

HYDRAULIC COIL SPRING COMPRESSOR REF.: 1950



Important:

Read this manual and follow all the safety rules and operating instructions before using this product.

Important:

Please read these instructions carefully. Note the safe operational requirements, warnings & cautions. Use the product correctly and with care for the purpose for which it is intended, failure to do so may cause damage and/or personal injury and will invalidate the warranty. Keep these instructions safe for future use.



Refer to
instructions



Wear eye
protection



Wear protective
gloves



Coil-bound
Beware
coil binding

1. Safety:**1.1 General Safety:**

WARNING! Ensure Health & Safety, local authority, and general workshop practice regulations are adhered to when using this equipment. **WARNING!** Wear approved safety hand and eye protection (standard spectacles are not adequate).

WARNING! TRAPPING DANGER – Keep hands and fingers away from the spring and compressing jaws in use.

Keep the work area clean, uncluttered and ensure there is adequate lighting.

Maintain correct balance and footing. Ensure the floor is not slippery and wear non-slip shoes.

Remove ill-fitting clothes. Remove ties, watches, rings, other loose jewellery. Contain and/or tie back long hair.

Wear appropriate protective clothing.

Familiarise yourself with the applications, limitations and potential hazards of the spring compressor.

DO NOT use the spring compressor for a task it was not designed to perform.

DO NOT allow untrained persons to use the spring compressor.

1.2 Pre-operational safety:

Apply a little transmission oil to the front and rear faces of the main upright to assist the smooth action of the compressor.

DO NOT operate compressor if parts are damaged or missing as this may cause failure and/or personal injury.

Before commencing compression, make a visual inspection of machine to ensure pins are securely positioned and that there is no sign of wear or fatigue – if found, **DO NOT** use and refer to your local Kroftools stockist for advice and replacement parts.

Ensure jaw locating pins are properly positioned and safety clips are attached correctly.

Before commencing compression of spring, ensure coils of the spring are seated securely in the yokes of the compressor and cannot slide out during compression.

ALWAYS ensure that the safety guard locks in place, use the chain to secure the spring safely and attach the gate safety chain.

1.3 Operational Safety:

When applying compression to the spring, always stand to one side of the compressor.

▲ DANGER! Stop compressing the spring before the coils touch / bind.

▲ DANGER! Before attempting to remove top cap nut, always use a tool or similar to test if the compression has been relieved, **DO NOT** use your hands / fingers.

We recommend the use of purpose made strut tools to remove the top-nut from the shock piston.

Once compressed, and the strut removed, we recommend releasing the tension on the spring. DO NOT leave the spring under compression in the machine unattended and DO NOT leave in compression for prolonged periods, i.e. overnight.

Before releasing the compression ensure that the top strut-nut is securely tightened to the manufacturer's tolerance.

Release the compression slowly keeping your hands and fingers away from the spring assembly. Be sure that the tension on the spring is fully controlled by the strut assembly before removing it from the yokes of the compressor.

1.4 Post operational safety:

When not in use, clean and store the spring compressor in a safe, dry, childproof location.

Maintain the spring compressor in good condition. Replace or repair damaged parts. Use genuine parts only.

Unauthorised parts may be dangerous and will invalidate the warranty.

2. Introduction:

Fast and safe compression of road springs. 1000kg air operated unit with safety locking guard. Supplied with two interchangeable coated lower yokes and a suspension strut clamp. Fits a wide range of spring configurations and diameters. Also features a strut locating platform for easy movement of the suspension strut to avoid unnecessary lifting.

3. Specification:

Maximum Load: 1000kg

Upper Clamp travel: 420mm

Spring Diameter: 102-165mm

Actuation: Foot Pedal

Maximum Air pressure: 0.9 Mpa

4. Assembly:

4.1 Unpack the spring compressor carefully, it will be necessary for two people to do this. (Refer to included Parts diagram).

4.2 Assemble the spring compressor as follows:

4.2.1 Lay out all of the parts ready for assembly.

4.2.2 There are pre-drilled holes in the feet if the unit needs to be bolted to the floor permanently.

4.2.3 Fit the two feet to the bottom of the frame with the wheels facing rearwards. Use four allen bolts, flat washers, spring washers and domed nuts, to secure in place.

NOTE: the one longer bolt is fitted in position as shown in fig.1.

4.2.4 Using two people, stand the unit onto it's feet, taking care when the wheels come into contact with the floor as the unit's weight might become unstable.

