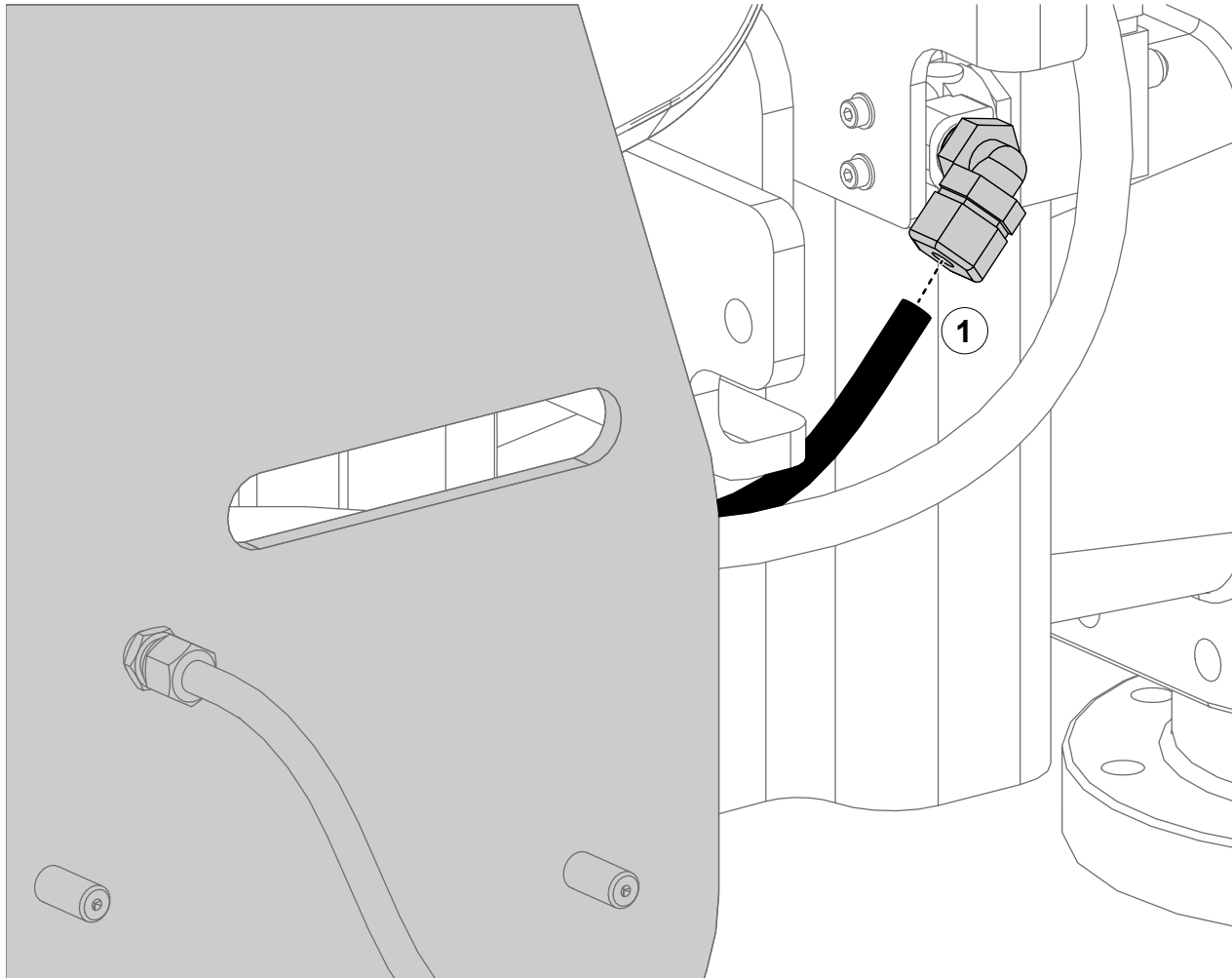
Installing the Compressor Plate



Use the illustration and instructions to install the compressor plate.

- 1 Align the compressor plate with the hole on the relay panel assembly. Use the 3/8-16 x 1 inch screw, 3/8 inch lock washer, and 3/8-16 inch nut to secure the compressor plate to the relay panel assembly.

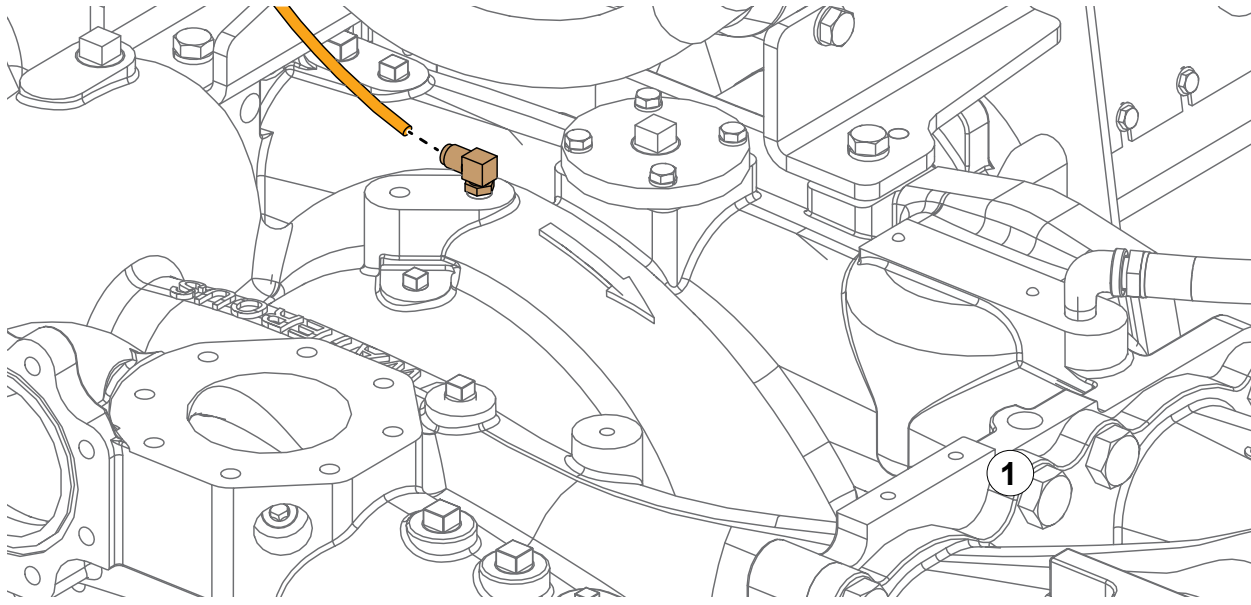
Connecting the Air-Clutch tube



Use the illustration and instruction to install the air-clutch tube.

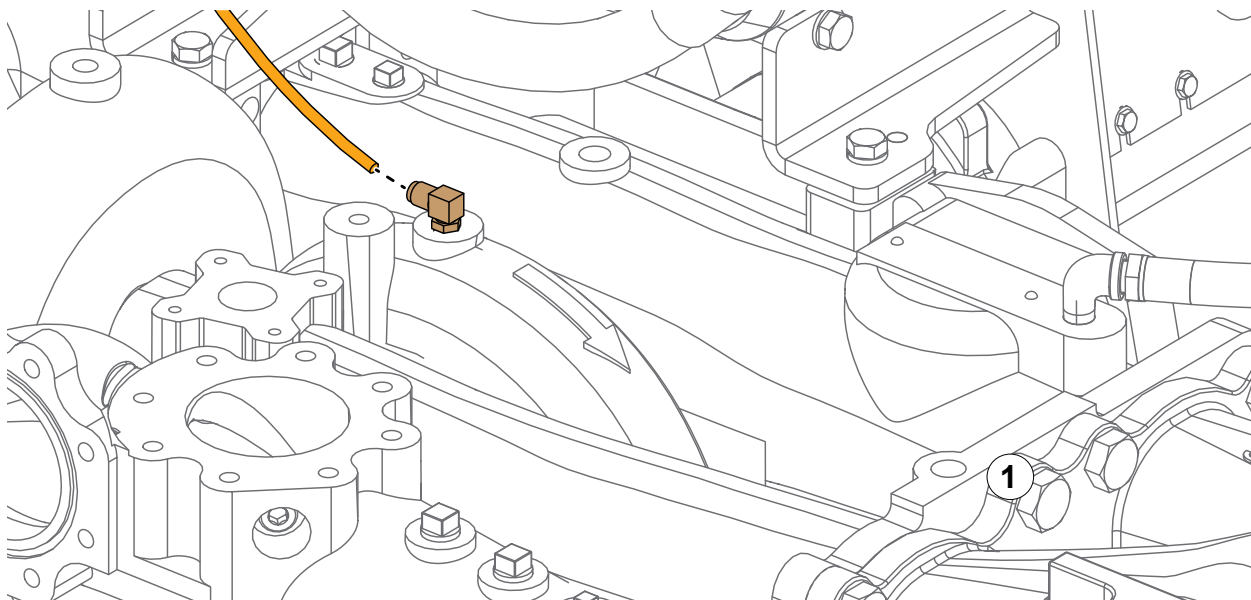
- 1 Connect the air-clutch tube to the fitting on the relay panel assembly. Refer to: **"Installing the Bulkhead Air-Clutch Tube"** on page 42.

Connecting the Balance Valve Tube—CM and CS Pumps

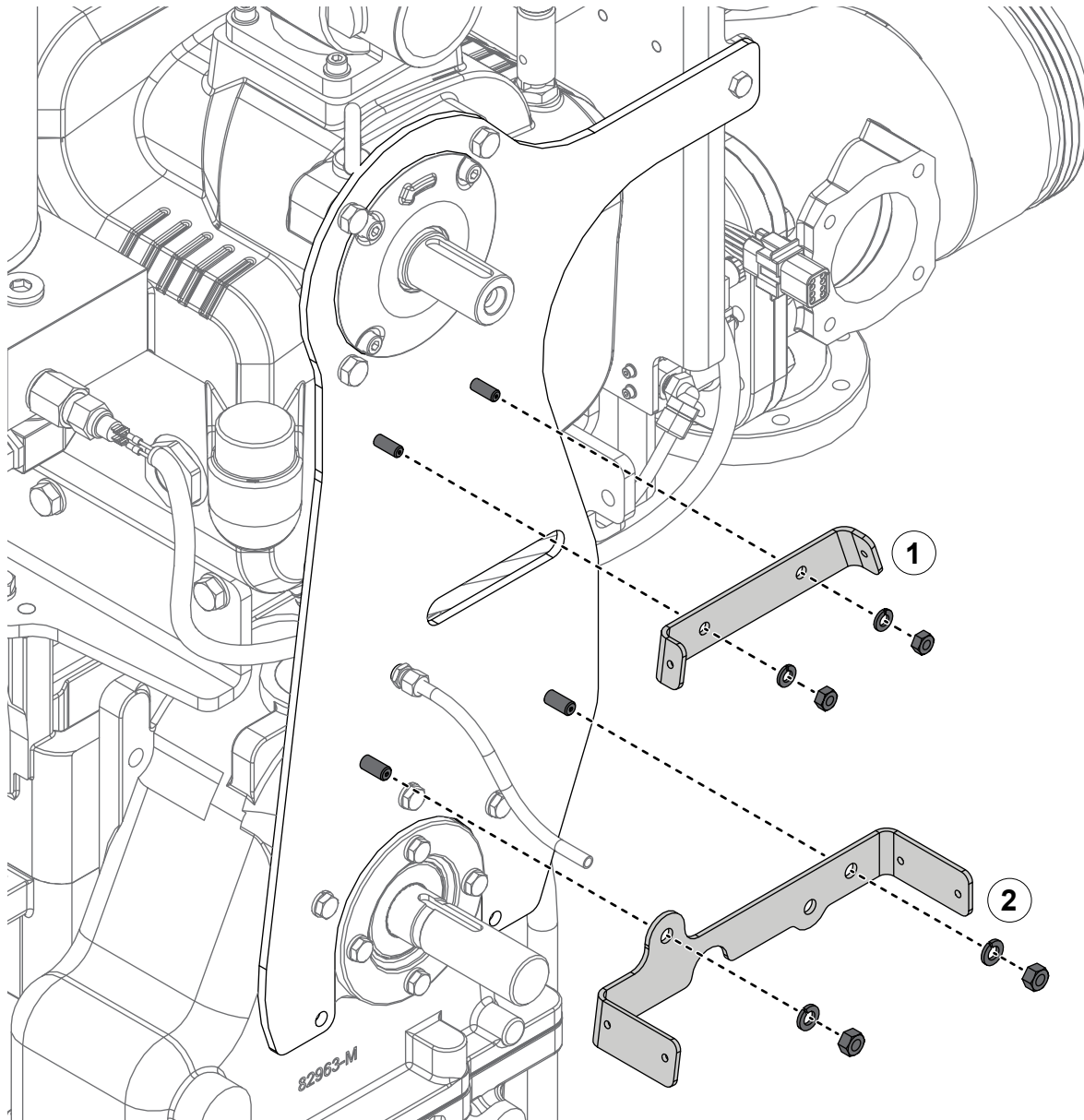


Use the illustrations and instructions to connect the balance valve tube.

