

Rotrex C-type Superchargers

C15, C30 & C38 Setup and maintenance



ROITREX™

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Welcome

Thank you and congratulations for choosing Rotrex!

Rotrex superchargers are based on a patented high-speed planetary traction drive. Innovative technology, advanced materials and quality control make this product the absolute best on the market. To get the most of your supercharger and to avoid problems, carefully follow the instructions contained within your supercharger kit documentation and within this leaflet.

Warning!

Before beginning any installation of the Rotrex supercharger, read and familiarize yourself with all the accompanying literature

Do not attempt to install this product before discussing the details with your dealer. Make sure you have the necessary mechanical knowledge and experience with forced induction systems

Do not put hands or fingers near the running supercharger. Suction is extremely powerful and can cause loose clothes, hair and fingers to be sucked into the device with risk of serious injury

Use protective eyewear when working near the running supercharger

Keep fingers and hands clear of the pulley and drive belt while the engine is running

Please remember to disconnect the battery of the vehicle before doing any installation work

If there are any questions prior to or during installation of the Rotrex supercharger or the Rotrex supercharger kit please contact your dealer

Key points

For best performance and durability please follow the key points stated below:

1. Prior to initial start up make sure to prime the supercharger oil system (on page 9), failure to do so may result in severe damage
2. Always use special Rotrex traction fluid for the C-type range of superchargers
3. For correct operation the supercharger pulley must turn clockwise when seen from the pulley side. Never turn the pulley counter-clockwise and do not attempt to remove or substitute it. The pulley is not a user serviceable part and must therefore only be removed or changed by authorized personnel. Contact your dealer for changing pulley sizes
4. Do not try to change the compressor setup. The direction of the compressor house is pre-set by your dealer to fit the kit setup. Changing this setup must only be done by authorized personnel. Contact your dealer if you encounter problems with the setup
5. To avoid engine damage, make sure to run the appropriate fuel grade (octane). If any sign of knocking is detected immediately discontinue running the engine under boost conditions until the problem has been solved
6. It is important to place the supercharger as the highest component in the system (s/c and oil system, page 7) and with the flat surface of the supercharger facing downwards within +/- 15° to horizontal
7. Check the supercharger oil level after initial start up. Always follow the correct procedure for oil level check (page 9)
8. To secure optimum oil conditions do not modify or change the oil circuit supplied with your kit
9. Always respect the oil and filter change interval of the supercharger (page 10)
10. Always take care not to over tighten the supercharger bracket and banjo bolts as this will strip the threads. Follow the torque specified in your kit installation instructions or download the datasheet available at www.rotrex.com

Lubrication system

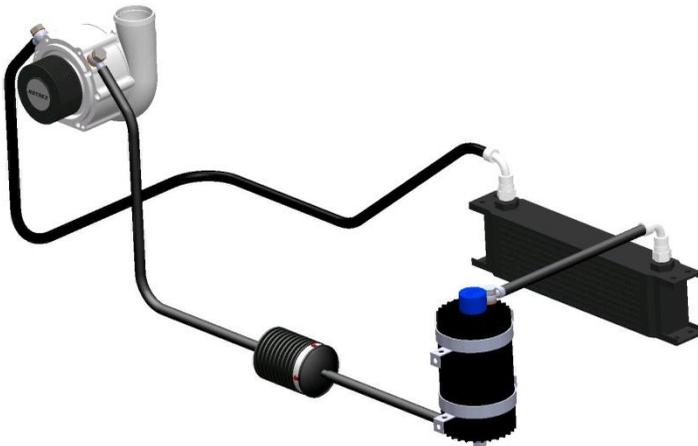
The Rotrex C-type supercharger has been developed and extensively tested with special Rotrex traction fluid.

Important!

To maintain the ultimate level of performance and durability it is very important that the unit is exclusively run with special Rotrex traction fluid supplied by a Rotrex dealer.

The lubrication circuit provided with the kit is an integrated and essential part of the supercharger system.

Carefully follow the instructions provided with your kit on how to install the lubrication circuit in the vehicle.



Routing of oil lines

When routing the oil supply and return lines, care must be taken to prevent cracks and cuts of the oil lines. If this occurs it could be catastrophic to the supercharger or engine.

- Oil lines must be routed at a safe distance from the exhaust system and other hot parts
- The oil lines and the oil system components (filter, canister and cooler) must be placed below or level with the supercharger's shaft
- Make sure there is sufficient clearance from other moving parts such as the ventilator fan, belts and pulleys
- To prevent restricted oil flow only use large radius bends when routing the oil hoses and avoid any sharp bends and kinks
- Engine vibration and movement must be taken into account when routing the oil lines
- Make sure there is no debris in the oil system before initial start-up
- Place the oil cooler where external clogging (debris, stones, sand etc.) can be prevented
- Prime the oil system correctly prior to initial start up (page 9)

Connecting the parts

The Rotrex C-type supercharger model range incorporates an independent dry sump lubrication system. Please follow these instructions closely during installation. If your supercharger was bought as part of a kit please refer to the instructions of the kit.