4.2.5 Fix the guard lock assembly (part K21) to the front of the unit using four cross headed bolts, see fig.2 for positioning.

4.2.6 Fit the guard by dropping it onto the bottom pivot, and then fit the large pin and spring into the top pivot holes and secure using a nyloc nut (fig.3). Some pressure will be needed to push down on the pin to allow the nut to be fitted.

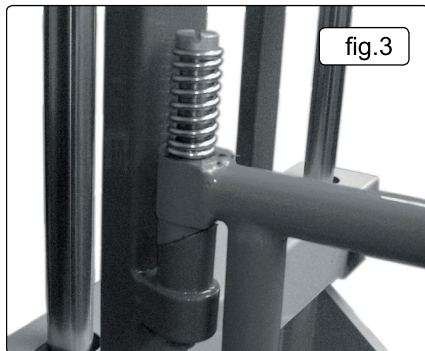
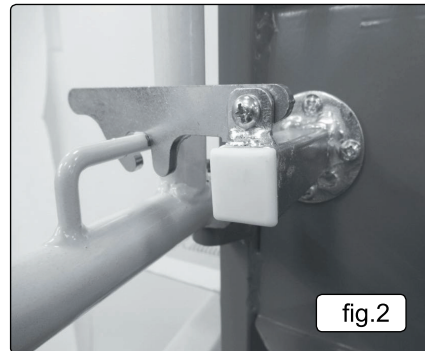
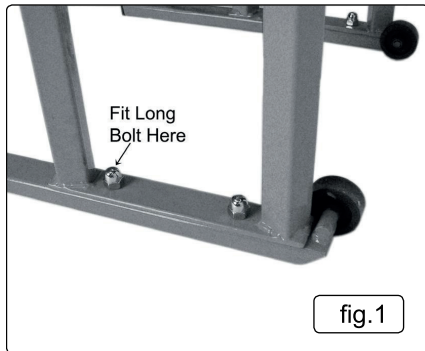
4.2.7 Fit the chain (part K15) to the left hand side using nut, bolt and washer to fix in place. Remove the clip from the end of the chain and clip it onto the hook on the other side of the compressor frame, the chain can then be fixed to the clip at the appropriate link as required (fig.4).

4.2.8 Fit the locating plate (part K42) by threading it onto the long metal rod (part K41) and secure it by fitting and tightening knob (part B08). The top of the rod fits through the hole in the frame and is held in place using a domed nut and washer. The bottom of the rod is secured by attaching the metal arm to it and securing with a nut. Then undo the domed nut previously fitted (fig.1), and fit the metal arm over the bolt and refit the domed nut. Tighten all nuts in turn ensuring that the metal rod hangs vertically from the frame and also squarely to the metal arm (see fig.5).

4.2.9 Fit the handle to the top of the unit using two domed nuts, spring washers and washers to secure in place.

4.2.10 Hang two of the yokes not being used to the sides of the frame and locate the third yoke onto the compressor using the locking pin to hold it in position (fig.6).

4.2.11 Position the unit in a suitable location near an air line feed.



5. Air supply:

WARNING! Ensure the air supply is always clean and does not exceed 0.9Mpa whilst operating the compressor. Too high an air pressure and unclean air will shorten the product life due to excessive wear, and may be dangerous causing damage and/or personal injury.

5.1 A maximum air pressure of 0.9Mpa is required to operate at full capacity.

5.2 Ensure foot control lever is in the “Off” position before connecting to the air supply.

5.3 Drain the air supply water separator daily to avoid water in the air line which may damage the ram.

6. Operation:

6.1 Compressing a strut spring.

NOTE: Before removing the strut from the vehicle it is recommended that the upper strut locking plate nut is loosened a quarter turn. DO NOT loosen more than a quarter turn.

6.1.1 With the strut and spring removed from the vehicle, select the most suitably sized yoke or the strut clamp (parts K12, K13, 24) according to the size of the spring and fit it onto the compressor using the locking pin to hold it in position (fig.6).

6.1.2 Position the lowest coil of the spring in the lower yoke and rotate the strut and spring so that the coil is held as low as possible (fig.7).