- 1 Connect the balance valve tube to the fitting on the CM pump.
- 2 Connect the balance valve tube to the fitting on the CS pump.



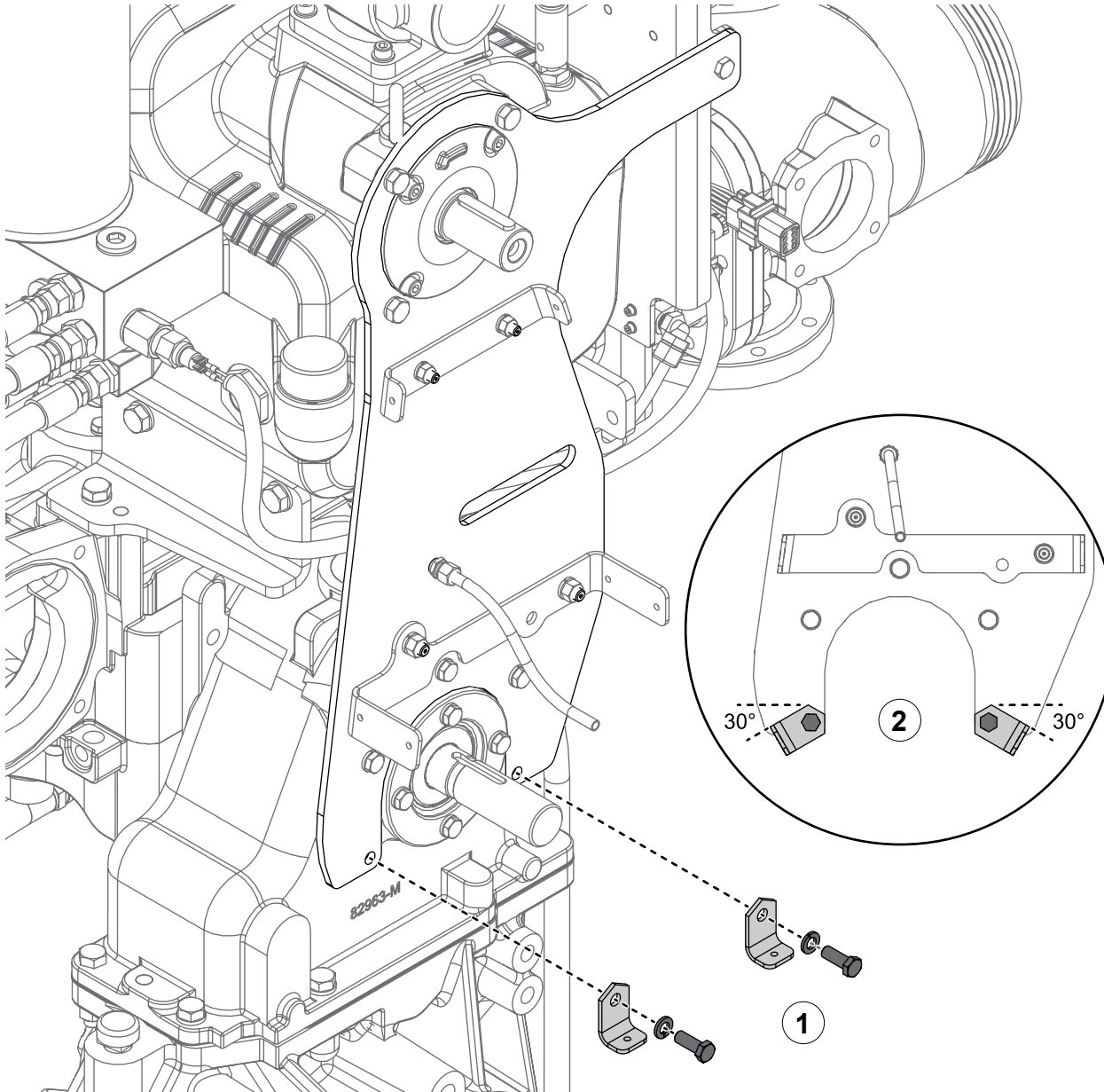
Installing the Belt Cover Brackets



Use the illustration and instructions to install the belt cover brackets.

- 1 Use the 5/16-18 inch nut and 5/16 inch washer to secure the upper belt cover bracket.
- 2 Use the 5/16-18 inch nut and 5/16 inch washer to secure the middle belt cover bracket.

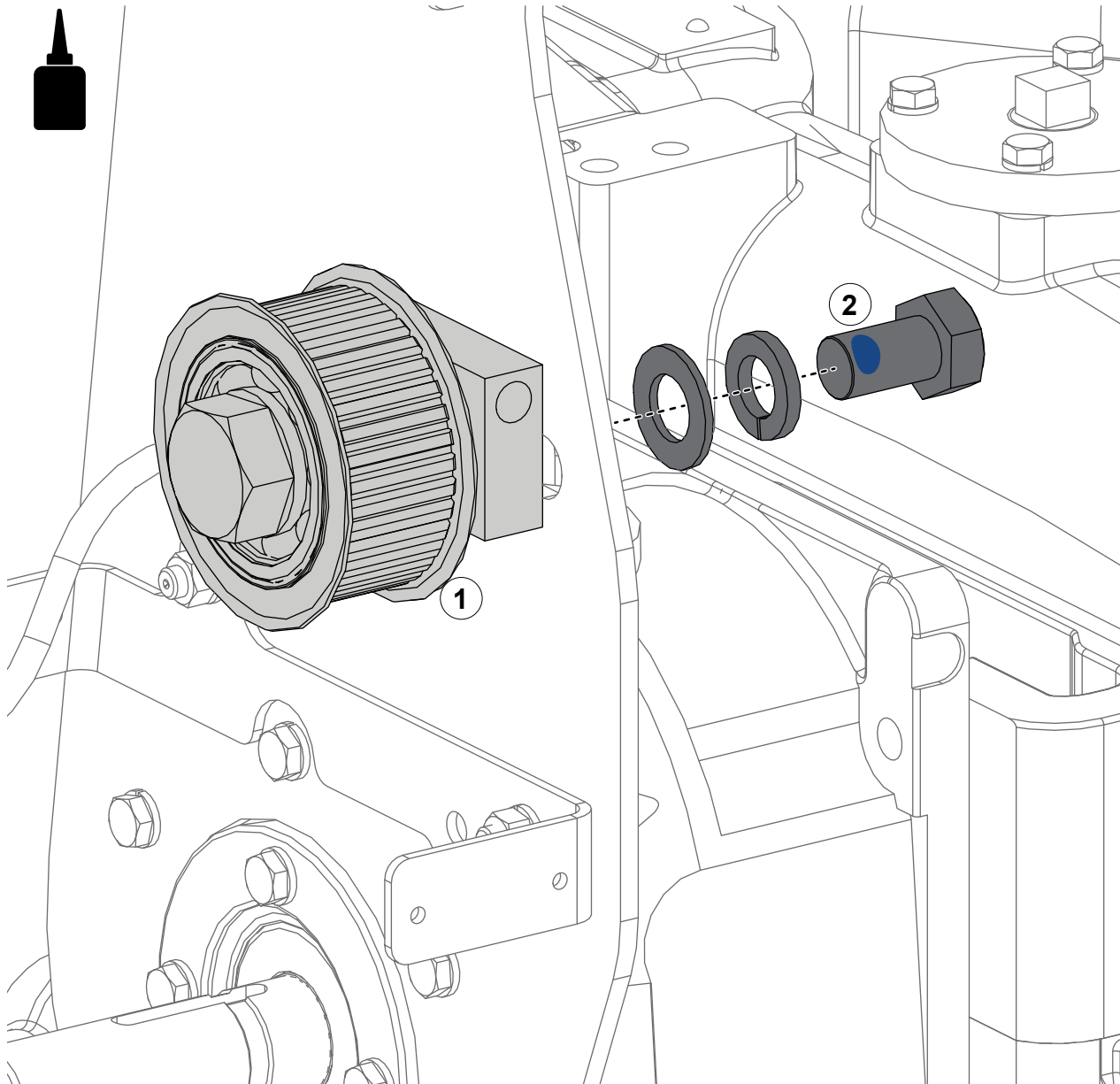
Installing the Belt Cover Brackets



Use the illustration and instructions to install the lower belt cover brackets.

- 1 Use the 3/8-16 x 1 inch screw and 3/8 inch washer to secure the lower belt cover bracket.
- 2 Rotate each bracket to 30° from their horizontal position.

Installing the Idler Adjustment Block

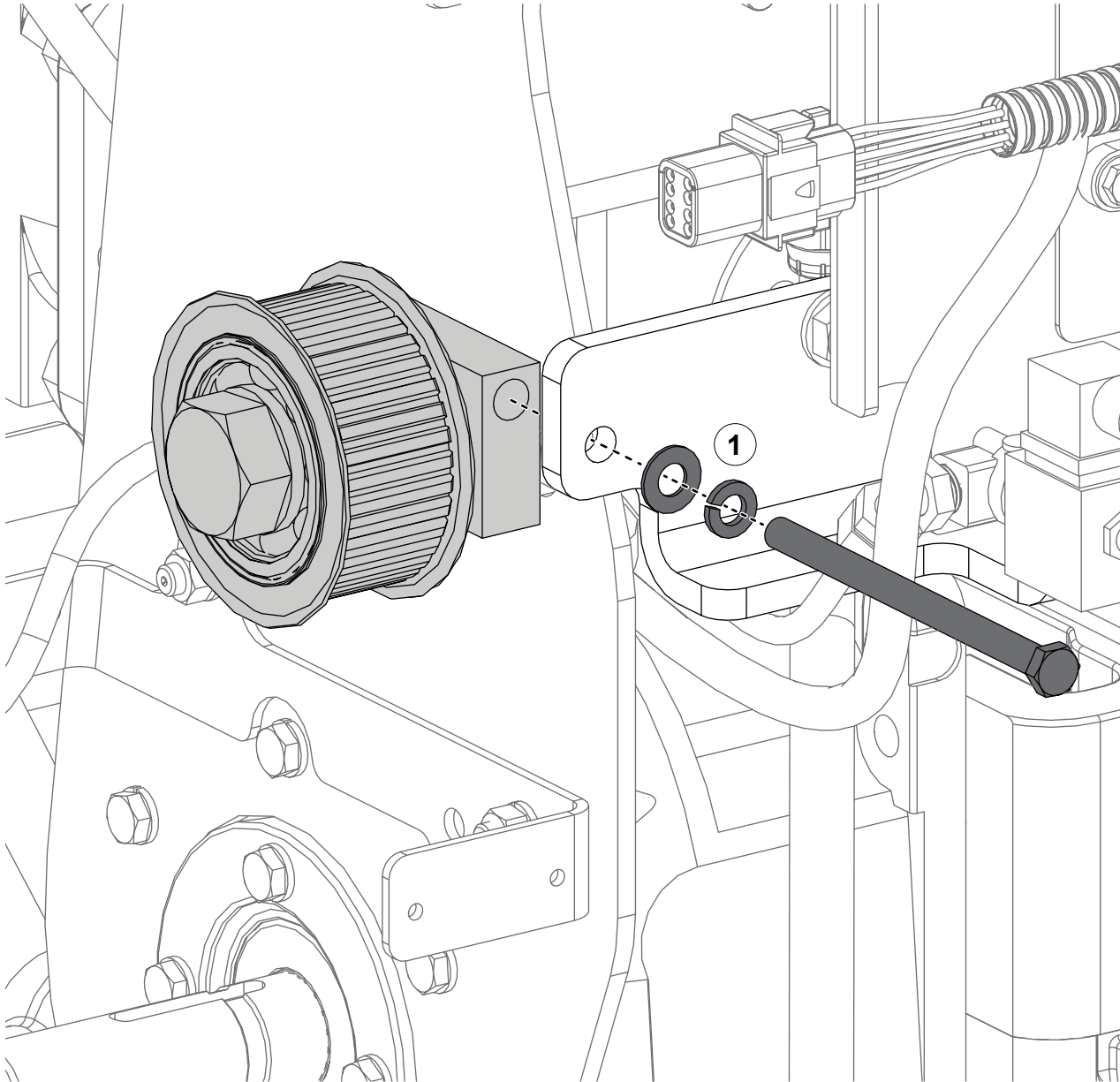


Use the illustration and instructions to install the idler adjustment block.

