



Operating and Maintenance Instructions

WARNINGS



Before using this equipment, read the contents of EN 529 : 2005 and familiarise yourself with the requirements for respiratory protective devices and their potential effects on the wearer.



TORNADO respiratory protection systems are designed for use by personnel who are familiar with workplace hazards.



This Manual must be read in conjunction with the User Manual for the TORNADO headtop used with T/A/LINE.



Air supplied by the airline system must conform to EN 12021 : 1999 for composition and permissible upper limit of the following contaminants: Oil, Carbon Dioxide, Carbon Monoxide and moisture. Do not supply any other gas such as Oxygen, Nitrogen, Carbon Monoxide etc, and ensure connection points are properly marked. Use of any other gas apart from breathing-quality air may result in death.



Airline systems used to supply T/A/LINE must be fitted with a pressure relief valve.



DO NOT use when ambient oxygen content is less than 19.5% or greater than 23%. There is an increased fire risk as the oxygen content increases.



Air for compressed airline respiratory protection devices must have a dew-point sufficiently low to prevent condensing and freezing.



Where apparatus is used and stored at a known temperature the pressure dew-point must be at least 5°C below the likely lowest temperature. Where conditions of use and storage of the compressed air supply is not known, the pressure dew-point must not exceed -11°C.



DO NOT use equipment that is damaged or has passed its service-due date. A monthly inspection of the apparatus is a mandatory requirement in the UK under COSHH regulations and inspection on a monthly basis is strongly recommended for all other countries.



DO NOT use if the filter warning panel is discoloured. The filter warning panel must be white.



DO NOT use if contaminant levels are likely to be immediately dangerous to life or health.



The equipment may not provide adequate protection in certain highly-toxic atmospheres.



DO NOT use if the ambient temperature is outside of the range -15°C to +60°C. Humidity levels up to 95% RH do not present any operational problems.



If accessories (for example a spray gun) are to be driven from the same compressed air supply tube, the User should ensure that at least the minimum flow conditions are present in the equipment when the accessory is consuming its maximum air-flow requirement.

TORNADO T/A/LINE/SCOTT

INTRODUCTION

T/A/LINE is a waistbelt-mounted pressure regulator for use with a medium-pressure, light-duty airline system in conjunction with specific headtops within the **TORNADO** range. Please refer to your headtop User Manual for applicability details.

This product should only be used where the risk of damage to the compressed air supply tube is low and where movement of the wearer is limited.

The host airline system must be capable of delivering a minimum of 140 litres per minute and a maximum of 200 litres per minute, at between 2.5 and 7.0 bar.

T/A/LINE is approved for use with **SCOTT** airline supply hoses of up to 10m in length, with a working pressure of 15 bar. Hoses are available in PVC and anti-static material. Anti-static hoses must be used in flammable or explosive atmospheres. All hoses are approved to EN 1835.

WARNING:

Ensure that the length of supply hose selected is sufficient for the task being undertaken. DO NOT join airline supply hoses together in order to give a required length.

T/A/LINE is CE marked and approved to EN 1835.

The following features are incorporated within the **T/A/LINE** unit (see Fig. 1):

- A replaceable filter that removes particles and oil vapour from the air supply.
- A quick-fit connector on the filter outlet that facilitates rapid connection of the headtop air supply hose.
- A low-pressure warning whistle that sounds when the airline fails to supply the minimum airflow required.
- A CEJN airline hose coupling.
- A 1/4 BSP outlet that provides power to air-driven power tools.

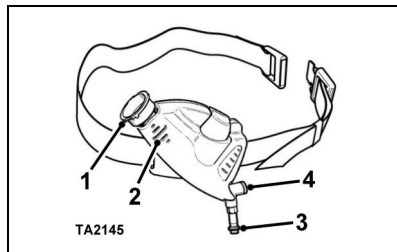


Fig. 1

1. Combined Filter and Quick-fit Connector for Headtop Hose.
2. Warning Panel.
3. CEJN Airline Hose Coupling.
4. 1/4 BSP Outlet for Power Tool.

OPERATING

1. Check that **T/A/LINE** is clean, that the filter indicator is not discoloured (indicating that the filter is not contaminated) and that the unit is fully serviceable. Replace worn or damaged parts as necessary.
2. Connect the airline to the CEJN coupling on **T/A/LINE** and fit the flow-test indicator to the quick-fit connector on the filter outlet. Check that the float rises so that the 'TM' line is visible (see Fig. 2).