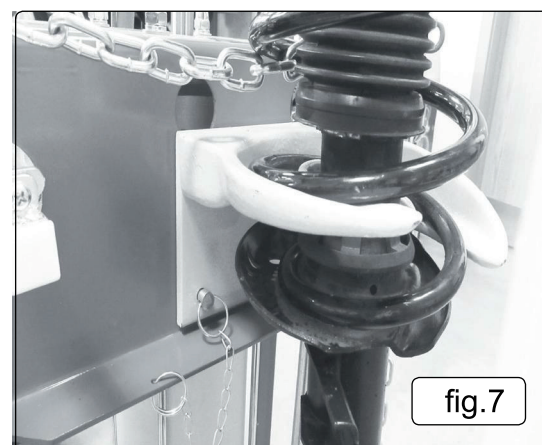
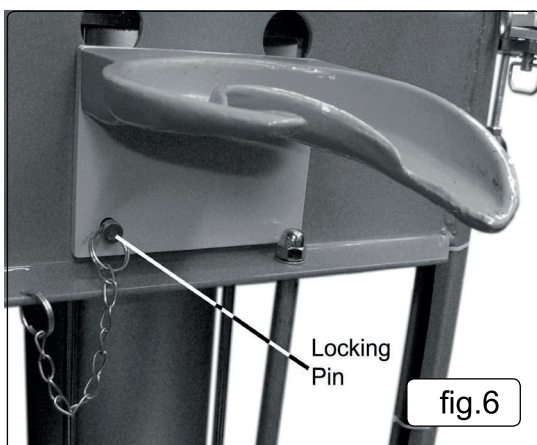
6.1.3 Swing the upper arms (parts K51) into position and locate the upper clamps on the uppermost available coil (fig.8). Ensure that the coil is placed inside the recesses of the clamp to ensure that the coil will not break free under compression.

6.1.4 Having correctly positioned the spring on the lower and upper yokes, tighten both of the locking knobs (fig.9).

6.1.5 Position the locating plate so that it is just underneath the bottom of the strut and secure it in place.

6.1.6 Use the chain (part K15) to secure the spring by pulling it across the spring and hooking it onto the clip (fig.4).

6.1.7 Shut the safety guard ensuring that it locks in place (fig.2). Use the shorter chain (K58) to lock the guard in place (fig.10).



▲ DANGER Stop compressing the spring before the coil windings touch/bind.

WARNING! If the spring/strut is not located correctly in the jaws, it is possible that the strut top retaining cap could be subject to sideways forces. Watch closely as the spring reaches it's final phase of compression and ensure the top cap assembly rotates freely before attempting to remove it.

WARNING! Keep hands away from the spring whilst compressing.

6.1.8 Check to make sure that the spring is safely secured and then gradually press the pedal to start to compress the spring coils. Ensure the spring is securely held.

6.1.9 When the strut is loose within the spring, unscrew the strut top plate nut and remove the plate from the top of the strut.

Gradually discharge the pressure on the spring by operating the foot control pedal. When all the pressure has been released,

take care to support the strut and spring when they become loose. Move the locating plate and withdraw the strut from the compressor. Release the spring from the upper retaining clamps and remove from the compressor.

6.2. Fitting a strut spring.

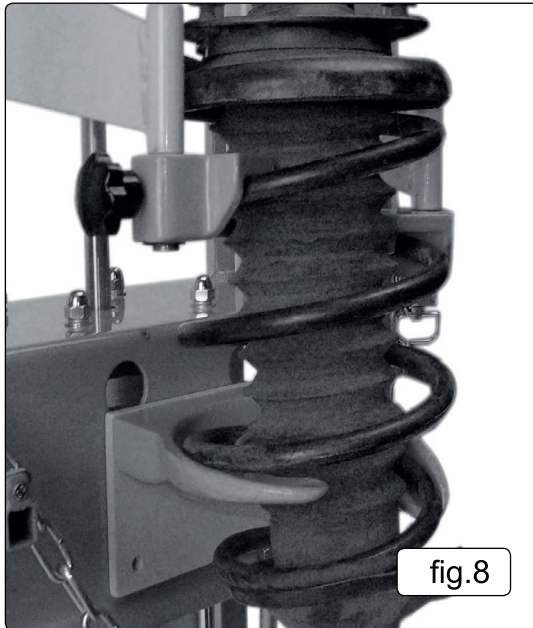


fig.8



fig.9

6.2.1. Offer the new strut spring up to the compressor's yokes and fit it in the same position as that of the old spring.

Position the lowest coil of the spring in the lower yoke and rotate the spring, so that the coil is held as low as possible. Swing the small upper arms into position and locate the upper clamps on the uppermost available coil. Ensure that the coil is placed inside the recesses of the yokes to ensure that the coil will not break free under compression. Tighten the locking knobs (fig.9).

NOTE: There must be coils free at either end to allow them to seat on the strut plates, without the strut and compressor yokes interfering.

