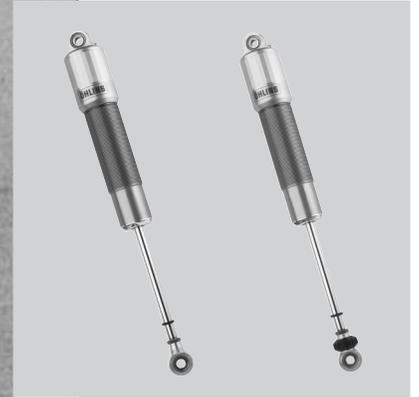


Workshop Manual

STJ - Series



Including:

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instructions**

Introduction

Öhlins advanced suspension products are designed to fit a wide range of racing vehicles. This means that length, travel, spring rate and damping characteristics are adjustable to fit the needs of the individual vehicle being fitted. When servicing, be sure to only use the correct Öhlins spare parts.

The information, illustrations and specifications contained in this manual are the latest available at the time of publication. This manual is designed to help you service the Öhlins STJ shock absorber as easily and safely as possible. Following these procedures will help you achieve the maximum possible performance from the serviced shock absorber.



Safety signals

Important information concerning safety is distinguished in this manual by the following notations:



*The Safety alert symbol means:
Caution! Your safety is involved.*

WARNING!

*Failure to follow warning instructions could result in **severe or fatal injury** to anyone working with, inspecting or using the suspension, or to bystanders.*

CAUTION!

Caution indicates that special precautions must be taken to avoid damage to the suspension.

NOTE!

This indicates information that is of importance with regard to procedures.

Before installation

Öhlins Racing AB can not be held responsible for any damage whatsoever to shock absorber or vehicle, or injury to persons, if the instructions for fitting and maintenance are not followed exactly.

Similarly, the warranty will become null and void if the instructions are not adhered to.

WARNING!

1. Installing a shock absorber, that is not approved by the vehicle manufacturer, may affect the stability of your vehicle. Öhlins Racing AB cannot be held responsible for any personal injury or damage whatsoever that may occur after fitting the shock absorber. Contact an Öhlins dealer or other qualified person for advice.

2. Please study and make certain that you fully understand all the mounting instructions and the owners manuals before handling this shock absorber kit. If you have any questions regarding proper installation procedures, contact an Öhlins dealer or other qualified person.

3. The vehicle service manual must be referred to when installing the Öhlins shock absorber

Öhlins products are subject to continual improvement and development. Consequently, although these instructions include the most up-to-date information available at the time of printing, there may be minor differences between your suspension and this manual. Please consult your Öhlins dealer if you have any questions with regard to the contents of the manual.

NOTE!

During storage and transportation, especially at high ambient temperature, the oil and grease used for assembling may run out inside the packing and damage the expanded polystyrene packing material. This is not unusual and is in no way detrimental to the shock absorber.

Disassembling

1

Close the rebound adjuster by turning it clockwise and count the clicks for your record. Then turn it to the fully open position by turning it counter clockwise. (rebound adjustable models only)

CAUTION!

To avoid damage to the needle and seat, do not use tools or excessive force when closing the needle valve. Use only your fingers.

2

Remove the protective screw and insert the gas filling device needle into the rubber valve. Attach the hose to the needle quick connection to depressurize the shock absorber.

CAUTION!

Apply a thin layer of red grease (0146-01) to the needle. This prevents the rubber valve from being damaged.

⚠ WARNING!

Releasing pressurized gas from the shock absorber can be hazardous.

Never perform any service, until the gas has been completely released from the shock absorber.

3

Secure the STJ cylinder head in an Öhlins shock vise (0773-01).

4

Fit an oil overflow cup (1753-01) to the end of the shock body to avoid oil spillage.

5

Loosen and free the seal head using an Öhlins seal head wrench (1826-01).