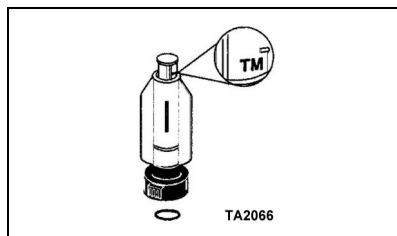


Fig. 2

3. Remove the flow-test indicator and store safely for future use.
4. Don the waistbelt so that the **T/A/LINE** is on the hip and adjust for a comfortable fit.
5. Follow the instructions in the **TORNADO** headtop User Manual to inspect and don the headtop.

6. Connect the headtop hose to **T/A/LINE** and check there is a steady flow of air into the headtop.
7. To adjust the left/right wearing position of **T/A/LINE** (see Fig. 3):
 - i) Release screws (1), rotate disc (2) and re-tighten screws.
 - ii) If necessary, swap the location of the CEJN coupling and power tool outlet so that the hoses hang correctly.

CAUTION:

DO NOT attempt to alter the position of the inlet/outlet manifold by rotating the manifold as this will cause the manifold to leak.

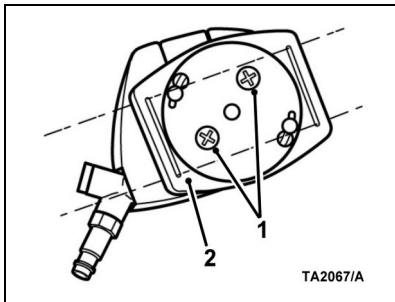


Fig. 3

8. Ensure that the airflow required by the wearer, plus any air-powered tool used with **T/A/LINE** does not exceed the capacity of the airline system.
9. If applicable, connect the air-powered tool to the power tool outlet.

AFTER USE

1. Disconnect any air-powered tools connected to **T/A/LINE**.
2. When safely clear of the hazard area, remove the headtop in accordance with the instructions given in the headtop User Manual.
3. Disconnect the headtop hose from **T/A/LINE**.
4. Push the airline supply hose CEJN connector collar to unlock and pull the connectors apart.
5. Use a lint-free cloth moistened in warm soapy water to clean the waistbelt and outer case.

CAUTION:

Ensure that moisture does not enter the T/A/LINE waistbelt module.

6. Dry thoroughly using a clean lint-free, absorbent cloth and inspect for wear or damage. Replace any worn or damaged parts.
7. Check that the filter indicator is not discoloured. If signs of discolouration are evident, the filter **MUST** be replaced.

WARNING:

The filter and bonded seal MUST be replaced after six months in service, regardless of condition.

8. When completely dry, store in a cool, clean environment, away from direct sunlight and radiant heat.

STORAGE

When not in use the equipment should be stored in a clean, dry environment, away from direct heat sources between -10°C and $+30^{\circ}\text{C}$, at a humidity of less than 65% RH.

The filter has a shelf-life of 5 years.

MAINTENANCE

Inspect **T/A/LINE** before and after each occasion of use and check that the plastic body and connectors are not damaged or excessively worn. Replace worn or damaged parts as necessary.

During pre and post-use inspections, check that the filter indicator is not discoloured and that the unit is fully serviceable. If signs of filter discolouration are evident, the filter **MUST** be replaced.

WARNING:

The filter and bonded seal MUST be replaced after six months in service, regardless of condition.

Perform a flow-test as detailed in the *Operating* section of this Manual. If the unit fails the flow-test, use a medium-pressure gauge to check that the pressure is between 2.5 and 7.0 bar at the wearer end of the airline.

Service and clean the headtop as described in the appropriate User Manual.

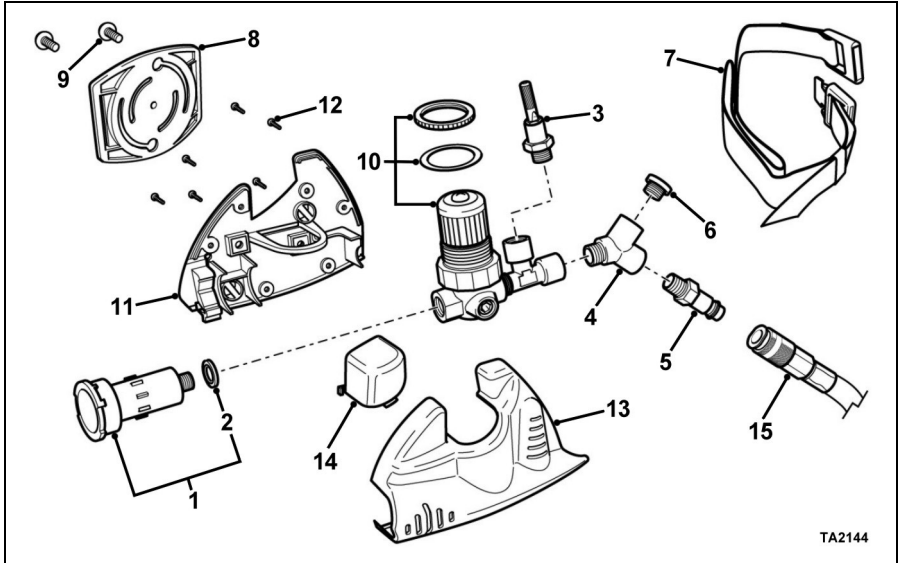
RECORD INSPECTION AND MAINTENANCE DETAILS

