

**SOVREN CALIPER KIT  
2019-2022 CAN-AM X3**

**INSTALLATION**

**HAYES**

## HAYES POWERSPORTS

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5800 W. Donges Bay Road  
Mequon, WI 53092

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888.543.4803

Support:

[hayespowersports.com/pages/contact-us](https://www.hayespowersports.com/pages/contact-us)

# HAYES PERFORMANCE SYSTEMS WARRANTY

## **Limited Warranty:**

HAYES warrants its products to be free from defects in materials or workmanship under normal intended use for a period of one year (two years in European Union countries) from the date of purchase, subject to normal wear and tear. Unless otherwise prohibited by law, any such defective products will be repaired or replaced at the option of HAYES when received with proof of purchase, freight prepaid. This warranty does not cover breakage, bending, or damage that may result from crashes or falls. This warranty does not cover any defects or damage caused by alterations or modifications of HAYES products or by normal wear, accidents, improper maintenance, damages caused by the use of HAYES products with parts of different manufacturers, improper use or abuse of the product, application or uses other than those set forth in the HAYES instruction manual or failure to follow the instructions contained in the applicable HAYES instruction manual. Instruction manuals can be found on-line at [www.hayespowersports.com](http://www.hayespowersports.com). Any modifications made by the BUYER or any subsequent user will render the warranty null and void. This warranty does not apply when the serial number or production code has been deliberately altered, defaced or removed from the product. The cost of normal maintenance or replacement of service items, which are not defective, shall be the BUYER's responsibility. If permitted by local law, this warranty is expressly in lieu of all other warranties (except as to title), express or implied, and in particular and without limitation HAYES disclaims the implied warranties of merchantability or fitness for purpose. If for any reason warranty work is necessary, return the component to the place of purchase or contact your dealer or local HAYES distributor. In the USA, contact HAYES for a return authorization number (RA#) at 888.543.4803 or [customerservice@hayespowersports.com](mailto:customerservice@hayespowersports.com).

## **Limitation of Liability.**

Unless required by mandatory law, HAYES shall not be liable for any incidental, indirect, special or consequential damages. This warranty does not apply to normal wear and tear. Wear and tear parts are subject to damage through normal use, failure to service according to recommendations or riding in conditions other than recommended. The cost of normal maintenance or replacement of service items, which are not defective, shall be paid for by the original purchaser. Wear and tear parts that will not be replaced under warranty include but are not limited to the following:

- Rotors
- Dust Seals
- Stripped or Worn Bolts
- Air Seals and/or O-rings
- Pads

# INTRODUCTION

This manual is intended to provide the information necessary for installation, set-up, normal maintenance and service of the Hayes Sovren Caliper Kit. We highly recommend installation be performed by a qualified mechanic. These instructions can be downloaded from the Hayes Powersports website at [www.hayespowersports.com](http://www.hayespowersports.com).

## **⚠ WARNING ⚠**

We highly recommend that service to this brake be performed by a certified mechanic. Failure to follow instructions presented in this manual could lead to serious injury or death. Any questions about the servicing of this brake or the manual itself should be directed to Hayes Customer Support at:

<b>Hayes Powersports USA</b>	5800 W. Donges Bay Road, Mequon, WI 53092
	Phone: 888.543.4803
	<a href="mailto:customerservice@hayespowersports.com">customerservice@hayespowersports.com</a>

# SAFETY INFORMATION

As a serious rider you are well aware of the need to practice safety in all aspects of the sport. This includes service and maintenance practices as well as riding practices. Before each ride, always check your brakes for proper function and the brake pads for wear. When you ride, always wear a helmet.

## ⚠️ WARNING ⚠️

When you need to install any of the disc brake components, that installation work should be done by a qualified technician with the proper tools. Improper installation could cause severe or fatal injuries.

## ⚠️ WARNING ⚠️

The use on any other vehicle or device will void the warranty and can cause serious injury.

## ⚠️ WARNING ⚠️

With use, disc brake components may become very hot. Always allow components to cool before attempting to service your vehicle.

## ⚠️ WARNING ⚠️

When following any of the procedures below, be sure to keep your hands and fingers from getting caught in the disc. Failure to do so could result in injury.

## ⚠️ WARNING ⚠️

If your vehicle is involved in a fall or crash it is recommended your brakes are checked by a qualified mechanic before riding to ensure they are functioning properly. Always have a qualified mechanic check your brakes if you suspect damage.