6

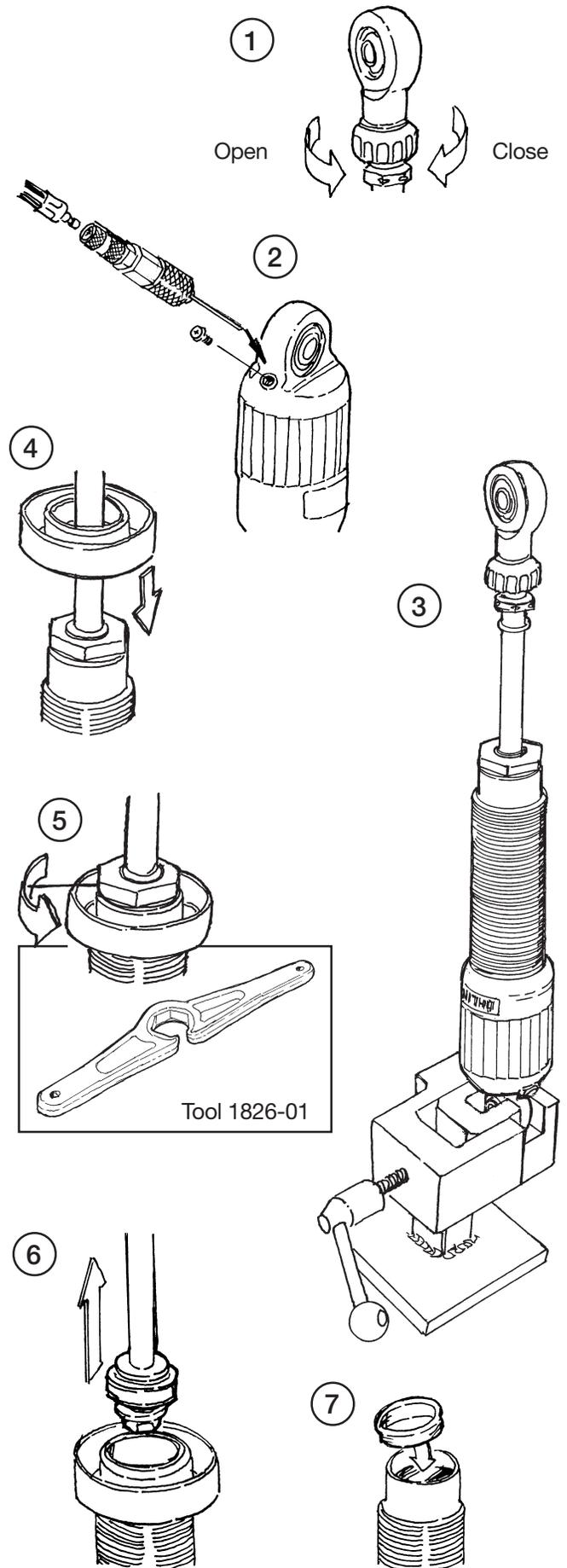
Pull the entire shock shaft assembly out of the shock body. If the fluid is to be changed the old fluid should be poured out.

7

Seal the cylinder opening with a plastic lid (0764-01) to prevent fluid contamination.

NOTE!

If you are attempting to revalve the shock absorber without releasing the gas pressure, damage may occur to the seal head O-ring during reassembly.



Revalving the STJ shock absorber

1

Mount the shock shaft in an Öhlins vise (0773-01) with the piston end upwards.

2

Clean all components carefully.

CAUTION!

If you use strong solvents, such as brake cleaner to clean the shaft, apply red grease to the shaft before assembly. Failure to do so could cause the seals to dry out and cause friction.

3

If the revalving requires a jet change, loosen the shaft jet with a flat blade screwdriver.

4

Tap the end of the shock shaft with a plastic mallet to dislodge the adjustment needle. It can also be pushed out if the end eye is removed (rebound adjustable models only).

5

Clamp the shaft in a vise when removing the end eye. Use aluminium soft jaws (0727-03).

6

Install the new adjustment needle and push down with an aluminum rod (1748-01). Torque the shaft jet to 4.5 – 6 ft.-lbs. (6 – 8 Nm).

CAUTION!

It is of vital importance that the needle is pushed to its lowest position before the shaft jet is installed.

7

Remove the lock nut, washers and rebound shims. Note their positions carefully. Remove the piston and the compression shims. Note positions carefully.

NOTE!

When using the standard piston, the first shim of the compression stack has an outer diameter of 38mm. The first shim of the rebound stack has an outer diameter of 36mm.