6.2.2. Insert the strut up inside the spring, and move the locating plate just underneath the bottom of the strut to support it and secure the plate in place by tightening the knob.

6.2.3. Use the chain to secure the spring by pulling it across and hooking it onto the side frame clip. Shut the safety guard, ensuring that it locks in place and fit safety chain (fig.10).

▲ DANGER! Stop compressing the spring before the coil windings touch or bind.

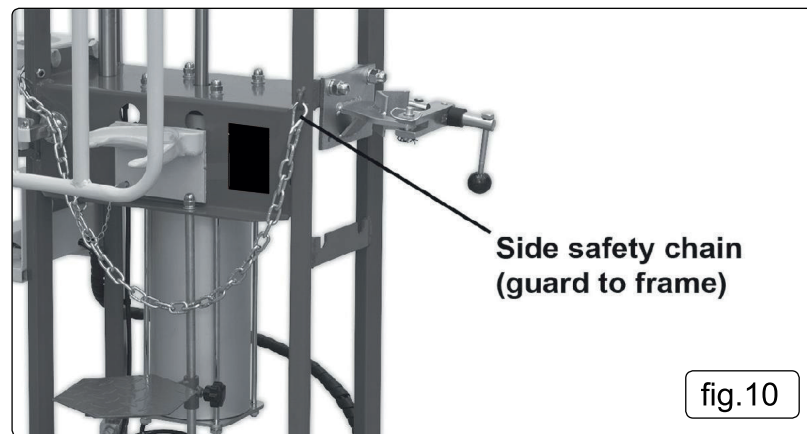
WARNING! Keep hands away from spring.

6.2.4. Compress the spring using the correct pedal on the foot control unit, ensuring that the spring is securely held in place within the clamp recesses at all times. When the spring is compressed sufficiently, fit the strut top plate to the strut, and using a new nut, secure it in position.

6.2.5. Decompress the spring carefully and slowly, using the pedal on the foot control unit, ensuring the spring is located correctly into the strut top plate.

6.2.6. Remove complete strut carefully from the spring compressor.

6.2.7. When re-fitting the strut to the vehicle, the locking plate nut will need to be fully tightened using a torque wrench, to a setting in accordance with the vehicle manufacturer's specification.



7. Maintenance:

7.1. Before each use, check the spring compressor to ensure it is not damaged or worn. If in any doubt DO NOT use the spring compressor. Remove it from service immediately and contact your local Kroftools stockist for advice and/or repairs.