Note: Some components are hidden for illustrative purposes.

- 1 Align the idler adjustment block with the slot on the compressor plate.
- 2 Apply removable threadlocker before you loosely install the idler adjustment block hardware that you removed earlier.

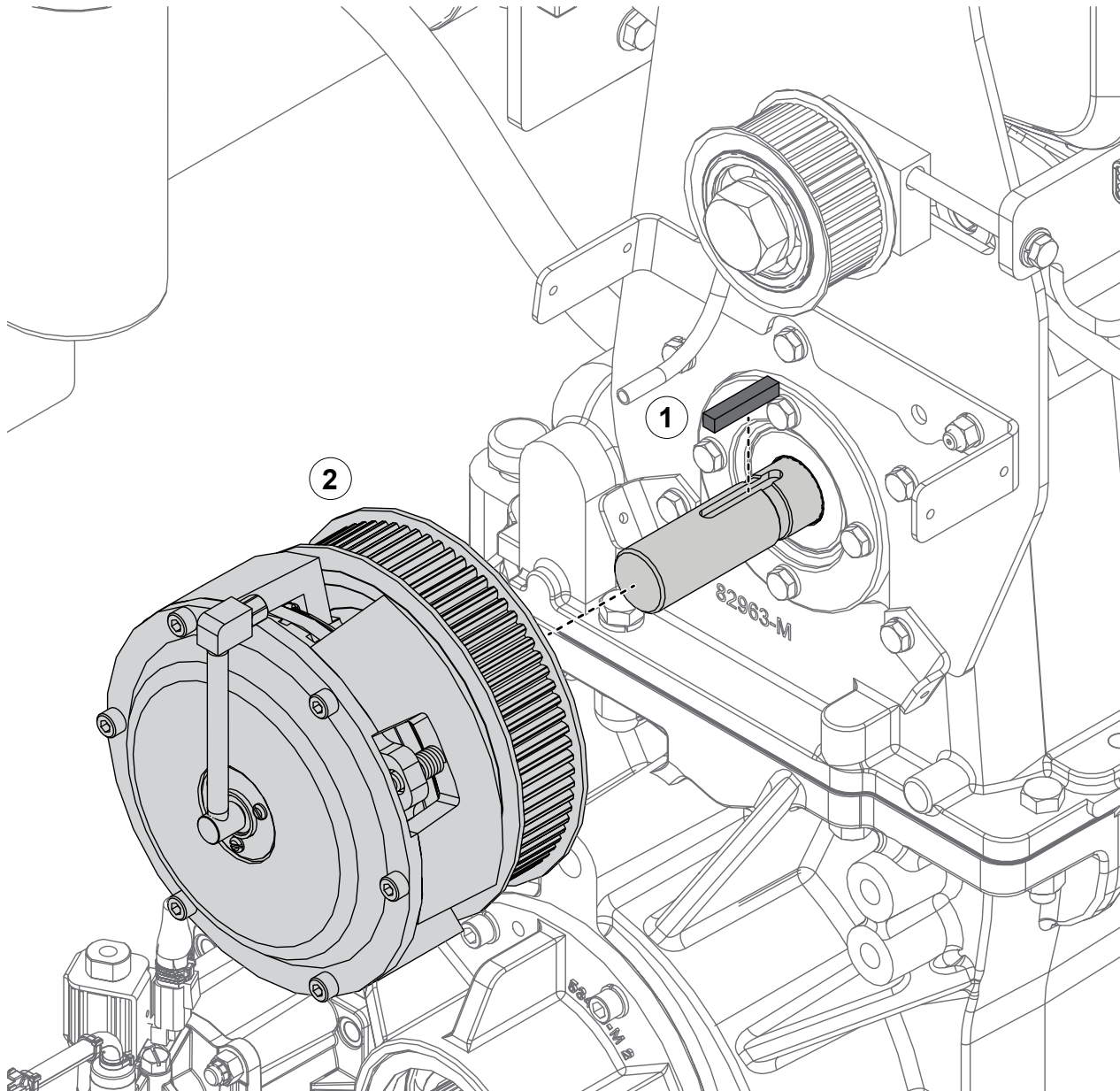
Installing the Idler Adjustment Block Screw



Use the illustration and instructions to install the idler adjustment block screw.

- 1 Loosely install the idler adjustment block adjustment screw.

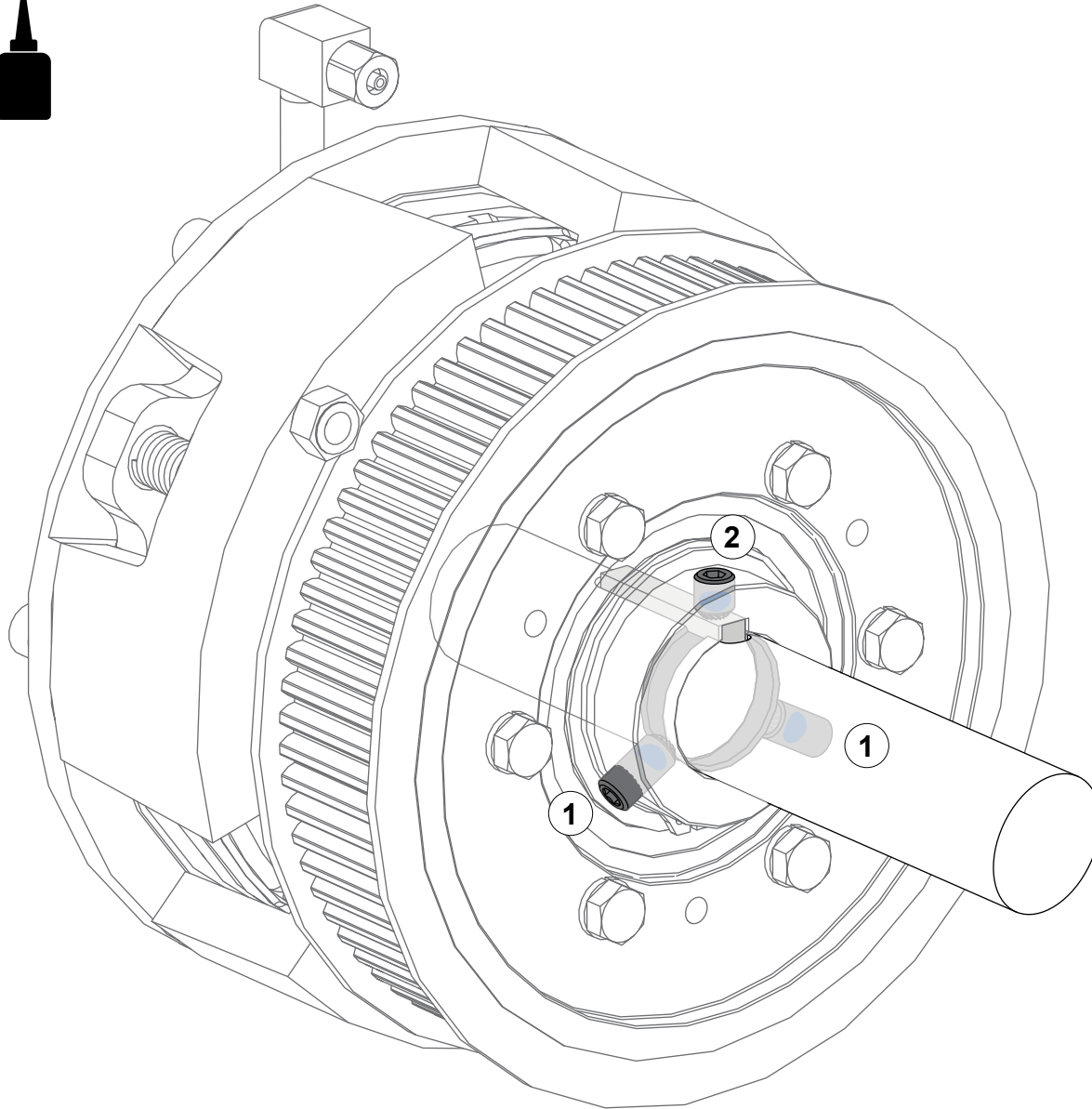
Installing the Air-Clutch



Use the illustration and instructions to install the air-clutch.

- 1 Install the key that you removed earlier into the keyway on the transmission output shaft.
- 2 Align the air-clutch with the key and install it onto the shaft.

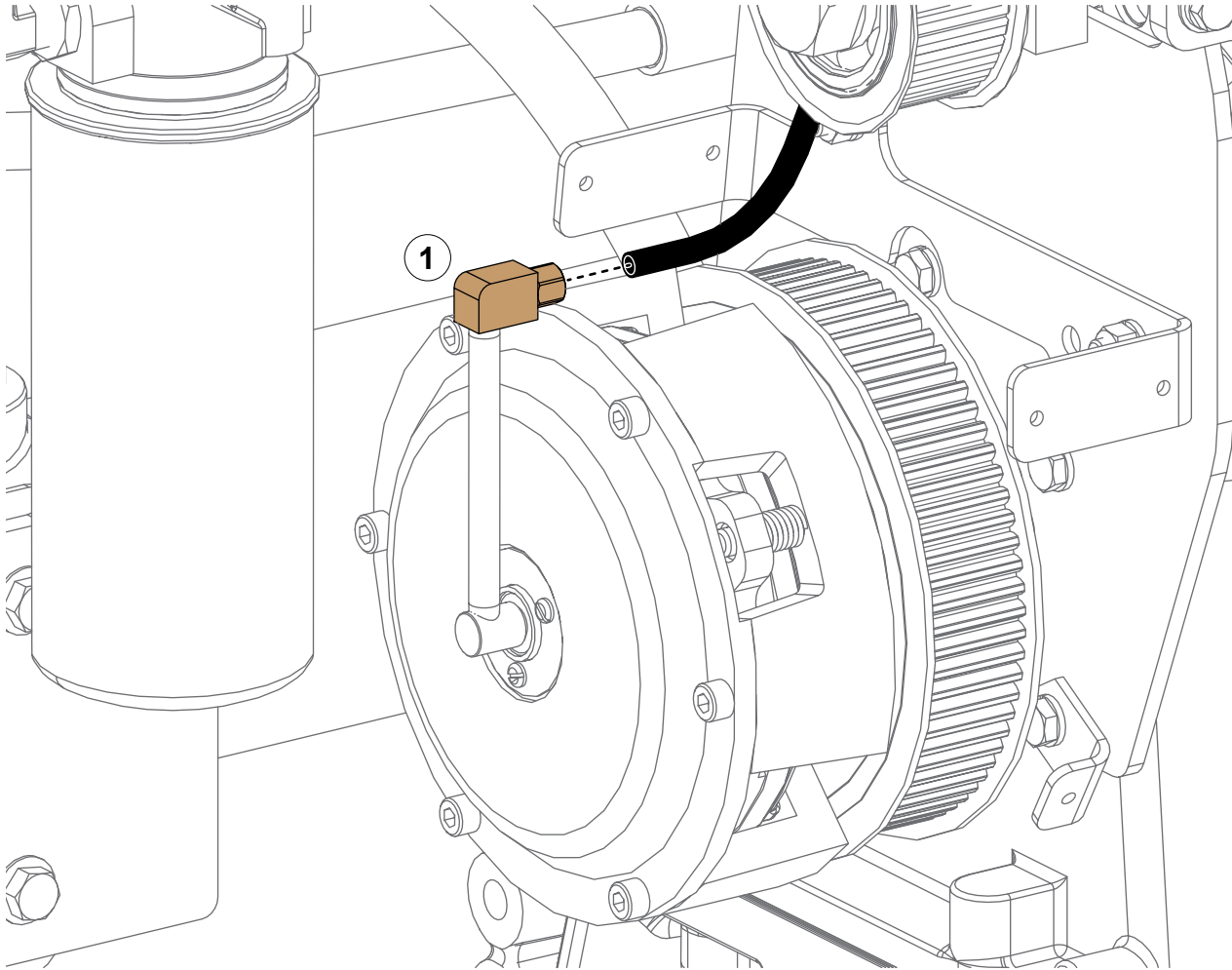
Installing the Air-Clutch



Use the illustration and instructions to install the air-clutch.