# TABLE OF CONTENTS

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<b>SECTION</b>	<b>PAGE NUMBER</b>
Brake Caliper Kit Contents	7
Caliper Installation	8-13
Additional Safety Information	14
Testing the Brakes	15
Critical Brake Information	15

# SOVREN BRAKE CALIPER KIT CONTENTS

- Brake Caliper Assembly, Front (2)
- Brake Caliper Assembly, Rear (2)
- Copper Crush Washer (8)
- Mount Bolts (8)

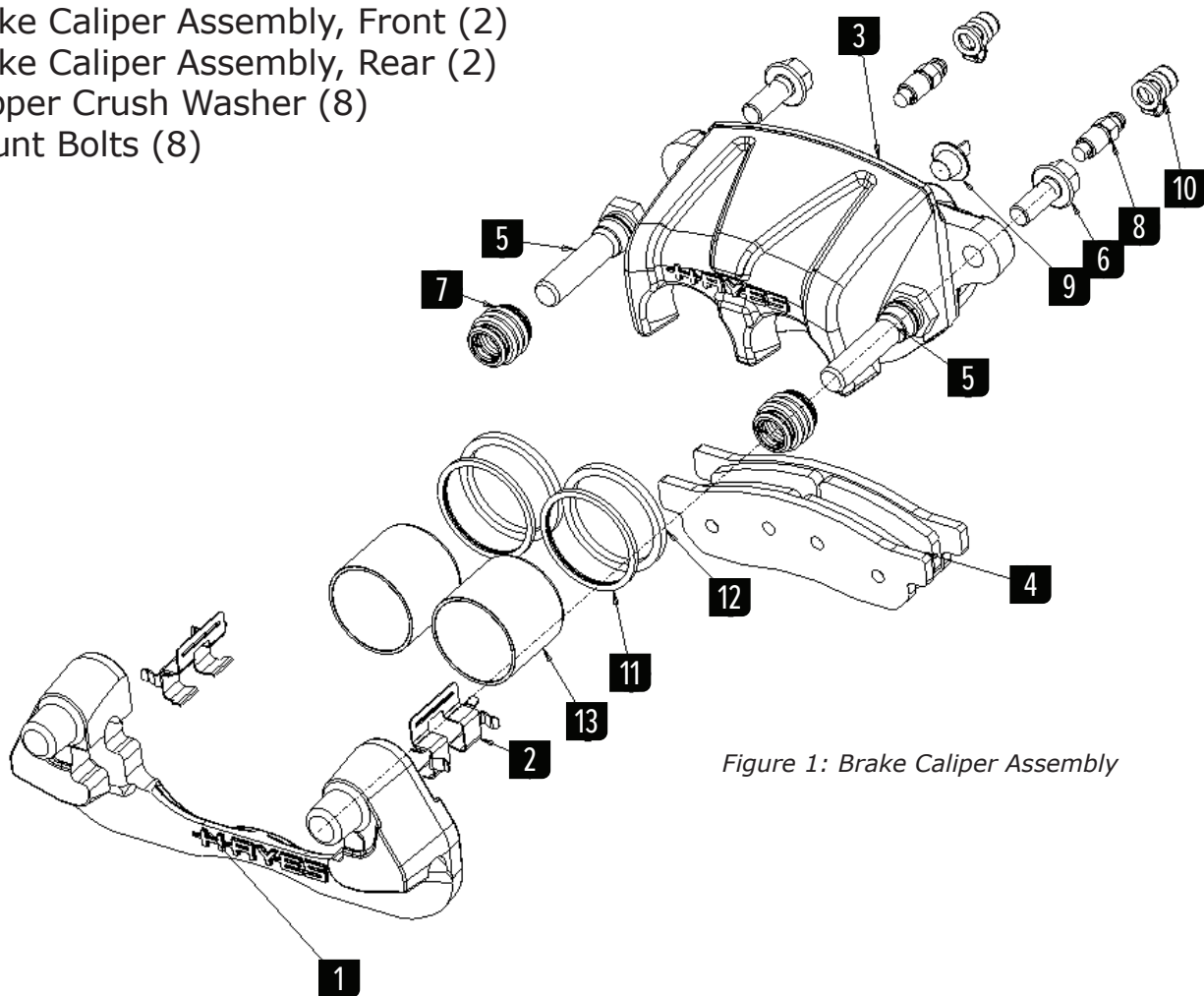


Figure 1: Brake Caliper Assembly

ITEM	PART NUMBER	DESCRIPTION	QTY
1	14-38407	BRACKET, MACHINING, RACE, X3	1
2	06-37166	SPRING, ANTI-RATTLE, PAD	2
3	36-38890	CAPILER, ANODIZED, CLEAR	1
4	33-38751	PAD, SINTERED, S-SERIES, TYPE 139	2
5	05-33150	PIN, SLIDER, HIGH CLEARANCE	2
6	01-33499	BOLT, CALIPER, SLIDE PIN	2
7	09-37168	BOOT, DUST, SLIDER PIN	2
8	10-19809	FITTING, BLEEDER SCREW	2
9	90-17489	CAP PLUG, W10	1
10	09-21182	CAP, BLEEDER, W8, CP, 75DURO	2
11	08-30682	SEAL, WIPER, 1.375	2
12	08-38336	SEAL, SQUARE, SMOOTH, 1.375"	2
13	13-35538	PISTON, CALIPER	2

