

Use ISO VG15 Liquid Paraffin (Shell Ondina Oil #15) in the Air Line Kit
lubricator bowl (For U.S.A. specification, use Chevron Supella #9).

Model
• Lubricating Oil (K-211) 70cc • Lubricating Oil (K-202) 1 L

9. TROUBLESHOOTING

If a problem or concern occur, please check the following items prior to consulting your dealer.

Trouble	Cause	Inspection / Corrective Action
Air Grinder does not rotate or rotate smoothly.	Air flow does not reach the spindle.	Check if input supply connection hose or air / oil supply hose is broken, bent or disconnected. Check connection of the input supply connection and air / oil supply hoses. Check the compressor power supply and the air compressor output. Check the Regulator and set to the correct air pressure. Check all connections input supply and air / oil supply hose.
	The ball bearings have been damaged.	Replace the ball bearings. (Return to NAKANISHI dealer service.)
	The motor has been damaged by no Lubricating Oil.	Repair the motor. (Return to NAKANISHI dealer service.)
Motor speed decrease.	The connection hose or air / oil supply hose have been damaged.	Replace the input supply and or air / oil supply hoses.
	Poor connection of input supply or air / oil pressure.	Check all threaded joints and re-tighten if necessary. Check the Compressor, Air Circuit, and Regulator.
	Low Lubricating Oil.	Check lubricator for proper lubricant level. Set the Oil Drip Rate from 1 to 3 drops / min. Clean inside of the motor use the Lubricating Oil. Removing the Filler Joint from Air Line Kit, supply a small amount of Lubricating Oil directly into the Filler Joint. Afterwards, supply air pressure and rotate the Air Grinder. Flush dirt in the motor and repeatedly do this work about three times. When the improvement is not seen, return to NAKANISHI dealer service.
	Water, dirt and debris are collected in the Filler Regulator.	Drain water, dirt and debris from the Filler Regulator bowl.
	Water in Lubricating Oil reservoir.	Drain water from Lubricating Oil reservoir and replace with clean Lubricating Oil.
Unequal motor speed and motor speed decrease.	Lubricator inclined or upside down.	Inclined or upside down Lubricator will flood spindle with Lubricating Oil.
	Over filled lubricator.	Drain the Lubricating Oil from Reservoir to meet indicated levels. Excess lubricant will flood spindle. → Draining the Lubricating Oil until upper limit below by opening the Drain Valve. Replace the ball bearings. (Return to NAKANISHI dealer service.)
Overheating during rotation.	Cutting debris has contaminated the ball bearing, and the ball bearings are damaged.	Replace the cutting tool. Replace the ball bearings. (Return to NAKANISHI dealer service.)
Abnormal vibration or noise during rotation.	The cutting tool shank is bent. Cutting debris has contaminated the ball bearings.	Replace the cutting tool. Replace the ball bearings. (Return to NAKANISHI dealer service.)
Cutting tool slippage.	The spindle ball bearings have been damaged.	Replace the spindle shaft. (Return to NAKANISHI dealer service.)
High run-out.	Collet is not correctly installed. The collet is worn. Cutting tool is bent. Collet is not correctly installed. The collet is worn.	Check and clean the collet. Reinstall the collet and re-tighten. Check the accuracy. Replace the collet. Replace the cutting tool. Secure the collet correctly. Replace the collet.
	Contaminants inside the collet or the spindle.	Replace the spindle shaft. (Return to NAKANISHI dealer service.)
	The spindle ball bearings have been damaged.	Clean the collet and the inside of the taper and spindle. Replace the ball bearings. (Return to NAKANISHI dealer service.)

10. DISPOSAL OF THE AIR GRINDER

When disposal of an Air Grinder is necessary, follow the instructions from your local government agency for proper disposal of industrial components.

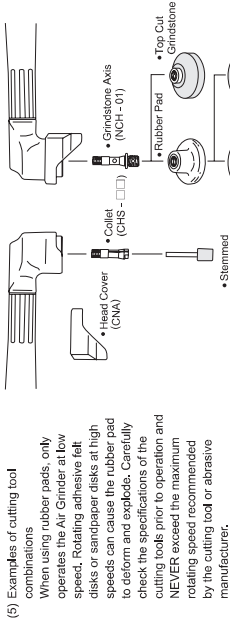


Fig. 14

8. OPERATION AND CONNECTING TO THE AIR LINE KIT

⚠ CAUTION

Make sure to turn the compressed air supply to the Air Line Kit OFF, before replacing the Lubricating Oil or draining the water in Lubricating Oil.

- Connect the Filler Joint of the Air Grinder to the Secondary Joint (ø6 One-Touch Joint) on the Air Line Kit (Fig. 15 (1)).
- Place exhaust air / oil hose with silencer into an empty container (Fig. 15 (2)). (Exhaust outlet air and oil from the Silencer).

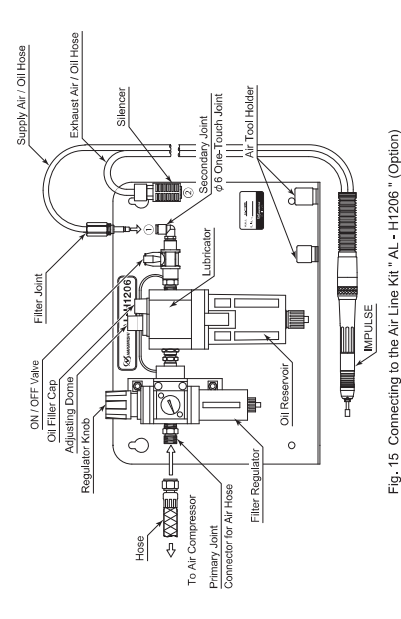


Fig. 15 Connecting to the Air Line Kit *AL - H1206* (Option)