- 1 Apply removable threadlocker to the 2 longer setscrews that you removed earlier. Align them to the groove in the shaft before tightening.
- 2 Apply removable threadlocker to the short setscrew that you removed earlier and securely install it over the key on the shaft.

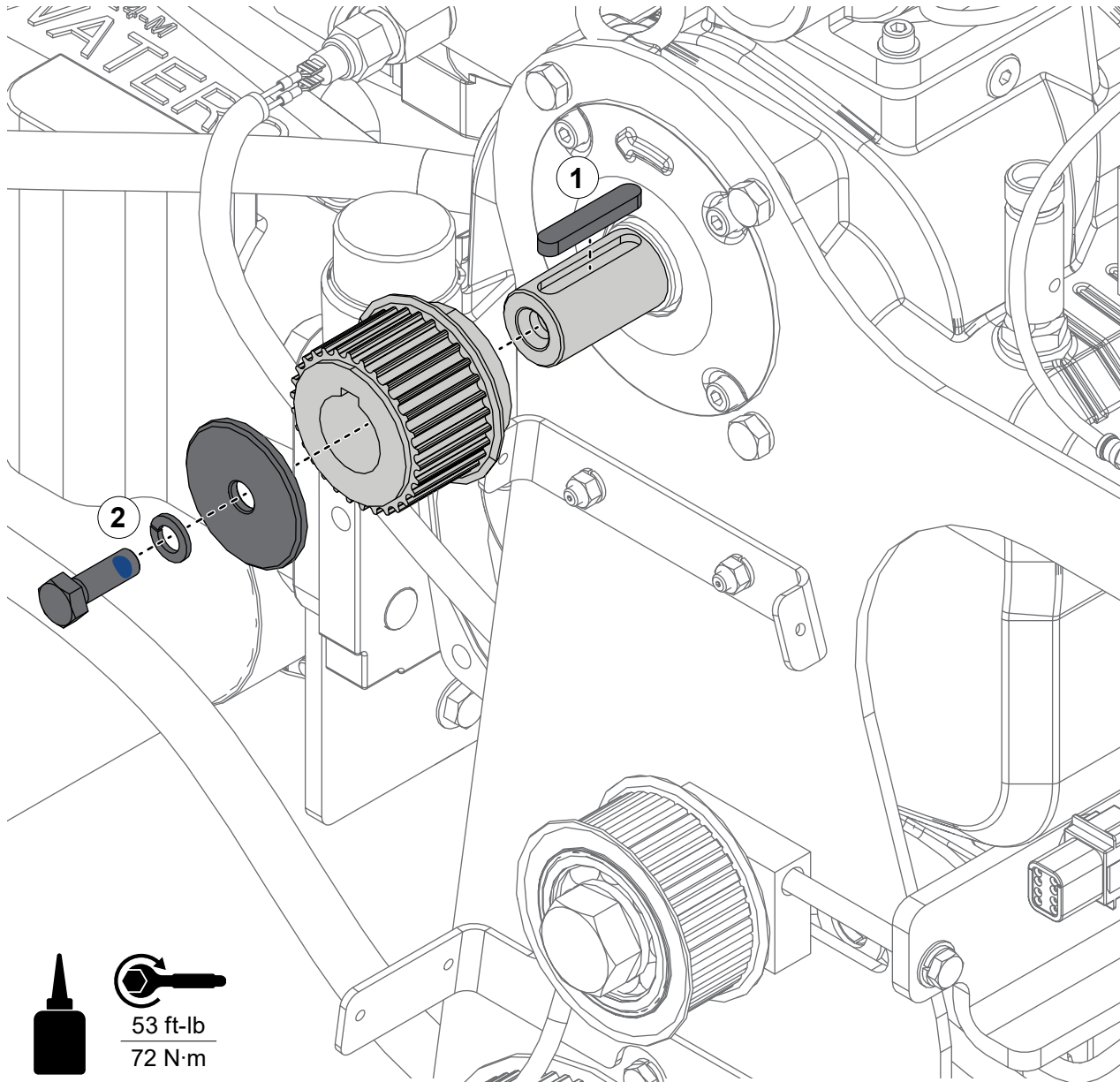
Installing the Air-Clutch Tube



Use the illustration and instructions to install the air-clutch tube.

- 1 Connect the tube to the fitting on the air-clutch tube.

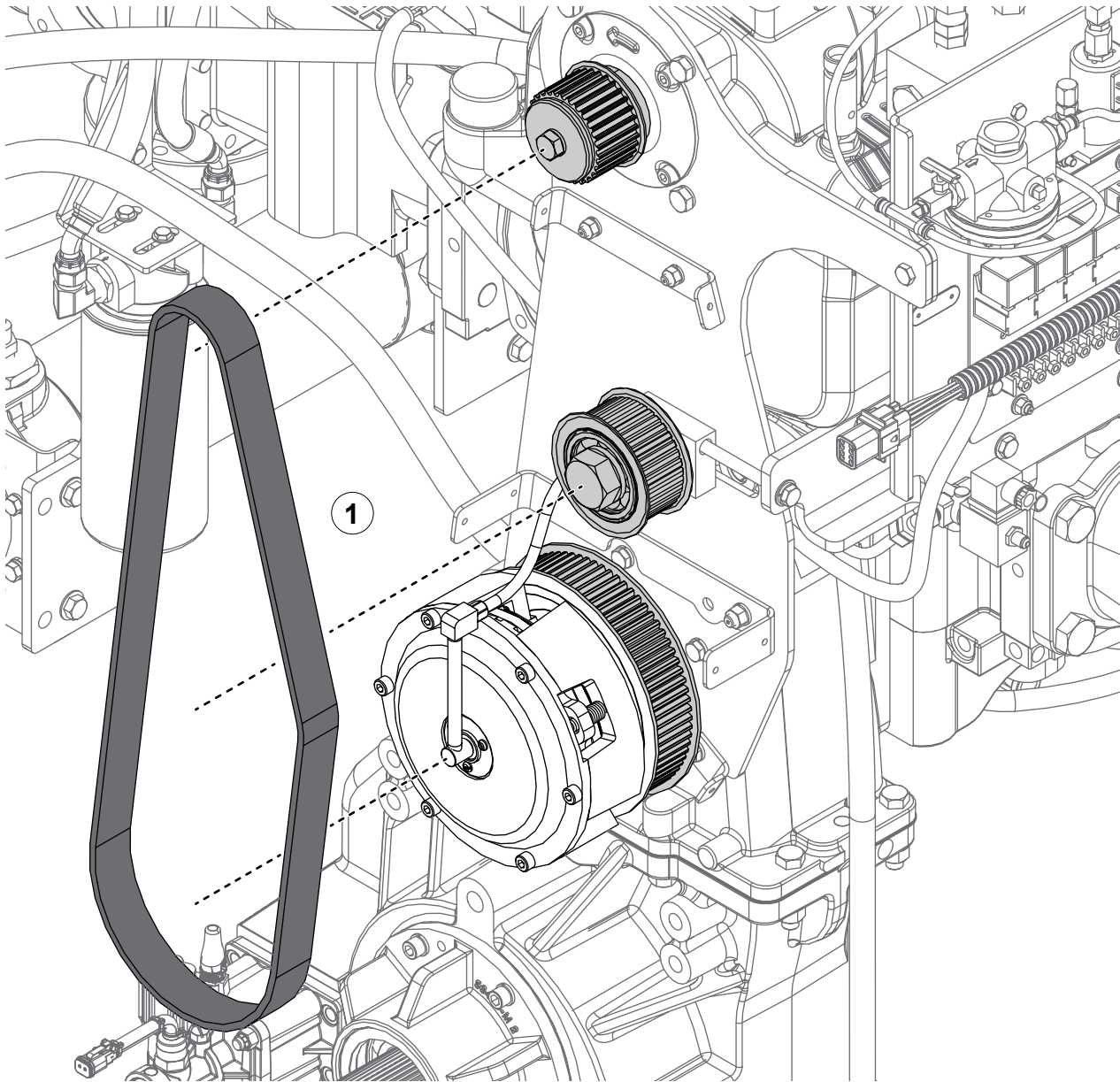
Installing the Compressor Sprocket



Use the illustration and instructions to install the compressor sprocket.

- 1 Install the key into the keyway on the compressor shaft.
- 2 Apply removable threadlocker to the threads before you secure the compressor sprocket to the shaft. Torque the screw to 53 ft-lb (72 N·m).

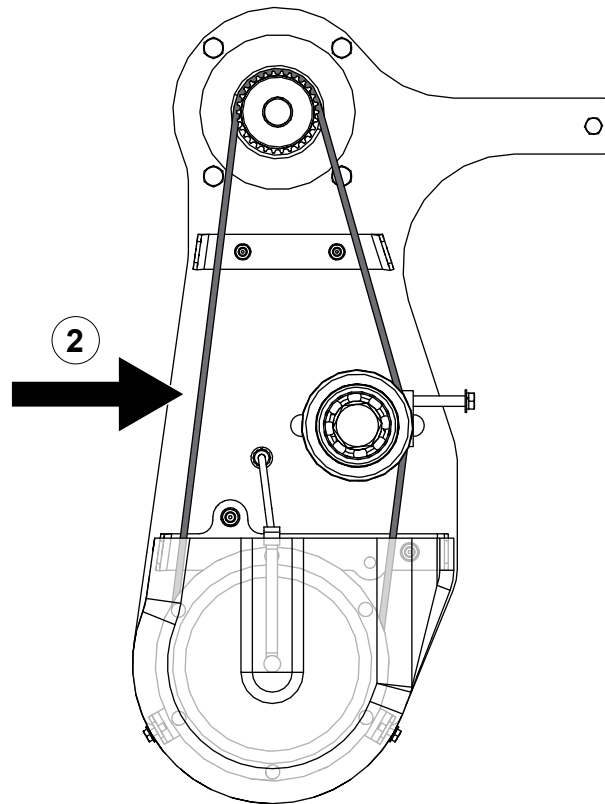
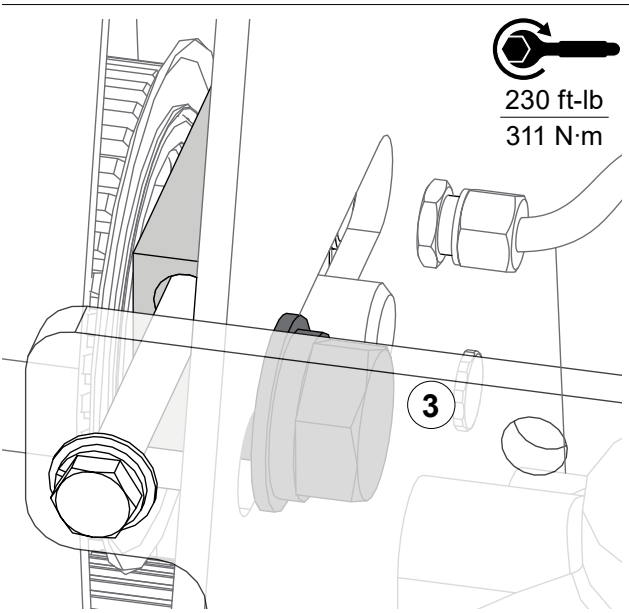
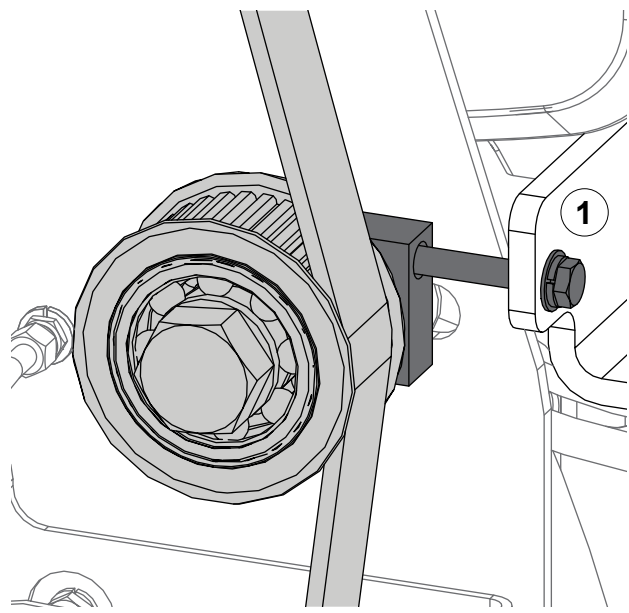
Installing the Compressor Belt



Use the illustration and instructions to install the to install the compressor pocket.