8

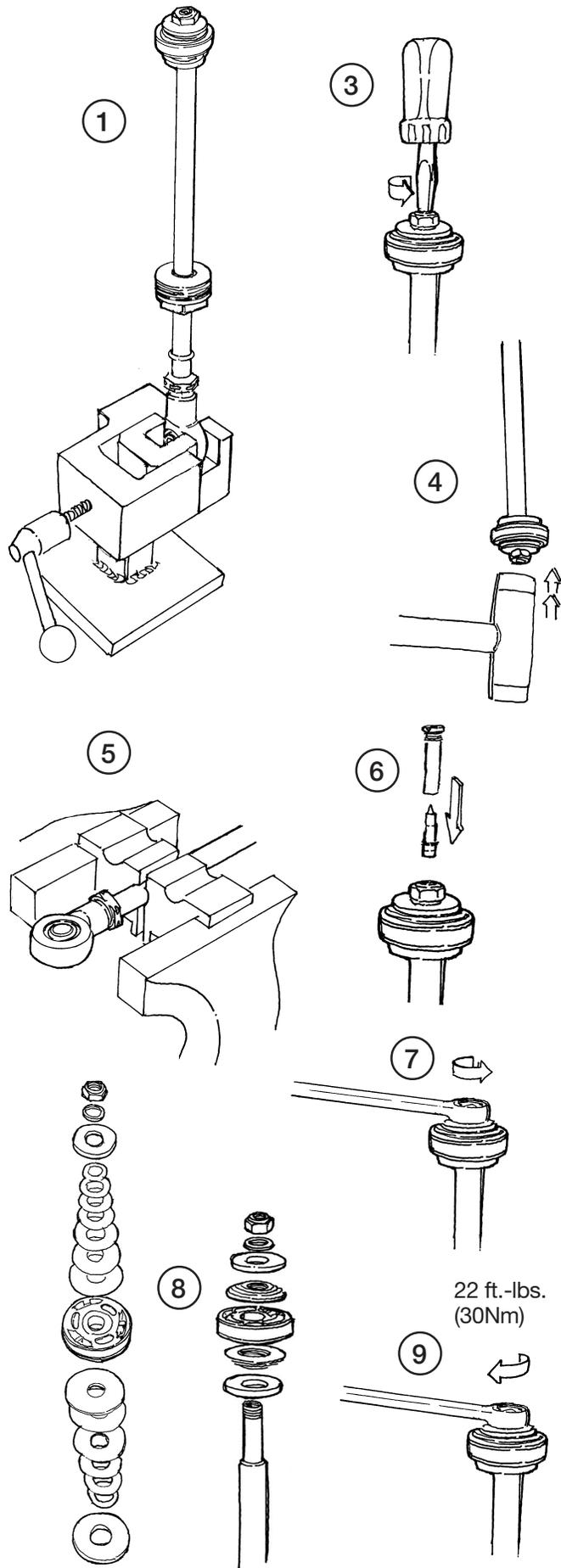
Reassemble the shock shaft assembly by installing the washer, compression shims, piston, rebound shims, washers and lock nut.

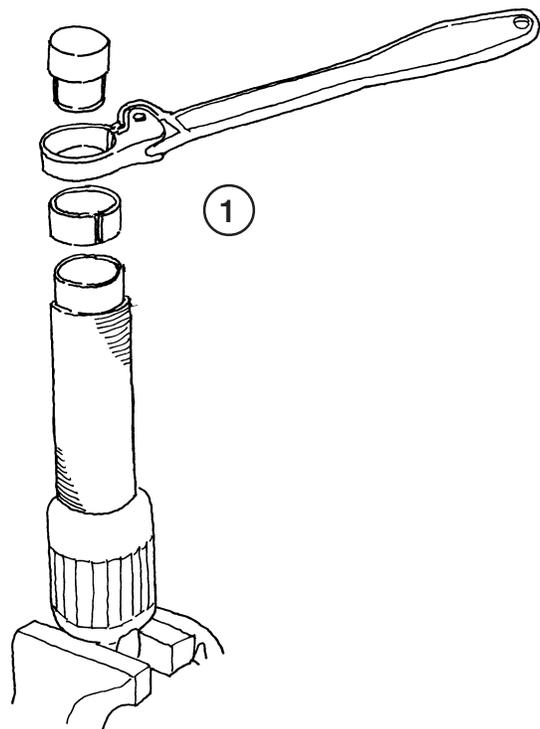
NOTE!

It is important to install the shims in the correct order. The piston side with a groove is the rebound side and should face the lock nut.

9

Tighten the lock nut to a torque of 22 ft.-lbs. (30Nm).





Body and reservoir service

1

Put plug (1798-01) into the shock body and use spanner wrench (0738-01) together with gripping sleeve (0737-01) to loosen the shock body from the cylinder head.

2

Loosen the shock body from the cylinder head by turning it counter clockwise, and remove it.