⚠ CAUTIONS IN USING AIR LINE KIT

- When connecting the Compressor and Air Line Kit, recommended install the air filter or air dryer to compressed air and Air Line Kit in order to supply clean dry air to the Air Grinder. Using compressed air containing excessive moisture could result in malfunction or failure of the Air Grinder. If excessive moisture or condensation are found in Filler Regulator Bowl, it will be necessary to install a dryer and larger air filter on the Primary Joint side of the Air Line Kit to prevent and remove excessive moisture.
- Connect the input air supply connection hose and supply air / oil hose securely to avoid accidental disconnection during use. Input air pressure should never exceed 1.0MPa (145psi). Air pressure exceeding 1.0MPa (145psi) may cause the supply connection hose and air / oil hose supply to rupture.
- Make sure operation air pressure is less than 1.0MPa (145psi) before connecting the input supply connection hose and air / oil supply hose. If operation air pressure is exceeds 1.0MPa (145psi), injury to the operator may occur by accidental disconnection before or during use.
- Before use, carefully read "Air Line Kit Operation Manuals" regarding the correct connection, operation and cautions when using the Air Line Kit.

- Remove the Oil Filler Cap. Put the Lubricating Oil to the Lubricator (Oil Reservoir).

- Lubricating Oil: Air Line Kit standard accessories.
- Supply air from the air compressor and open the ON / OFF Valve. Turn the Regulator Knob and adjust air pressure to between 0.4 - 0.6MPa (58 - 87psi) (Clockwise direction: Air pressure is increased).
- To adjust the rotation speed by turn the ON / OFF Ring of the Air Grinder (Fig. 16).

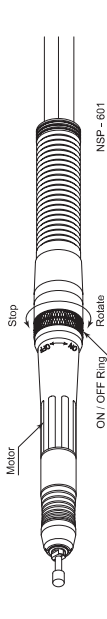


Fig. 16

- To stop rotation of the Air Grinder, turn the ON / OFF ring to the OFF position. If the Air Grinder will not be used for more than one minute, close the ON / OFF Valve on the Air Line Kit and turn the ON / OFF ring into ON position to exhaust the remaining air from the air line.
 - Refer to the Air Line Kit Operation Manual.

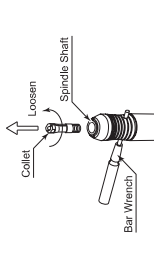


Fig. 7

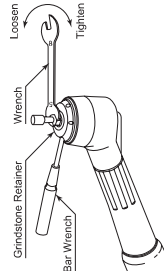


Fig. 8

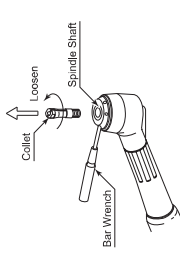


Fig. 9

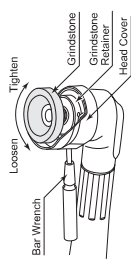


Fig. 10

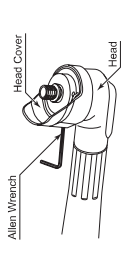


Fig. 11

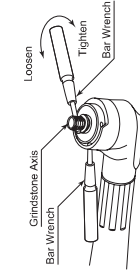


Fig. 12

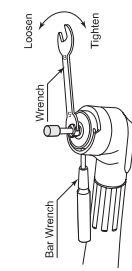


Fig. 13

- Replacing the Collet
 - Remove the cutting tool according to content of section *7-2 (1) Changing the Cutting Tool* procedure above.
 - Insert the bar wrench and turn the collet counterclockwise by hand and remove.
 - Insert the new collet, turn the collet clockwise and tighten by hand.

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- Changing the Cutting tool
 - Insert the bar wrench to the hole on the grindstone retainer.
 - Place the 5mm wrench on the collet and turn counterclockwise to open the collet and remove the cutting tool.
 - Insert the new cutting tool and place the wrench 5mm on the collet, turn the collet clockwise and tighten. Do not force the wrench or over tighten the collet as this can damage the collet.

- Replacing the Collet
 - Remove the cutting tool according to content of section *7-2 (1) Changing the Cutting Tool* procedure above.
 - Insert the bar wrench and turn the collet counterclockwise by hand and remove.
 - Insert the new collet into the spindle and tighten slightly by hand.

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- Changing the Grindstone or Rubber Pad
 - Align the holes on the head cover and grindstone retainer, and insert the bar wrench.
 - Turn the grindstone or rubber pad counterclockwise to remove.
 - Screw in the new grindstone or rubber pad and tighten by hand.

- Replacing the Head Cover
 - Insert the allen wrench 1.5mm to the hexagon socket screw of the head cover, and turn the allen wrench 1.5mm counterclockwise and loosen.
 - Remove the head cover by rotating and pulling gently by hand.
 - When mounting the head cover, align the convex part on the inside of the head cover to the concave part of the head and turn the allen wrench clockwise and tighten the hexagon socket screw.

- Replacing to the Collet from the Grindstone Axis
 - Align the holes on the head cover and grindstone retainer, and insert the bar wrench.
 - Insert another bar wrench into the hole on the grindstone axis and turn it counterclockwise to remove the grindstone axis.
 - Insert the collet into the spindle and tighten slightly by hand.

- Mounting the Cutting Tool
 - Mount the collet according to content of section *7-3 (3) Replacing to the Collet from the Grindstone Axis* procedure above and insert the cutting tool into the collet.
 - While holding the provided bar wrench, place the wrench 5mm on the collet and turn clockwise to tighten the cutting tool (Do not force the wrench or over tighten the collet as this can damage the collet).