- 1 Align the belt and install it onto the compressor sprocket and air-clutch.

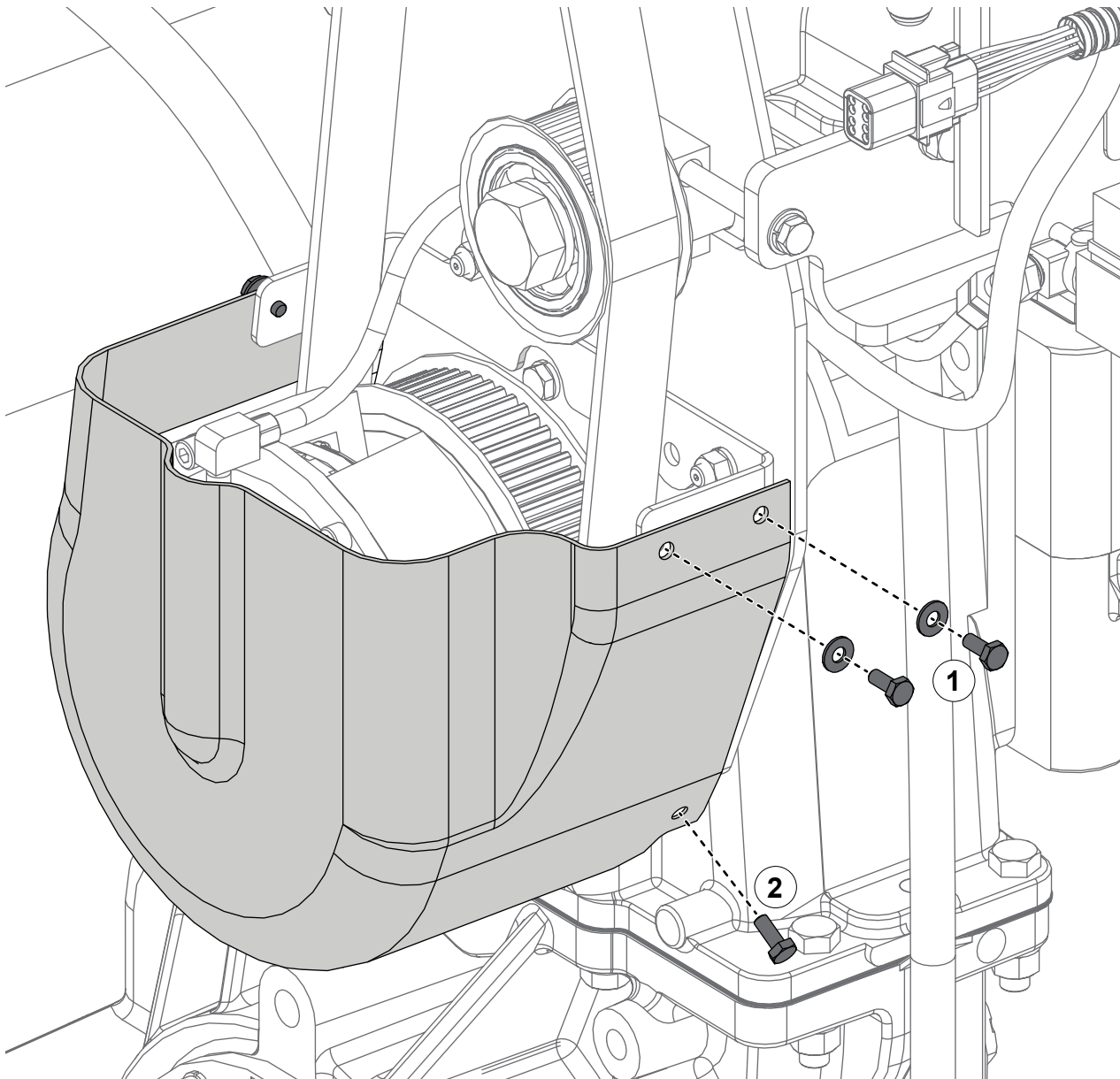
Adjusting the Compressor Belt Tension



Use the illustration and instructions to adjust the belt tension.

- 1 Use the idler adjustment block screw to adjust the belt tension.
- 2 Set the belt tension to allow for 1/4 to 5/16 inch deflection when 10 to 12 lbf are applied to the longest span.
Note: Do not over-tighten the belt. Extremely high tension can reduce belt life and damage other drive components.
- 3 Use the screw to lock the idler adjustment block position.

Installing the Lower Belt Cover

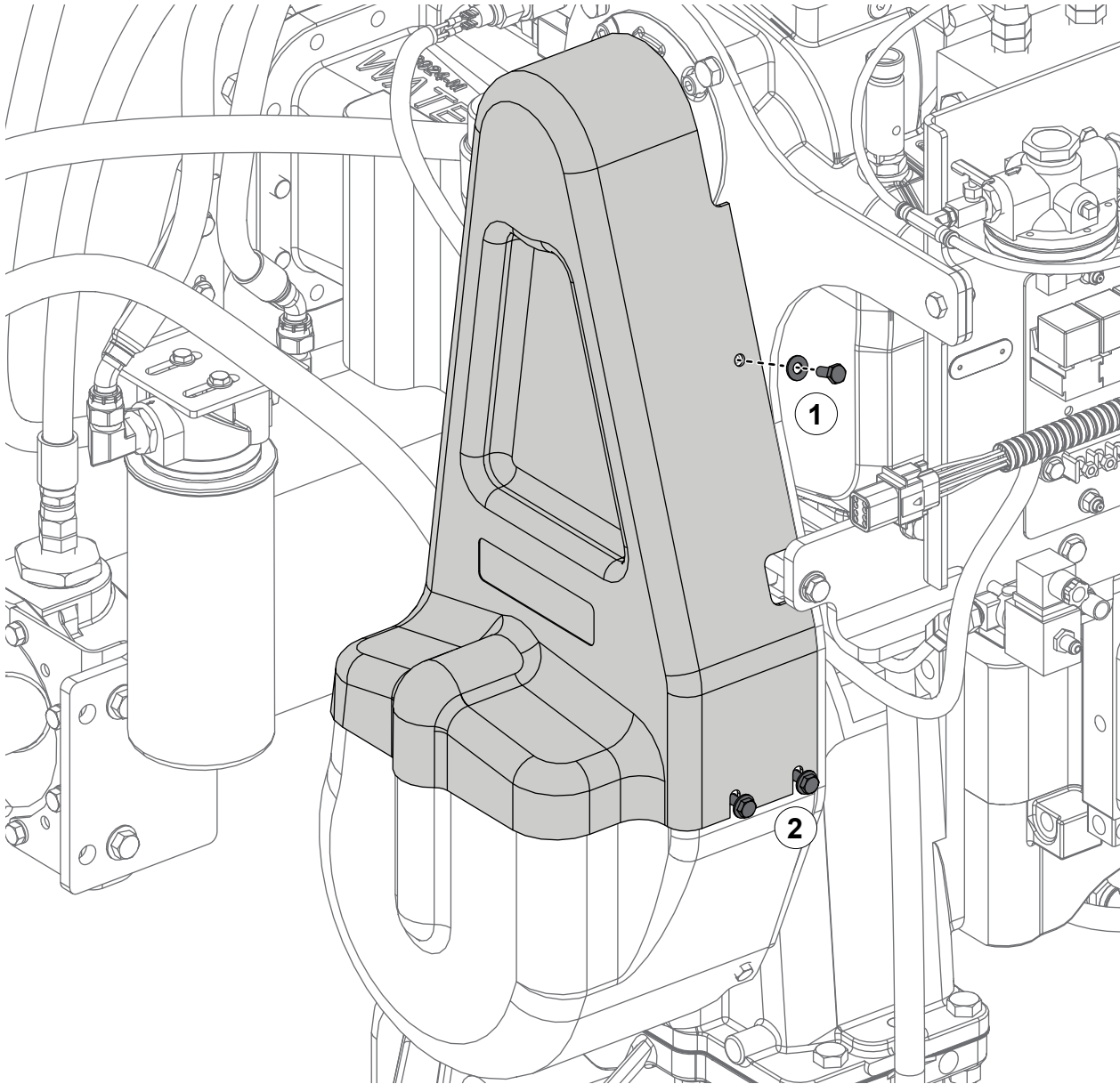


Use the illustrations and instructions to install the lower belt cover.

Note: *Install the hardware to both sides of the lower belt cover.*

- 1 Loosely install the upper screws.
- 2 Securely install the lower screw.

Installing the Upper Belt Cover

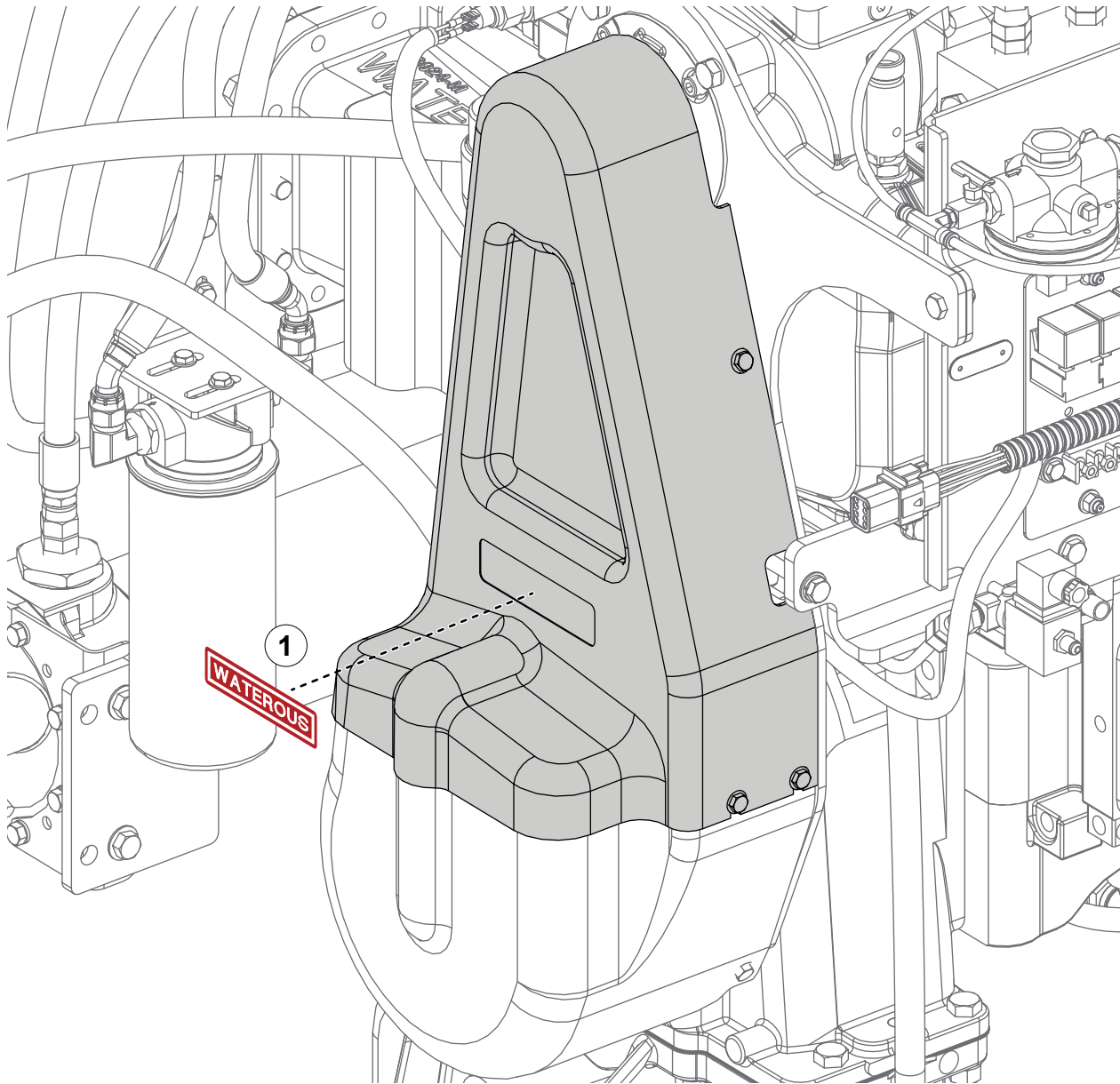


Use the illustrations and instructions to install the upper belt cover.