Record test and maintenance details on the Inspection and Maintenance Record Sheet provided at the back of this Manual.

Information recorded usually includes:

- Name of employer responsible for the apparatus.
- Make, model number or identification mark of the apparatus, together with a description of any distinguishing features, sufficient to enable clear identification.
- Date of the inspection/maintenance together with the name, signature or unique authentication mark of the examiner.
- Condition of the apparatus, details of any defects found and any remedial action taken.

SPARE PARTS



TA2144

Item No.	Description	Part No.
1	Filter Body and Bonded Seal	T/AL/FILTER
2	Bonded Seal (Pack of 5)	1027821
3	Whistle Assembly	2003697
4	Y-piece Connector	-
5	CEJN Hose Coupling	1019325
6	Plug and O-Ring	-
7	Waistbelt	ECWB
8	Backplate Assembly	-
9	Screw	-
10	Regulator Assembly	-
11	Rear Cover	-
12	Screw	-
13	Front Cover	-
14	Top Cover	-
15	Airline Hose (PVC) - CEJN Couplings (3 Metres Long)	HOSE PVC 3M
15	Airline Hose (PVC) - CEJN Couplings (10 Metres Long)	HOSE PVC 10M
15	Airline Hose (Anti-static) - CEJN Couplings (3 Metres Long)	HOSE-AS-3M
15	Airline Hose (Anti-static) - CEJN Couplings (10 Metres Long)	HOSE-AS-10M
-	Loctite 542 Hydraulic Sealant (50 cc)	1034526
-	Loctite 403 Adhesive (50 g)	2004742
-	PTFE Tape (12 Metre Roll)	2009625
-	Flow-test Indicator	PPFI92/ASSY/TOR
-	Medium-pressure Gauge	2001750

TORNADO T/A/LINE/SCOTT

FITTING SPARES

To Replace the Filter:

1. Press the release tab (arrowed in Fig. 4) to unlock the filter.

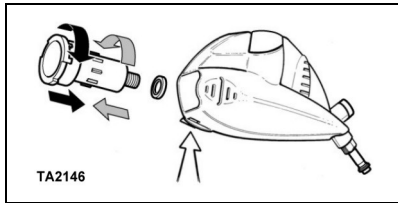


Fig. 4

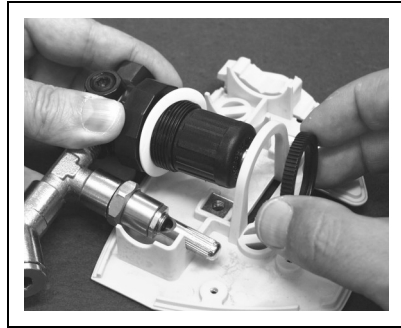
2. Unscrew the filter plastic body and discard.
3. Screw the new filter into the **T/A/LINE** body until finger-tight, taking care to ensure that the filter warning indicator is visible.
4. Re-fasten the release tab.

To Replace the Whistle:

1. Remove the filter as described above. Place aside or discard.
2. Pull the waistbelt clear of the backplate and using a Bladed Screwdriver, remove the two screws that secure the backplate to the rear cover. Place screws aside.
3. Align the enlarged ends of the slots in both the backplate and metal support plate with the locating pegs on the rear cover and withdraw the backplate assembly.
4. Using a Torx Screwdriver, remove the six screws that secure the rear cover to the front cover. Place screws aside.
5. Withdraw the front and top covers from the unit and place aside.
6. Unscrew the retaining ring that secures the regulator unit to the rear cover, using finger-pressure **ONLY**. Place retaining ring aside.