3

Press or tap the dividing piston upwards in the shock body and remove it. Remove the O-ring and the piston band from the dividing piston.

4

Remove the O-ring from the inside of the cylinder head.

5

Clean all parts carefully and replace the O-rings and the piston band.

6

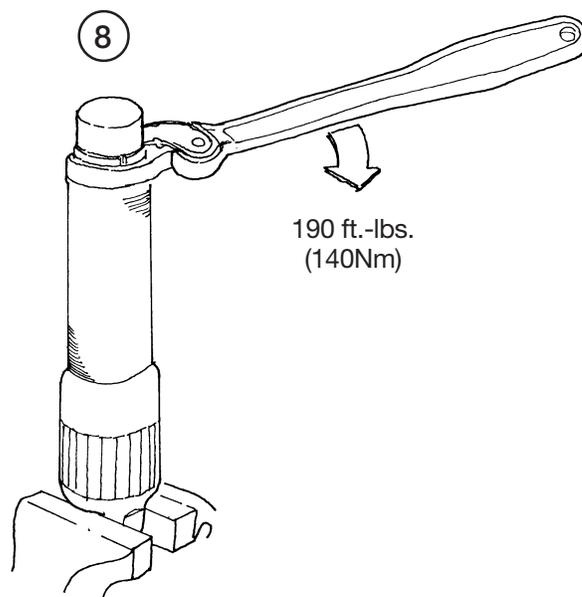
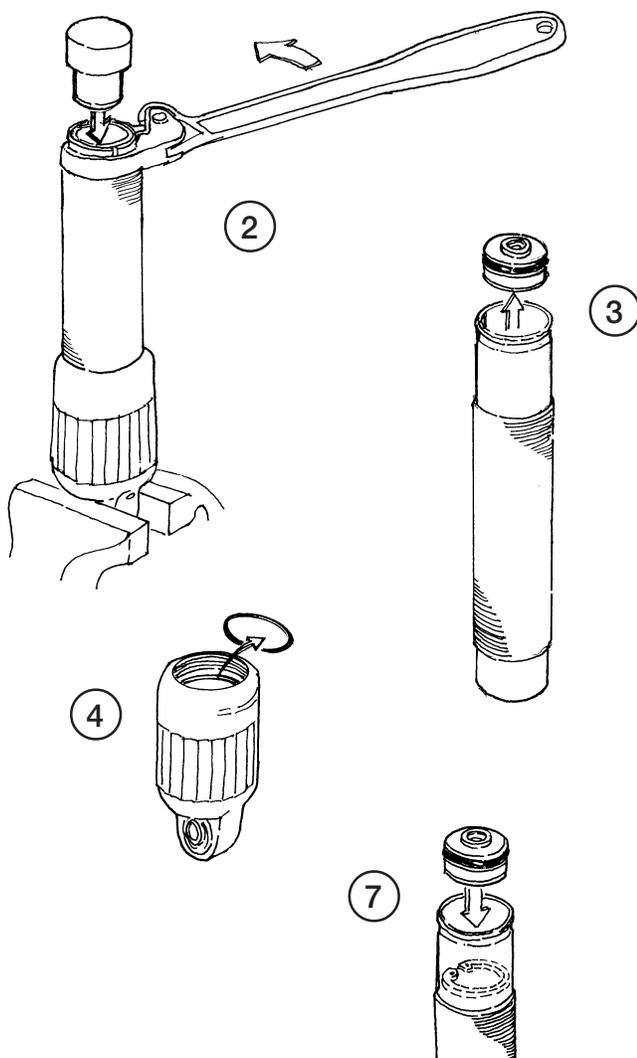
Put a layer of red grease on the new O-ring and on the internal surface of the shock body where the dividing piston is located.

7

Insert the dividing piston into the shock body. Apply red grease to avoid damage to the O-ring and the piston band. Push the dividing piston down until it stops against the internal circlip.

8

Insert the shock body into the cylinder head and screw together. Torque to 190 ft.-lbs. (140 Nm)



Assembling

1

Pressurize the shock absorber to 5 - 10 bar (70 -145 psi).

2

Pour Öhlins shock oil (0105-01) into the shock body, filling to approximately 1 inch below the top edge of the shock body.

NOTE!

Before installing the piston shaft assembly make sure that the needle valve is in the fully opened position. This makes the reinstallation of the piston shaft easier. Use the aluminium rod (1748-01) to gently push the valve down.