Note: Install the hardware to both sides of the upper belt cover.

- 1 Securely install the upper cover screws.
- 2 Secure the lower cover screws.

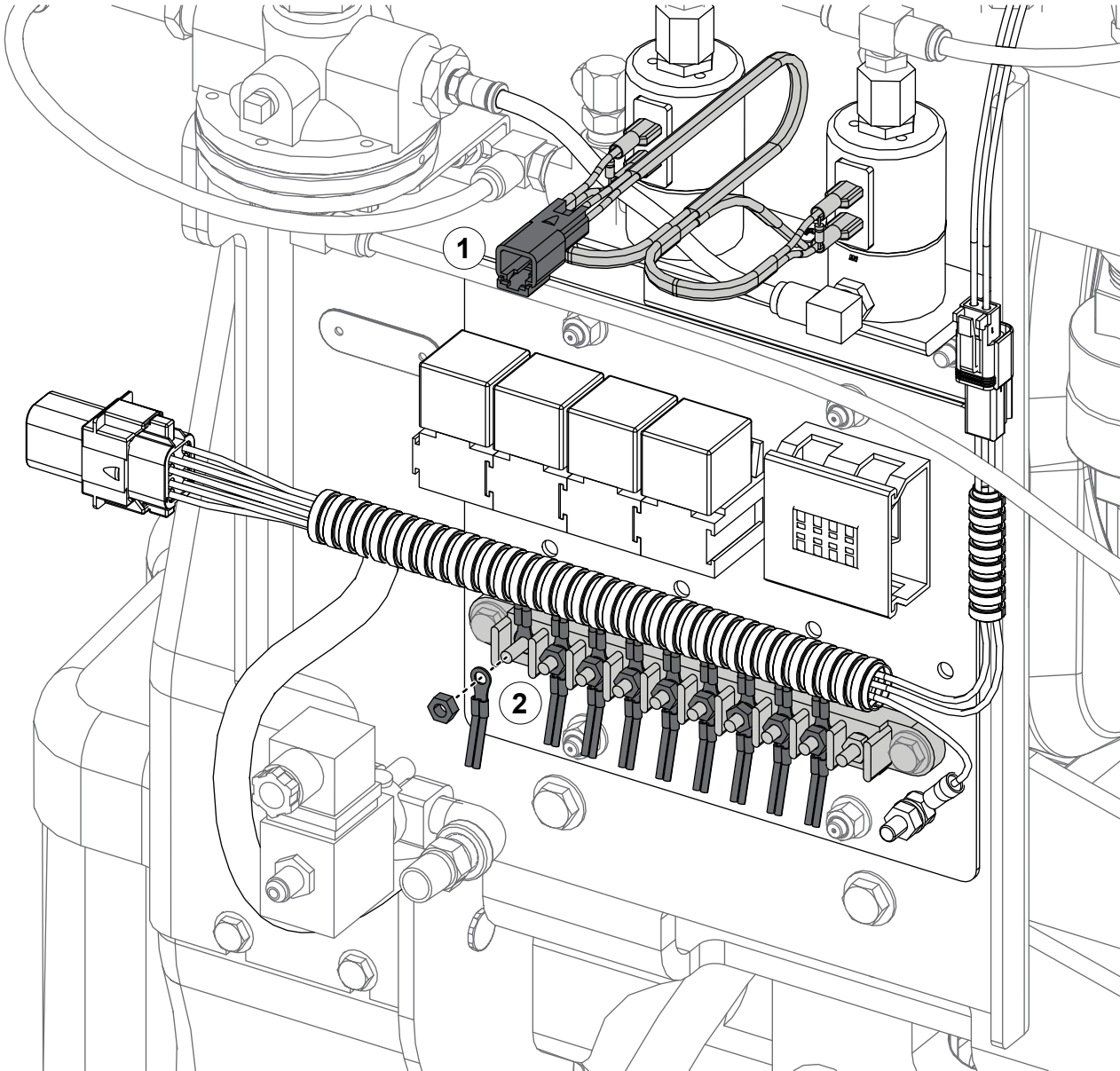
Installing the Belt Cover Label



Use the illustrations and instructions to install the belt cover label.

- 1 Install the label to the belt cover.

Connecting the Relay Panel Wiring

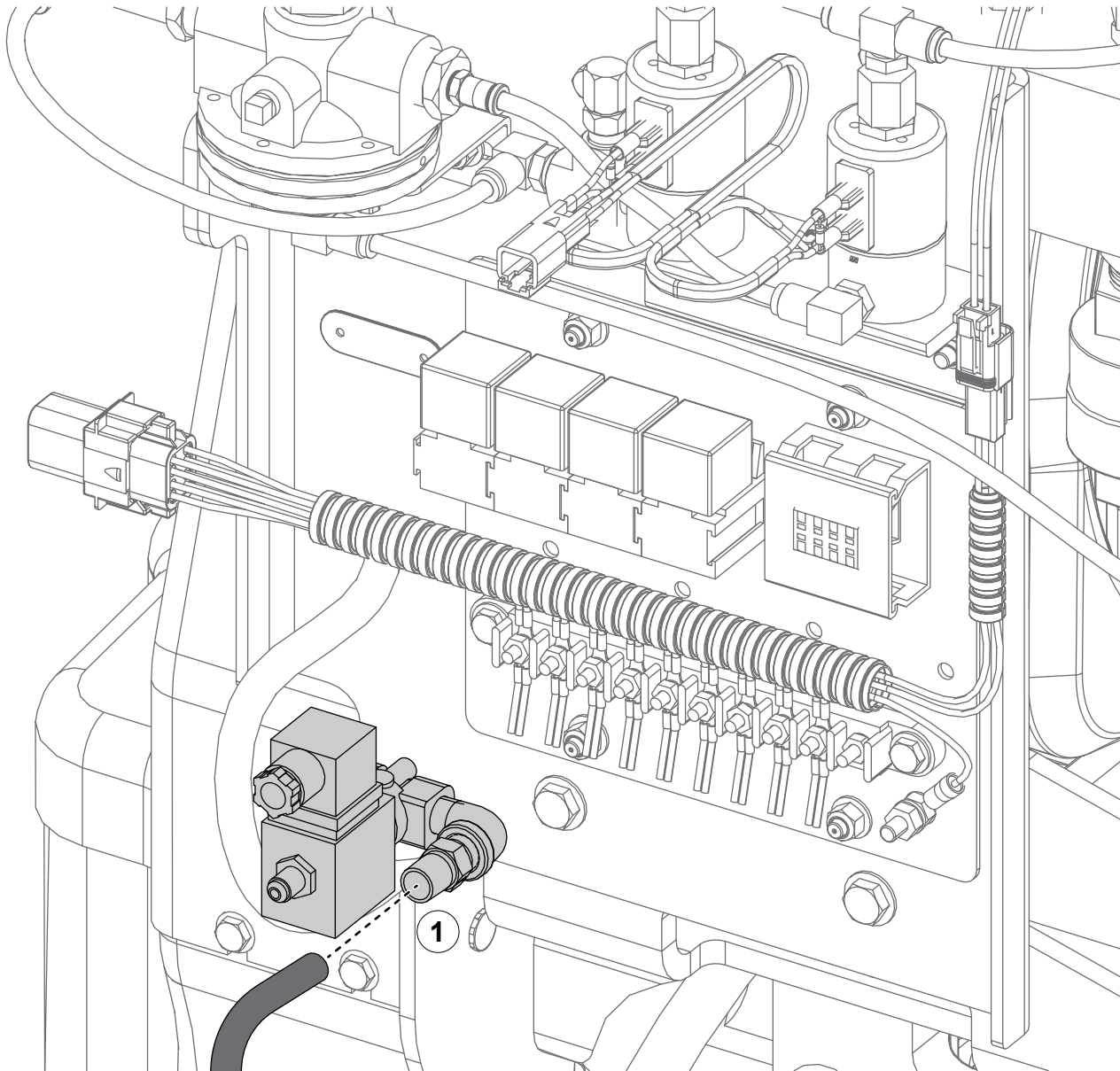


Use the illustration and instructions to connect the wiring to the relay panel.

Note: Use the information that you recorded earlier to connect to the relay panel wiring.

- 1 Connect the CAFS mode controller from the operator panel.
- 2 Connect the wires to the terminal clock.

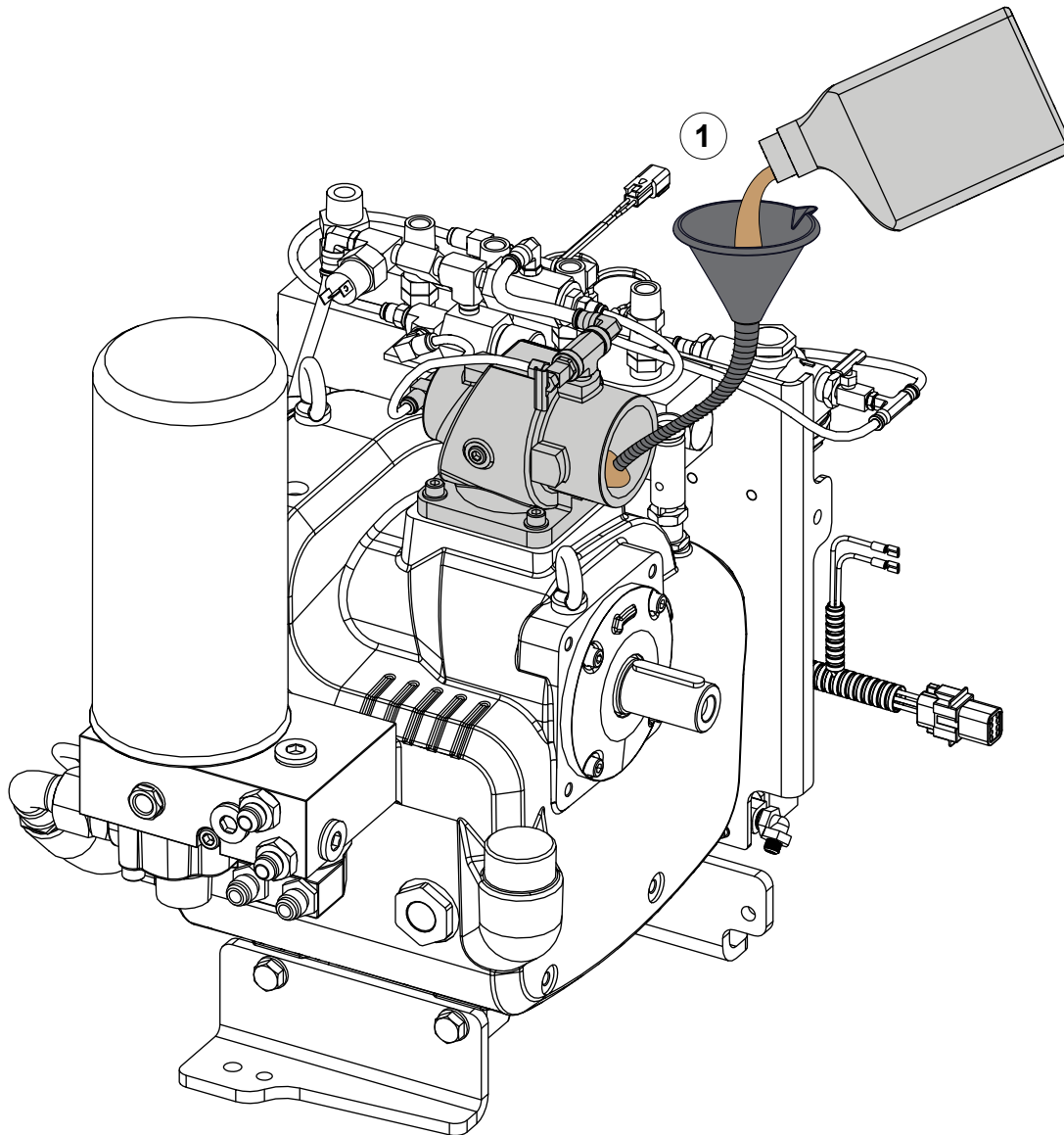
Connecting the Air Supply



Use the illustration and instructions to connect the air supply.