# CALIPER INSTALLATION

**Before performing Steps 1-4 below, remove OEM Brake Calipers per OEM Repair & Maintenance Manual. For optimal performance, install the Sovren caliper kit with new Hayes Pro-Float 8R Rotors.**

Modify knuckle according to the pictures and instruction below – template provided to assist in removal of material.

Remove material from both front knuckles so that caliper has minimum of .030" ( $\sim 1/32$ ) and a maximum of .075" ( $\sim 1/16$ ) clearance (Figures 2, 3 and 5).

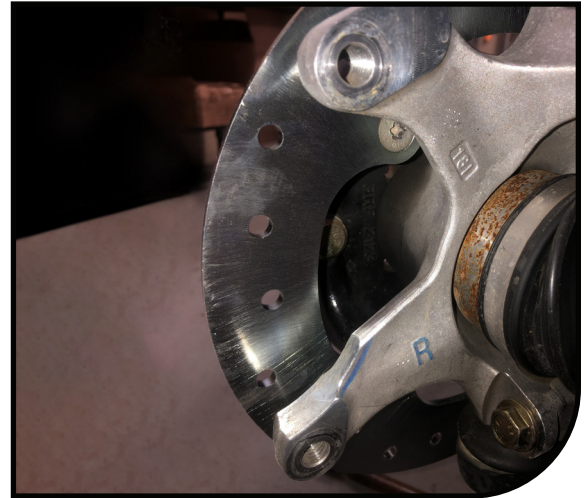


Figure 2: Modified knuckle

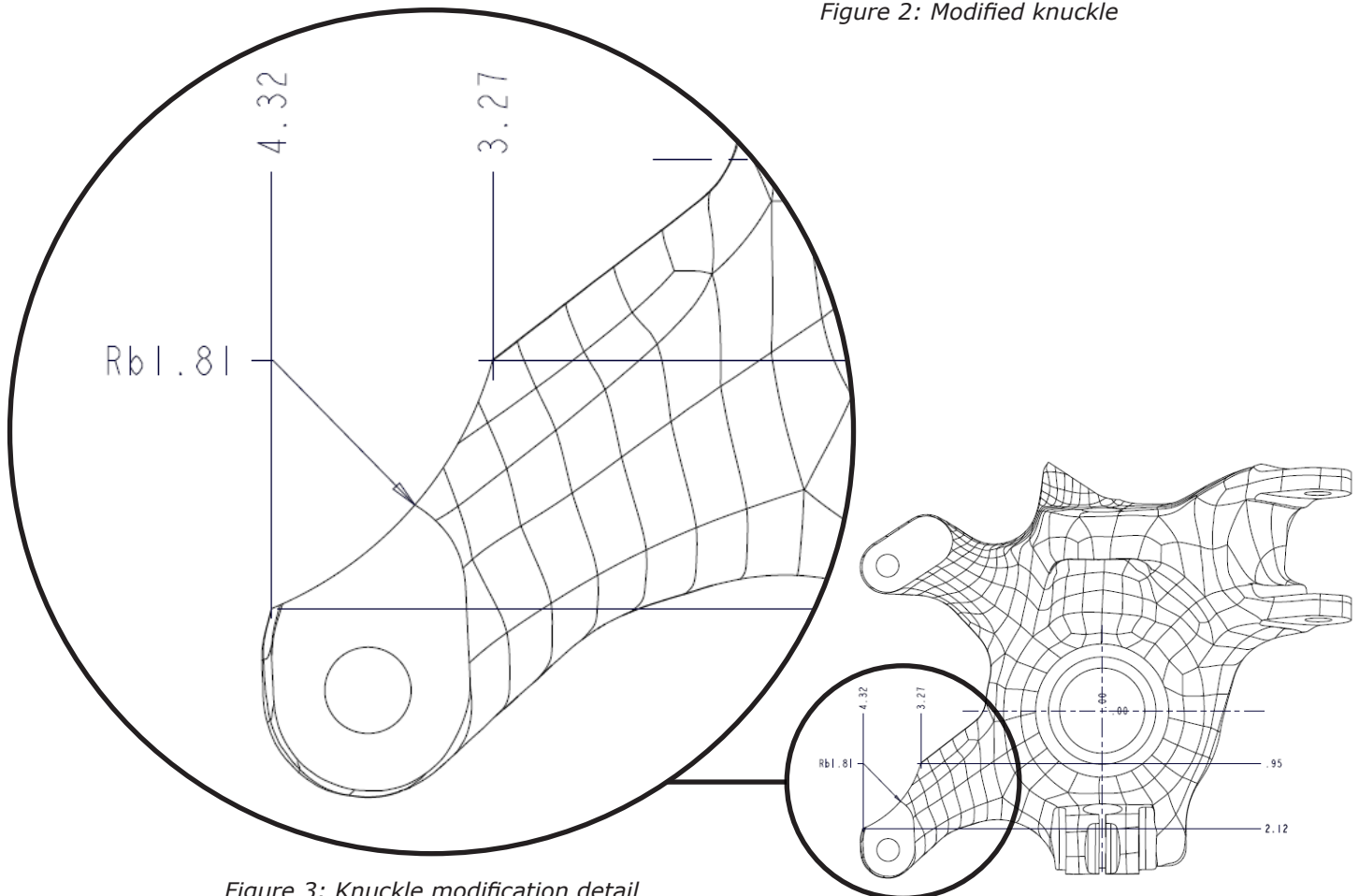


Figure 3: Knuckle modification detail



# CALIPER INSTALLATION

- 1** Identify front and rear calipers based on label on packaging, circled front or rear. Caliper sizing can be determined by a drill point on the backside of the caliper. 35 is used on the front, 28 or 32 on the rear. Make sure to install the correct caliper on the correct axle.