3

Reinstall the shock shaft assembly into the shock body.

4

Move the shock shaft up and down to bleed air out from shims and piston.

NOTE!

The shock shaft should be moved down fast and up slowly. Make sure that the bleed hole in the shaft is below the oil surface. Also tap gently on the shaft end eye with a plastic mallet to bleed out the last small air bubbles from the shims.

5

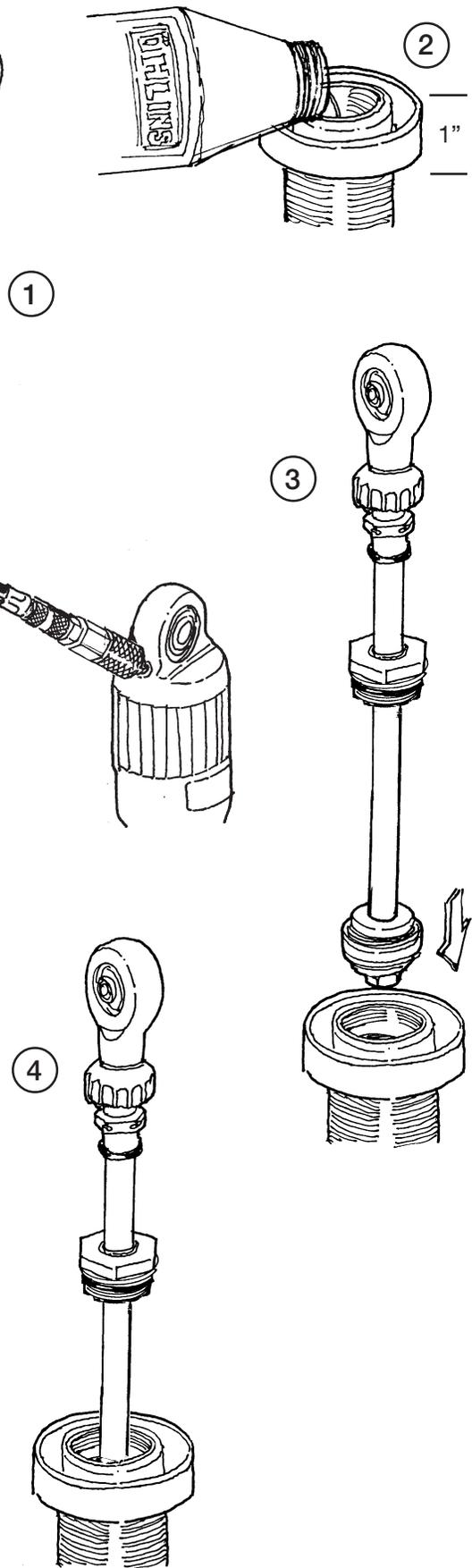
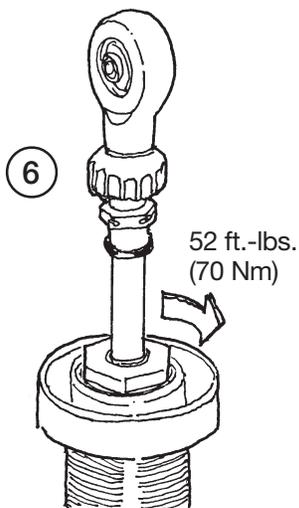
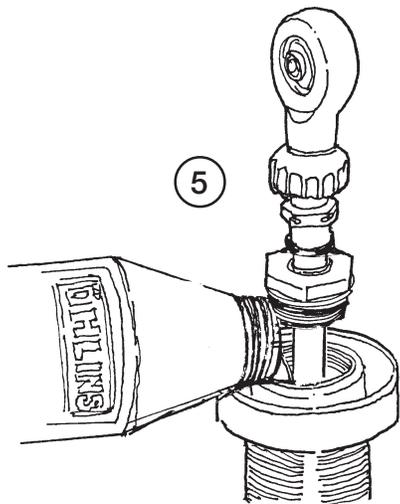
Fill the shock absorber with Öhlins shock oil to the edge of the shock body and pull the piston up so it is positioned just below the oil level without exposing the shaft bleed hole to the air.