- 1 Connect the apparatus air supply to the compressor assembly.

Preparing for Operation



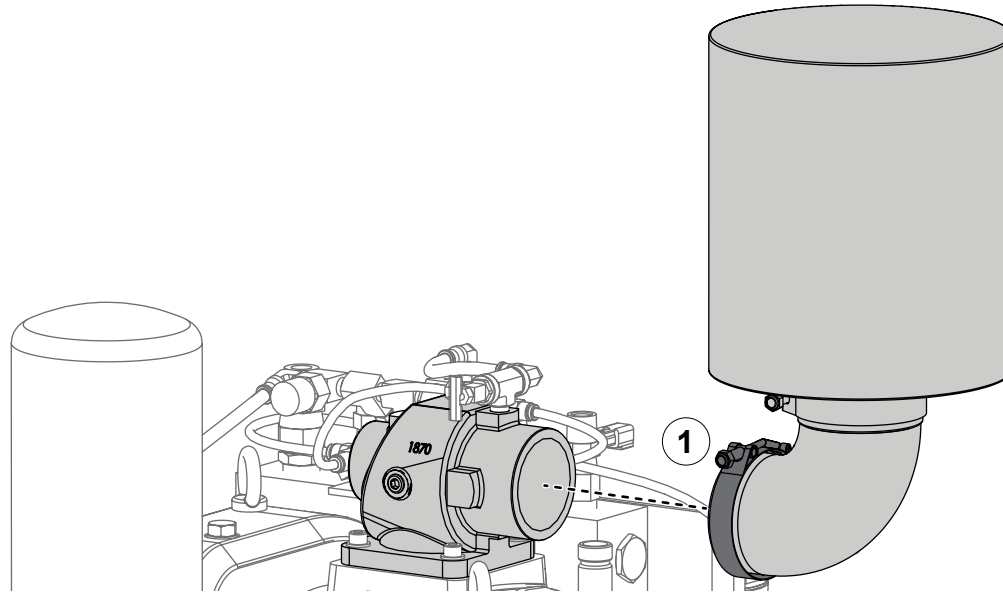
Use the illustrations and instructions to prepare the system for operation. This procedure distributes the oil in the compressor to the hoses, oil cooler, and other system components.

Before you begin the procedure:

- Make sure that tools have been removed from the apparatus and the equipment is clear of debris.
- Make sure that all hardware and connections are properly tightened.
- Make sure that the drain valves are closed.
- Make sure to flow water through the oil cooler.
- Make sure that all associated equipment is operating properly.

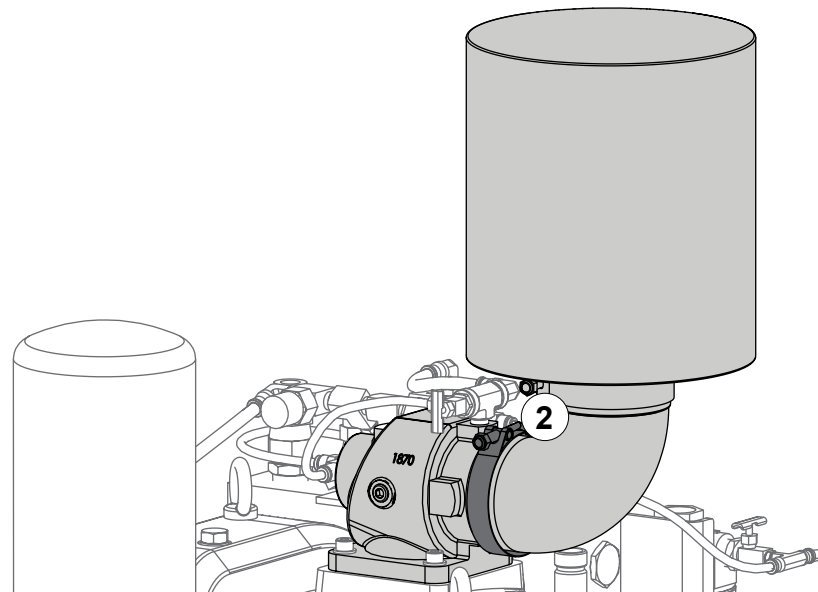
1 Pour 8 to 16 oz (267 to 474 ml) of ISO 68 low-foaming or anti-foam hydraulic oil into the air inlet. Install the air filter.

Installing the Air Filter

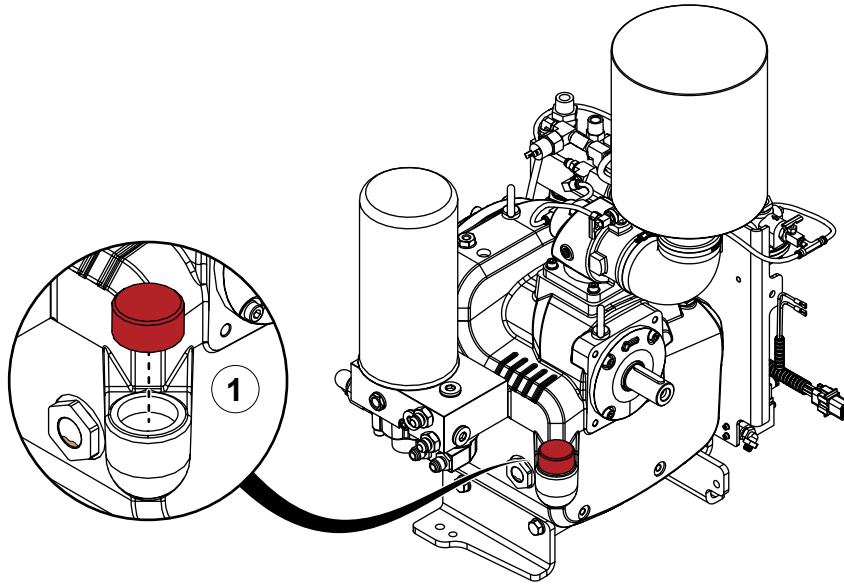


Use the illustrations and instructions to install the air filter.

- 1 Arrange the T-bolt on the air filter assembly and align it air-inlet on the compressor.
- 2 Securely tighten the air filter assembly to the air inlet.



Adding the Compressor Oil

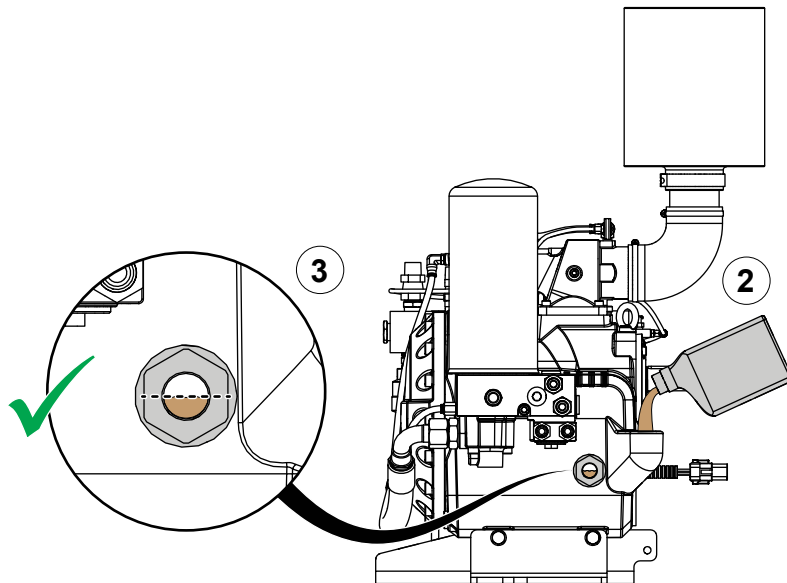


Use the illustrations and instructions to add oil to the sump. Use approximately 2.5 gal (9.46 L) of ISO 68 low-foaming or anti-foam hydraulic oil.

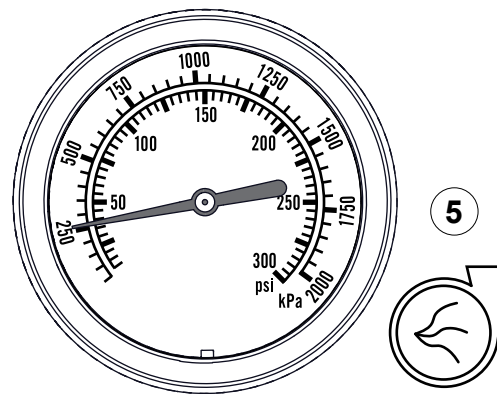
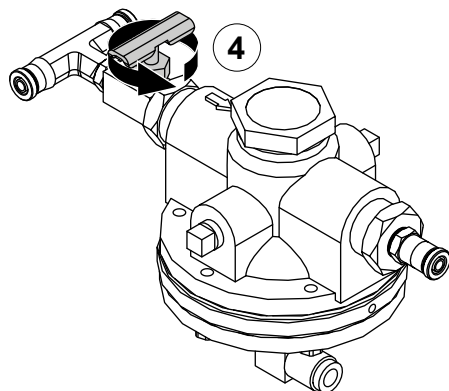
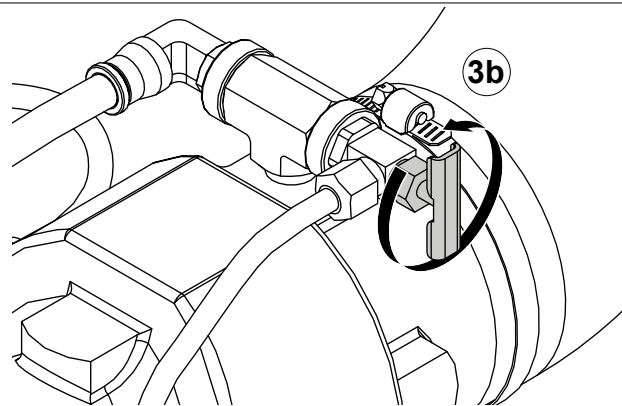
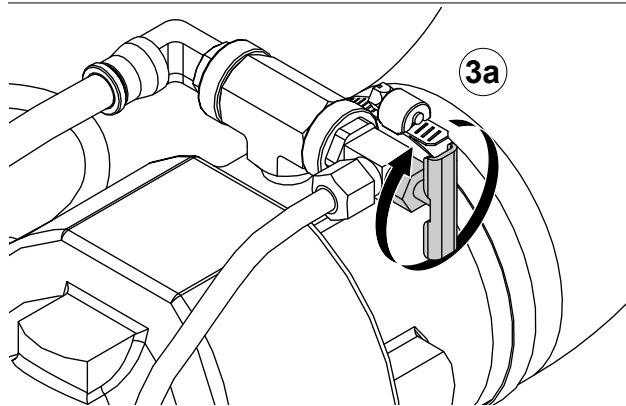
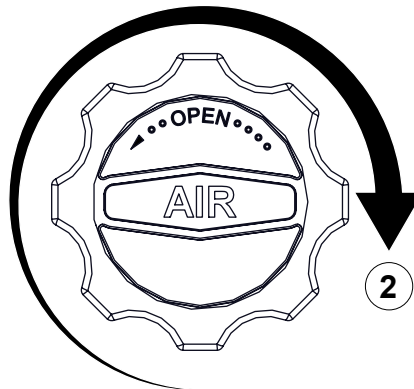
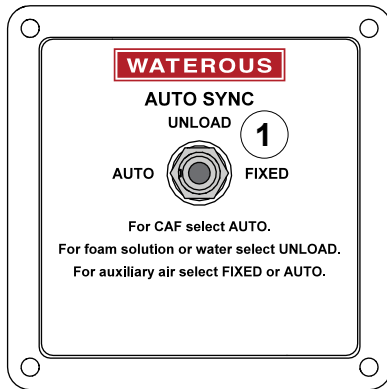
- 1 Remove the oil fill cap.
- 2 Add oil to the compressor, then run the compressor for 10 seconds to circulate the oil through the system.

Note: After pouring some oil into the compressor, allow it to settle before adding more to avoid over-filling.

- 3 Add oil until it reaches halfway up the sight glass, then install the oil fill cap.



Calibrating the System—Unload Mode



Use the illustrations and instructions to calibrate the system for unload mode.