Important:

- Tightening torque of the banjo bolts: 21Nm (15lbft)
- Observe the correct priming procedure described in the following section
- Observe the correct oil level and oil level checking procedure in the next section

1



Place the oil canister with the cap **below or level** with the supercharger's shaft. Use the bracket supplied in the oil set. Make sure the canister is placed upright. Leave the plastic plugs in place to prevent debris from entering the system

2



Mount the oil cooler in front of other coolers in a location with good air flow. Place the oil cooler **below or level** with the supercharger's shaft. The threads for the fittings must be facing upwards to prevent air pockets

3



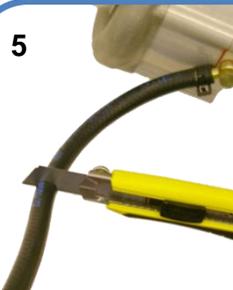
With a pair of pliers, compress a hose clamp and slide it over one end of the hose. Press a banjo fitting into the hose end and secure it with the hose clamp

4



With the supercharger properly in place fit one end of the hose to the oil inlet using the banjo fitting and banjo bolt. Make sure to use a copper washer on each side of the banjo fitting to prevent leaks

5



Now find a suitable place for the oil filter somewhere along the oil inlet hose. Place the oil filter **below or level** with the supercharger's shaft. Cut the hose using a sharp knife or a hose scissor. Again slide a hose clamp over each end of the hose

6



Now press the filter studs into the hose ends as shown and secure with hose clamps. Observe the flow direction of the filter! Following the same method, continue fitting the remaining part of the oil system

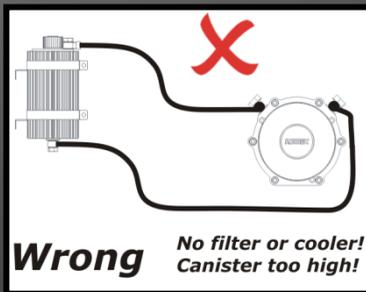
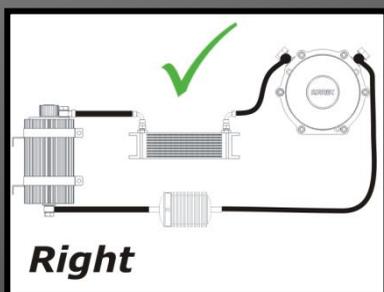


The finished oil system is shown above with oil flow direction as indicated by the arrows. Oil flows from the oil canister through the filter into the compressor oil inlet. The compressor oil outlet routes through the cooler before entering the oil canister at the top.

To prevent oil leaks it is of utmost importance that the oil cooler, oil filter and the oil canister with its cap are placed **below** or **level** with the supercharger's shaft.

Cooling and filtering!

Make sure your oil system has proper cooling, filtering and positioning

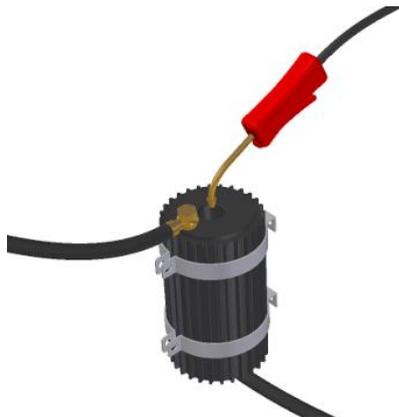


Initial start up

To ensure proper traction fluid circulation and adequate lubrication, it is important to prime the oil system before the engine is started for the first time after the supercharger installation.

The priming process is done most easily with all oil components in place and installed.

1. Carefully fill the oil canister with traction fluid without exceeding the maximum mark on the dip stick. The oil level is measured with the thread of the dip stick cap fully engaged
2. The banjo bolt at the oil line attached to the supercharger inlet marked "oil inlet" should be loosened a couple of turns allowing air to escape the system
3. **Carefully** apply pressurized air to the oil filler hole of the canister. Do not pressurize the system to more than one bar or 15psi. Use a rag or a sponge as a seal between the air gun and the canister
4. When oil appears at the "oil inlet", tighten the banjo bolt and the system is primed
5. Carefully top up the oil canister to the maximum mark on the dip stick
6. Turn on the engine and rev it to 2-3000 rpm and make sure the oil starts flowing by visual inspection, looking into the oil canister. Do not rev the engine more than specified, as this can cause damage to the supercharger
7. Let the engine idle for 5 minutes while checking the oil system for leaks
8. Check the oil level using the correct procedure described in the next section (page 10)
9. A run-in period of 100 km (65 miles) is highly recommended. During this run-in period, drive the vehicle moderately and avoid unnecessary revving or heavy acceleration



Oil level checking and maintenance

Check the oil level on a regular basis using the correct oil level checking procedure as described below.

Rev the engine to 2 - 3000 rpm and then check the oil level. The correct oil level is between the min and max marking of the dipstick measured with the thread of the cap fully engaged. Check the oil level regularly.

Important!

Always keep the oil level between minimum and maximum. Overfilling the canister may cause oil leaks from the oil canister and too little oil may cause severe damage to the supercharger.

Testing

Upon completion of the installation, the vehicle must be tested thoroughly. Testing should identify any leaks, noise, vibration, improper alignment of belt, overheating or other faults in the installation. It should also ensure the engine is running properly with the correct air/fuel ratio and ignition timing. Wrong installation and use of the supercharger can cause severe damage of the product and/or engine.

Maintain your system!

The oil and filter change interval of the C-range is 80,000 km / 50,000 miles or two years, whichever comes first.

Warranty

Only the official Rotrex warranty, as granted with the purchase of Rotrex products applies.

Parts found to be defective due to misuse will not be honored for warranty or other associated liabilities.

If the Rotrex supercharger has been disassembled, has had the original pulley replaced or has been altered in any other way the warranty is automatically void. If you have a problem with your Rotrex product or the pulley needs replacing, always contact your local Rotrex dealer.

Rotrex shall not be responsible for any special, incidental or consequential damages or costs incurred due to the failure of this product.

ROTREXTM
SUPERCHARGERS