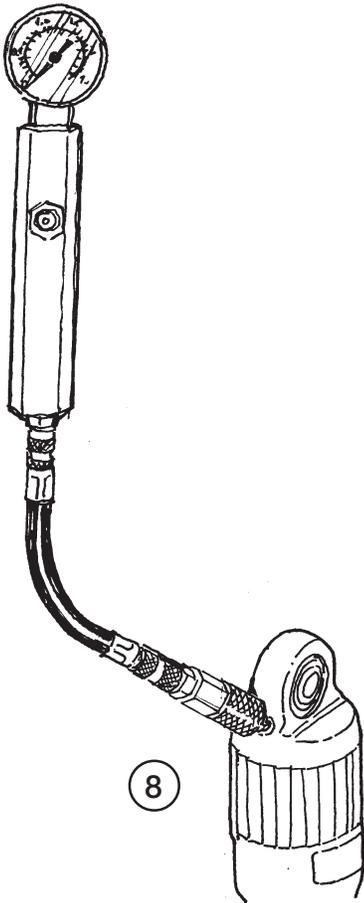
6

Reseat the seal head to where the O-ring is just entering the shock body and release the gas pressure.

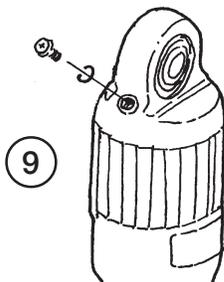
⚠ WARNING!

Use of flammable gas for pressurizing the shock absorber unit can be hazardous. Use Nitrogen gas (N₂) only.

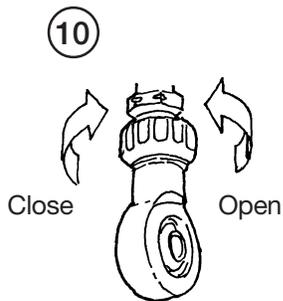




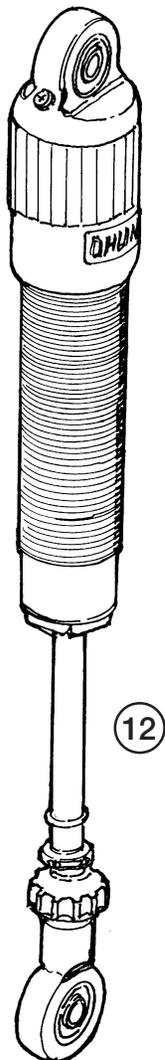
8



9



10



12

7

Finish tightening the seal head and torque to 52 ft.-lbs. (70 Nm).

8

Use only Nitrogen gas (N₂) for pressurizing and adjust the gas pressure to 145 psi (10 bar).

9

Remove the needle and seal the rubber valve with the screw and the O-ring.

10

Fully close the rebound adjuster by turning it clockwise. Compress the shock absorber and check that the piston shaft comes out very slowly. If it comes out quickly, there is an internal leak. In that case the shock absorber must be disassembled again. Check for dirt and foreign objects between the shims.

11

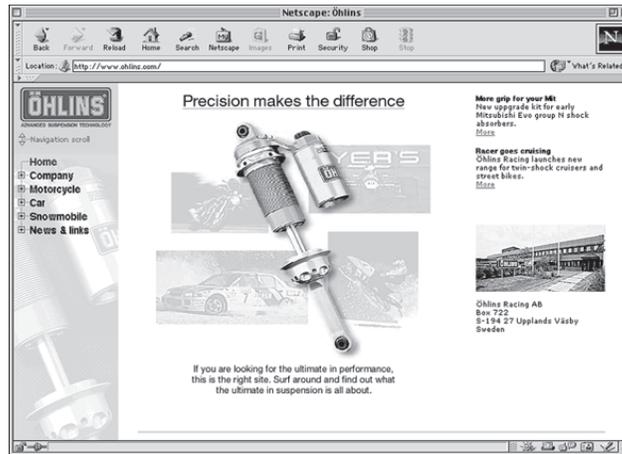
Set the rebound adjuster to the correct setting. Click settings are counted out from the fully closed position.

12

Lubricate the shock shaft before putting the shock absorber into use.

More info

www.ohlins.com



The ultimate suspension site.
Find out everything about your suspension.
Download mounting instructions, manuals and brochures.
And a lot more.



Öhlins USA, Inc.

703-C Old Spartanburg Road, Hendersonville, NC 28792
Tel: 828-692-4525 Fax: 828-692-0595

Öhlins Authorized USA Dealers

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SHY Racing Suspensions
Murfreesboro, TN
Tel: 615-893-0150 Fax: 615-896-8430

Manufactured by

Öhlins Racing AB, Box 722, S-194 27 Upplands Väsby, Sweden