When operating the system:

- Always start the system in auto or unload mode.
- Always circulate enough cool water to regulate the compressor oil temperature during operation.
- Never operate the system with the compressor oil temperature above 250°F (121°C).

1 Toggle the auto-sync switch to the *UNLOAD* position.

2 Close all air discharges before calibration.

3 a. Locate the AITV, then turn it clockwise until fully closed.

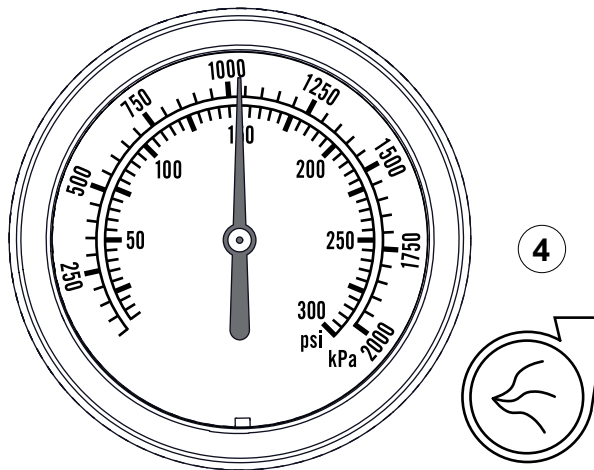
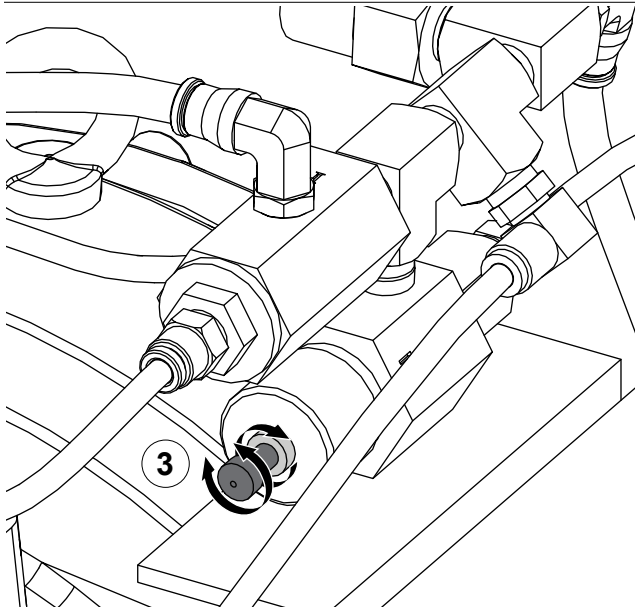
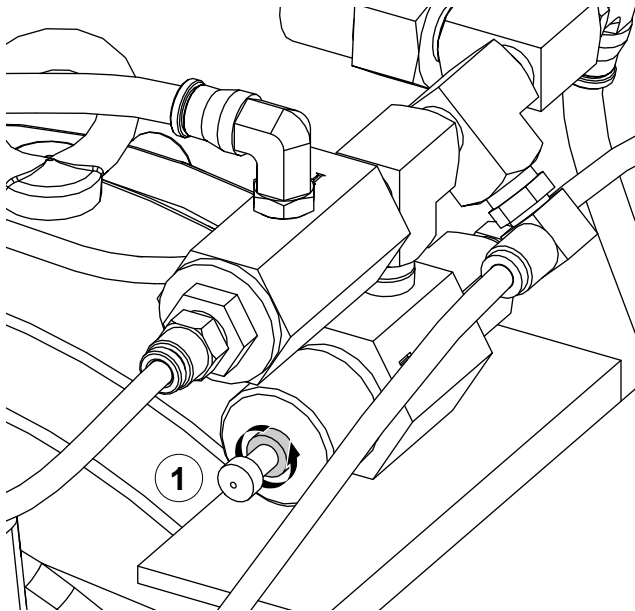
b. From the closed position, turn it 3 full turns counter-clockwise.

4 Locate the balance trim valve, then turn it counter-clockwise until fully open.

5 Idle the engine and flow water through the pump, then engage the air clutch. The air pressure gauge should read approximately 40 psi (2.8 bar).

Note: Do not engage the clutch when the engine speed is above 1,000 rpm.

Calibrating the System—Fixed Mode



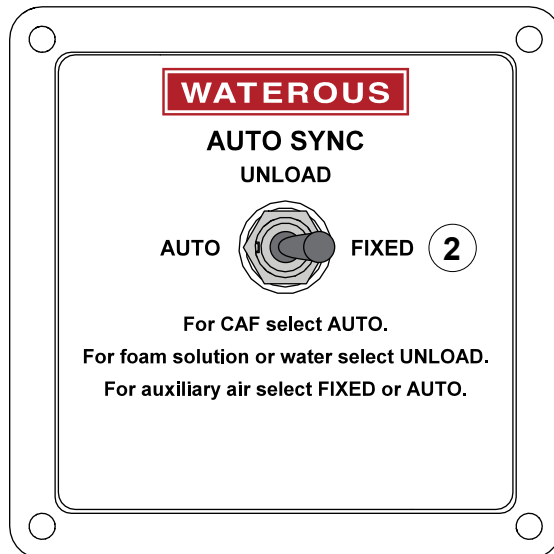
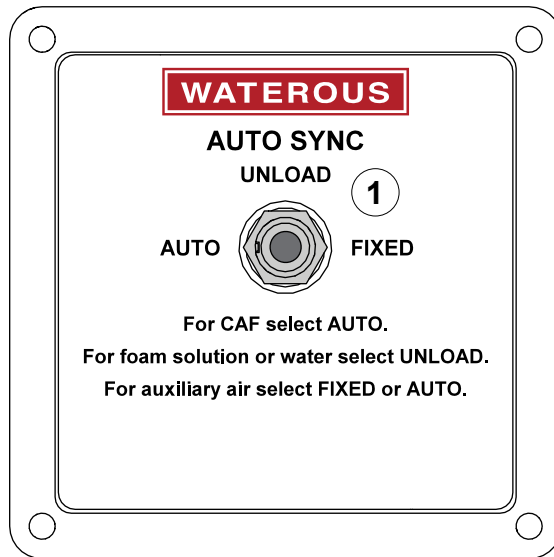
Use the illustrations and instructions to calibrate the system for fixed mode.

When operating the system:

- Always start the system in auto or unload mode.
- Always circulate enough cool water to regulate the compressor oil temperature during operation.
- Never operate the system with the compressor oil temperature above 250°F (121°C).

- 1 Loosen the locknut on the PMC manual adjustment screw.
- 2 Toggle the auto-sync switch to the *FIXED* position.
- 3 To adjust the air pressure, do the following:
 - Turn the screw clockwise to increase pressure.
 - Turn the screw counterclockwise to decrease pressure.
- 4 Allow time for the adjustment to take effect, then use the gauge to verify the change. Secure the setting with the locknut.

Calibrating the System—Fixed Mode



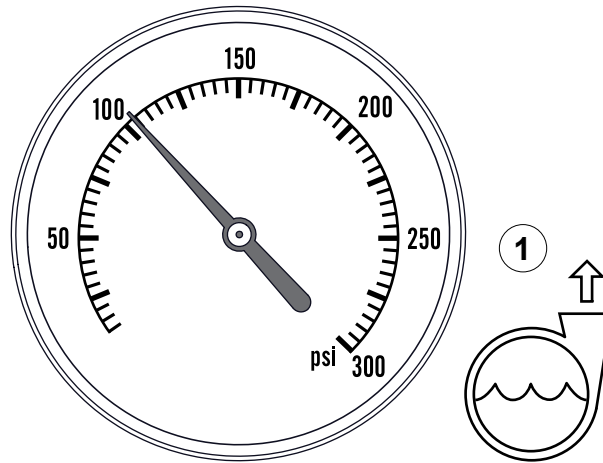
Use the illustrations and instructions to verify that the system is calibrated for fixed mode.

When operating the system:

- Always start the system in auto or unload mode.
- Always circulate enough cool water to regulate the compressor oil temperature during operation.
- Never operate the system with the compressor oil temperature above 250°F (121°C).

- 1 Toggle the auto-sync switch to the *UNLOAD* position to make sure that the air pressure decreases to the unload mode value—typically 40 psi (2.8 bar).
- 2 Toggle the auto-sync switch to the *FIXED* position to make sure that the air pressure increases to the fixed mode value—typically 145 to 150 psi (10 bar).
- 3 Verify that the system operates as expected in both modes when you vary the engine speed.

Calibrating the System—Auto Mode



Use the illustrations and instructions to adjust the system in auto mode.

When operating the system:

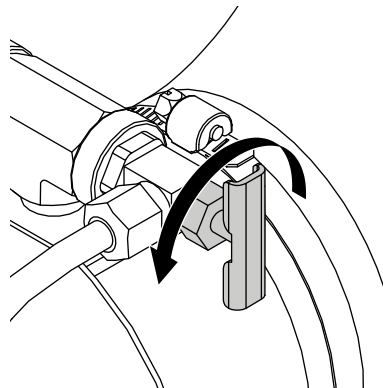
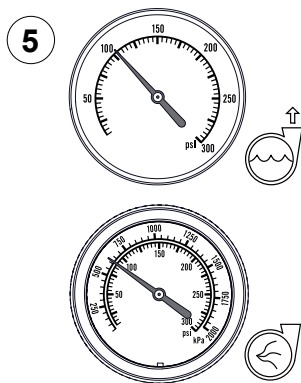
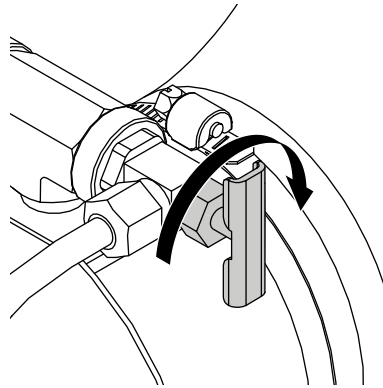
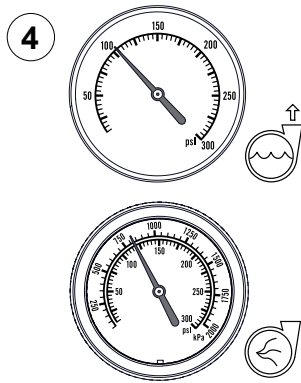
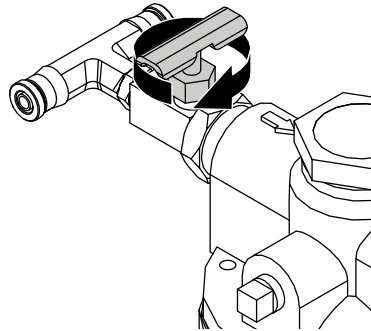
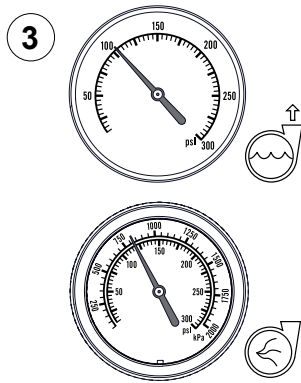
- Always start the system in auto or unload mode.
- Always circulate enough cool water to regulate the compressor oil temperature during operation.
- Never operate the system with the compressor oil temperature above 250°F (121°C).

1 Make sure that the pump has 100 psi (10.3 bar) at the main discharge with minimal flow.

2 Toggle the auto-sync switch to the *AUTO* position.



Calibrating the System—Auto Mode



Use the illustrations and instructions to adjust the system in auto mode.

When operating the system:

- Always start the system in auto or unload mode.
- Always circulate enough cool water to regulate the compressor oil temperature during operation.
- Never operate the system with the compressor oil temperature above 250°F (121°C).

3 Turn the balance trim valve clockwise until the air pressure is 5 to 10% higher than the water pressure.

4 If the air pressure remains 10% higher than the water pressure and the balance trim valve is fully open, turn the AITV 1/2 turn clockwise. After the adjustment takes effect, compare the air and water pressure.

If the air pressure is still too high, turn the AITV an additional 1/2 turn clockwise.

Note: Do not turn the AITV more than 1 full turn clockwise.

5 If the air pressure remains lower than the water pressure and the balance valve is fully closed, turn the balance trim valve counterclockwise until it is fully open. After the adjustment takes effect, compare the air and water pressure.

Repeat this step until the air pressure is equal to, or 5% higher than, the water pressure.

Note: Do not turn the AITV more than 1 full turn counterclockwise.

WATEROUS

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