# **IDHN50N** 40-6201 & 40-6211 Sheave Alignment Laser Operator's Manual

Thank you for purchasing this Johnson Sheave Alignment Laser - the most accurate way to align your drivetrain to reduce power losses, friction, bearing wear and noise.



This sheave alignment laser can detect all methods of drivetrain misalignment including offset, angle and twist. The laser line allows visualization of the corrections required to bring your system back into alignment.



This Class II laser tool complies with CRF 21 parts 1040.10 and 1040.11. IEC 285 and EMC Tests EN61000-6-3: 2001+A11:2004, EN6100-6-1:2011, EN6100-4-2, EN61000-4-3. EN 60825 & FCC Test Part 15.



THIS TOOL EMITS LASER RADIATION. DO NOT STARE INTO BEAM, AVOID DIRECT EYE EXPOSURE.

#### **ATTENTION:**

- Read all instructions before operating this tool.
- Do not remove any labels from the tool.
- Do not project the laser into the eyes of others.
- Do not set up the laser tool at eve level, or operate the tool near reflective surfaces, as the beam can be projected into your eyes or the eyes of others.
- Do not place the laser tool in a manner that may cause someone to unintentionally look into the laser beam. Serious eye injury may result.
- Do not operate the tool in explosive environments, (i.e., in the presence of gases or flammable liquids).
- Keep the laser tool out of the reach of children and other untrained persons.
- Do not attempt to view the laser beam through optical tools such as telescopes. Serious eye injury may result.
- Always turn off the laser tool when not in use or when left unattended for any period of time.
- Disassembly or repair by unqualified persons will void the warranty.

## SAFETY LABEL LOCATION



The included pulley offset chart can be used to determine your misalignment angle. 0.5° is the maximum recommended offset angle. Measure the distance (in feet) between pullev centers. Measure the offset using the included targets and divide the offset (inches) by the distance (feet). The angle can be read from the chart on the label.

### **INSERTING BATTERIES**

Unscrew the battery door and insert 2xAA batteries according to the polarity shown. Replace the battery door.

NOTE: To prevent damage to the O-Ring seal. do not over-tighten.

### COMPONENT OVERVIEW POWER BUTTON TARGET SCALE BATTERY DOOR TARGET BODY



### **BASIC OPERATION**

For the brightest beam, ensure you are using fresh batteries.

To power on the laser, press the power button. To power off the laser, press the power button again.

Store the tool in the included soft pouch when not in use. If the tool will be stored for an extended period (>3 months), remove the batteries to prevent corrosion.

**CAUTION:** Never operate your drivetrain with the laser or targets installed. Serious injury or drivetrain damage may occur!





# **JOHNSON** 40-6201 & 40-6211 Sheave Alignment Laser Operator's Manual

### DRIVETRAIN ALIGNMENT

To align your drivetrain, attach the laser to the smaller sheave and attach the three targets to the top, bottom and far center of the larger sheave, as illustrated below.

NOTE: It doesn't matter which is the driving and which is the driven sheave. This method maximizes the distance between the targets to increase accuracy.



Ensure the targets are properly adjusted so that the center of the laser beam properly passes through the center of the reflective strip when the drivetrain is aligned.

For simple drivetrains where both pulleys are the same thickness, set the target to the zero point. The zero point on each target is factory set to ensure proper alignment. To adjust for sheaves with different thicknesses, or different numbers of sheaves, use a caliper (not included) to measure thickness and adjust the target accordingly. See ADJUSTING TARGETS.



The 1/32" increments help you accurately align your drivetrain. The "zero point" is the furthest graduation line to the right in the image above, and is calibrated so that the laser beam passes through the reflective strip when a drivetrain consisting of two identical pulleys is properly aligned.

To adjust for sheaves with different thicknesses, loosen the adjustment knob & slide the outer target assembly along the target body to reach the desired offset.

Adjust your drivetrain until the laser beam passes directly through the center of the reflective strip of each of the three targets. The reflective strip enhances the laser brightness to make it easier to see when you have properly aligned your drivetrain.

#### TROUBLESHOOTING

- Tool does not power on or remain on - Check battery polarity. Replace batteries. Ensure battery door is tight.
- Laser light is dim Ensure fresh batteries are being used. Ensure reflective strip on targets is intact.
- Laser appears out of calibration -Contact Johnson for service. The laser does not contain any user-serviceable parts.
- Can I purchase replacement targets? Yes, contact Johnson and reference part 40-6203 (red) or 40-6213 (green).

### SPECIFICATIONS

Laser	Class II, <1mW. 635nm (40- 6201). 520nm (40-6211).
Accuracy	+/- <sup>1</sup> / <sub>16</sub> " @ 10'
Operating Temp.	23°F to 104°F
Storage Temp.	-4°F to 160°F
Batteries	2xAA
Battery Life	2 hours (40-6201)
	4 hours (40-6211)
Dimensions	6.7" × 1.9" × 0.7"
Target Range	0" - 7/8"
Weight	1.2 lb. (with batteries)
IP Rating	IP54 (rainproof)

### **REGISTRATION & WARRANTY**

Please register your product within 30 days of purchase to ensure warranty service even if you lose your receipt, or so we can contact you if there is ever a product recall. We will never sell your information and will only send you marketing information if you opt-in.

To register, scan or click: www.johnsonlevel.com/register



Johnson Level & Tool offers a limited one-year warranty on this product. You can obtain a copy of this warranty on our website The limited warranty contains various limitations and exclusions.

**Note:** The user is responsible for verifying proper calibration of this instrument before each use. If you experience problems with this product, please contact us.

In the USA: service@johnsonlevel.com 888-9-LEVELS (888-953-8357) In Canada: 800-346-6682 On the Web: www.johnsonlevel.com