- 2** Pull pad spacer out and align brake caliper so that friction material contacts both sides of the rotor from the inner and outer pad (Figure 4). Check clearance fit is between .030" ( $\frac{1}{32}$ ) and .075" ( $\frac{1}{16}$ ) (Figure 5).

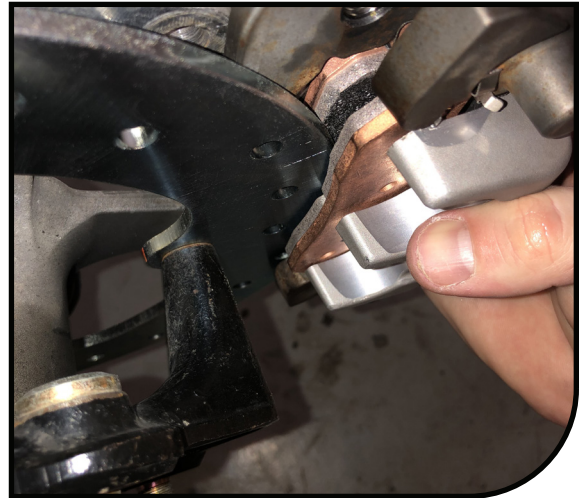


Figure 4



Figure 5

# CALIPER INSTALLATION

- 3 Align caliper bracket holes with vehicle steering knuckle holes as seen below (Figures 6 and 7).

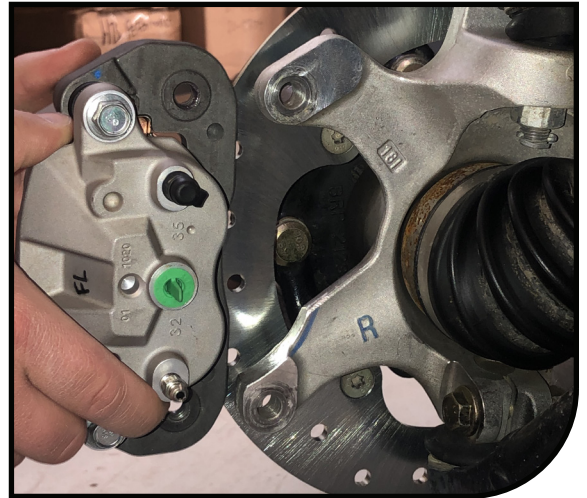


Figure 6



Figure 7

# CALIPER INSTALLATION

- 4 Install Hayes-provided bracket mount bolts. Recommended mount bolt torque is 40 ft-lb (Figures 8 and 9).

## NOTICE

Ensure use of Hayes-provided hardware as they are different thread pitch than the OEM.



Figure 8



Figure 9

# CALIPER INSTALLATION

- 5 Install brake line with existing OEM banjo bolt and new crush washers provided (Figure 10) and orient as seen (Figure 11). Recommended banjo bolt torque is 22 ft-lb (Figure 11).