7.2. Periodically clean the sliding columns and wipe over using a little transmission oil.

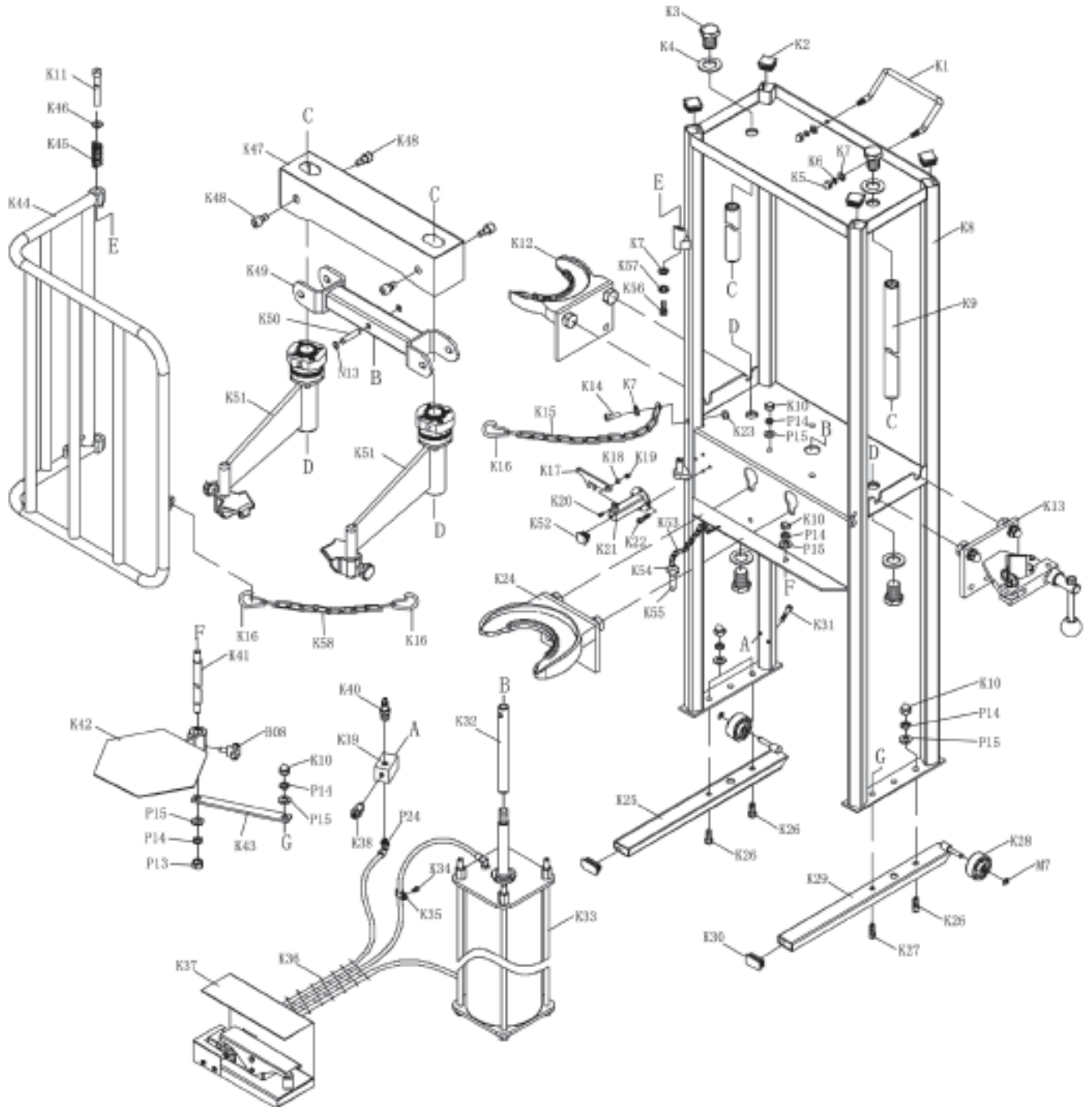
7.3. Any other maintenance required should be carried out by an authorised service agent.

7.4. If the spring compressor is not being used for a considerable length of time, disconnect the air supply and discharge any air in the cylinder by depressing the foot control lever. Drop a little Kroftools air tool oil into the air inlet and cover to prevent the ingress of any foreign matter.

Environment protection:

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.

8. Drawing View:



Item	Description
B08	Knob Screw
K01	Handle
K02	End Plug
K03	Socket Cap Bolt Black M6x10
K04	Flat Washer M6 Black (single)
K05	Steel Nut M8 Domed (single)
K06	Spring Washer M8 Zinc (single)
K07	Flat Washer M8 (single)
K08	Frame Ass'y
K09	Bar
K10	Steel Nut M10 Domed (single)
K11	Pin
K12	Lower Yoke (small)
K13	Lower Strut Clamp
K14	Bolt
K15	Chain (A)
K16	Shackle
K17	Hook
K18	Copper Bushing
K19	Nyloc Nut M4 Zinc din 985 (single)
K20	Bolt
K21	Hook Assembly
K22	Socket Cap Bolt Black M6x10
K23	Nyloc Nut M8 Zinc din 985 (single)
K24	Lower Yoke (large)
K25	Base (1)
K26	Rd Head S/T Screw M4x22 Black
K27	Socket Head Cap Screw M10x20 Black
K28	Wheel,Fixed (49x8x21)
K29	Base (2)
K30	End Plug, Base
K31	Socket Head Cap Screw M6x40 Black
K32	Connection Rod for Air Cylinder

Item	Description
K33	Air Cylinder Ass'y
K34	Machine Screw Pan Head Phillips M4x8mm (Single)
K35	Hose Clip
K36	Protective Casing
K37	Foot Pedal
K38	Safety Valve
K39	Valve Block
K40	Valve Block Connector
K41	Shaft for Plate
K42	Plate
K43	Connecting Rod
K44	Safety Locking Guard
K45	Spring
K46	Washer
K47	Moving Arm Cover
K48	Bolt
K49	Beam Ass'y
K50	Pin
K51	Moving Arm
K52	End Plug (white)
K53	Chain
K54	Ring
K55	Pin for Chain
K56	Screw
K57	Spring Washer M8 Zinc (single)
K58	Chain (B)
M07	Cotter Pin
N13	Retaining Ring
P24	Hose Connector
P13	Steel Nut M10 Zinc din934 (single)
P14	Spring Washer M10 Zinc (single)
P15	Flat Washer M10 (single)