CAUTION:

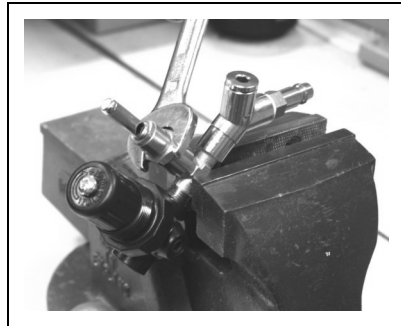
DO NOT use an Adjustable Spanner, Mole-grips or other similar tools to remove the retaining ring.



7. Withdraw the regulator unit from the rear cover. Place rear cover aside.
8. Remove the seating washer from the regulator unit and place aside.
9. Securely clamp the regulator unit, (by the two flats below the whistle housing), in a vice.

CAUTION:

DO NOT apply excessive clamping force to the vice.



10. Use an 18mm A/F Spanner to remove the whistle assembly from the whistle housing. Discard whistle assembly.
11. Thoroughly clean the threads inside the whistle housing to remove all traces of hydraulic sealant and any debris or dirt that may be present.
12. Apply **ONE** drop of **Loctite 542** hydraulic sealant to the threads on the replacement whistle assembly.
13. Screw the replacement whistle assembly into the whistle housing until finger-tight.

Fully secure using 18mm A/F Spanner. DO NOT over-tighten.

Note:

The replacement whistle is pre-set to the correct operating pressure and therefore no further adjustment is required.

14. Taking care to ensure that the seating washer is correctly positioned on the regulator, locate the regulator unit into position on the rear cover.

15. Apply TWO drops of **Loctite 403** adhesive (180° apart) to the threads on the regulator.

16. Secure the regulator unit in position with the retaining ring, using finger-pressure ONLY. DO NOT over-tighten.

CAUTION:

- **DO NOT use an Adjustable Spanner, Mole-grips or other similar tools to re-fit the retaining ring.**
- **Ensure that the regulator unit is correctly seated within the rear cover before proceeding further.**

17. Assemble the front and top covers to the rear cover and secure in position with the six screws. Tighten the screws evenly until hand-tight. DO NOT over-tighten.

18. Align the enlarged ends of the slots in both the backplate and metal support plate with the locating pegs on the rear cover and locate the backplate assembly onto the rear cover.

19. Align the two fixing holes in both the backplate and metal support plate with the threaded holes in the rear cover and secure in position with the two screws.

20. Tighten the screws evenly until hand-tight. DO NOT over-tighten.

21. Re-position the waistbelt through the belt loops on the backplate and re-fit or renew the filter as described above.

Note:

Before **T/A/LINE** is re-introduced into service it may be necessary to adjust the wearing position, as described within the *Operating* section of this Manual.

To Replace the Hose Coupling:

1. Remove the regulator unit from the rear cover as described in operations 1 to 8 in *To Replace the Whistle*.

2. Securely clamp the regulator unit, (by the Y-piece connector), in a vice.

CAUTION:

DO NOT apply excessive clamping force to the vice.

3. Use a 14mm A/F Spanner to remove the hose coupling from the Y-piece connector. Discard hose coupling.

4. Thoroughly clean the threads inside the Y-piece connector to remove all traces of PTFE Tape and any debris or dirt that may be present.

5. Wrap approximately 100mm of PTFE Tape around the threads on the replacement hose coupling.

6. Screw the replacement hose coupling into the Y-piece connector until finger-tight. Fully secure using a Torque Wrench, tightening to a torque of 20 Nm.

7. Remove the regulator unit from vice and re-assemble the **T/A/LINE** unit as described in operations 14 to 21 in *To Replace the Whistle*.

To Replace the Waistbelt:

1. Undo the belt buckle and slide the free end of the belt through the male half of the buckle.

2. Slide the belt fully through the slots in the backplate. Discard waistbelt.

3. Fit the new belt through the slots in the backplate and re-attach through the male half of the buckle.

WARRANTY

The products manufactured at our factories in Skelmersdale and Vaasa carry a warranty of 12 months (unless stated otherwise) for parts, labour and return to site. The warranty period runs from the date of purchase by the end user.

These products are warranted to be free from defects in materials and workmanship at the time of delivery.

SCOTT will be under no liability for any defect arising from wilful damage, negligence, abnormal working conditions, failure to follow the original manufacturer's instructions, misuse or unauthorised alteration or repair.

Evidence of purchase date will need to be provided for any claims arising during the warranty period. All warranty claims must be directed through **SCOTT Customer Services** and in accordance with our sales return procedure.

NOTIFIED BODIES

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British Standards Institute (0086)
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