Figure 10

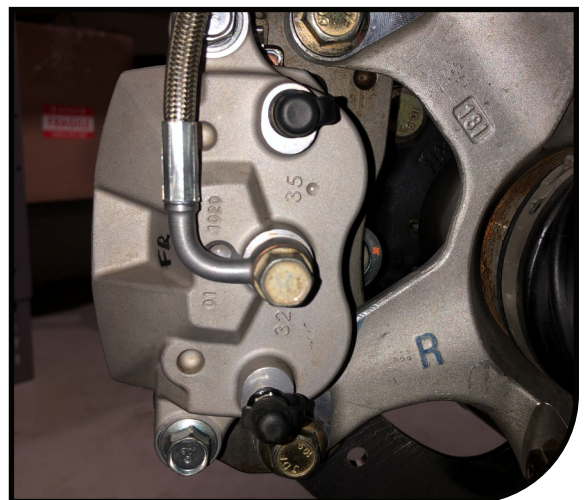


Figure 11

# CALIPER INSTALLATION

- 6** Secure brake line to mount anchor (Figure 12) and check clearance and wheel fitment (Figure 13).
- 7** Repeat steps 1-6 for all four brake corners for front and rear brake calipers.
- 8** Bleed brake system per OEM Repair & Maintenance Manual.
- 9** Once all brake calipers are installed and the brake system is properly bled per the instructions above, the brake pads must be bedded in per I-sheet provided.

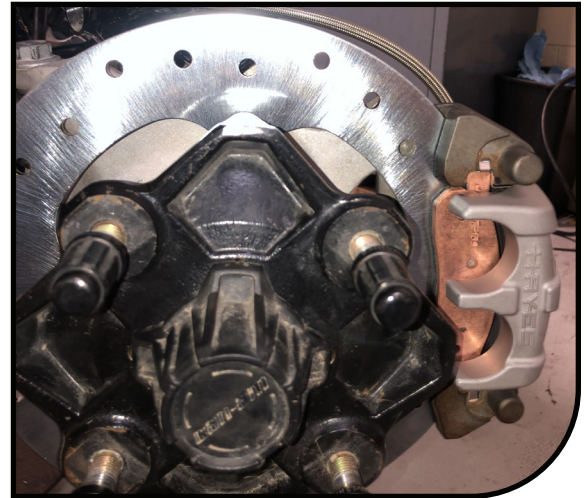


Figure 12



Figure 13

# ADDITIONAL SAFETY INFORMATION

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## **⚠ WARNING ⚠**

DO NOT DRIVE UNTESTED BRAKES. BRAKES MUST BE TESTED AFTER INSTALLATION OR MAINTENANCE. INSTALLATION OF THIS COMPONENT SHOULD ONLY BE PERFORMED BY PERSONS EXPERIENCED IN THE INSTALLATION AND PROPER OPERATION OF DISC BRAKE SYSTEMS. IT IS THE RESPONSIBILITY OF THE PERSON INSTALLING ANY BRAKE COMPONENT TO DETERMINE THE SUITABILITY OF THE COMPONENT FOR THAT PARTICULAR APPLICATION. IMPROPERLY INSTALLED, MAINTAINED OR INCORRECTLY BLED BRAKES ARE DANGEROUS AND MAY RESULT IN DEATH OR SERIOUS INJURY.

# TESTING THE BRAKES

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Do not attempt to operate the vehicle until the system has been fully tested under controlled conditions in a safe location. After the system has been bled, checked for leaks, and the proper pedal/lever resistance and travel have been determined, make a series of low speed stops, then gradually progress to normal operating speeds.

## CRITICAL BRAKE INFORMATION

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Install in accordance with vehicle manufacturer's service manual.

Make sure pedal/level is firm: Hold firm pressure on pedal/lever for several minutes, it should remain in positions without sinking. If pedal/lever sinks during hold, check system for fluid leaks. DO NOT drive vehicle if pedal/lever does not stay firm or can be pushed to the floor/handlebar with normal pressure.

At very low speed (2-5 mph) apply brakes hard several times while turning steering from full left to full right, repeat several times. Review the brake and brake line packaging area and check that components are not touching, rubbing, or leaking.

Carefully examine all brake components, brake lines, and fittings for leaks and interference.

Make sure there is no interference with wheels or suspension components.

- Drive vehicle at low speed (15-20 mph) making moderate and hard stops. Brakes should feel normal and positive. Again check for leaks and interference.
- Always test vehicle in a safe place where there is no danger to (or from) other people or vehicles.
- Always make use of all safety equipment.

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GLOBAL HEADQUARTERS USA**

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