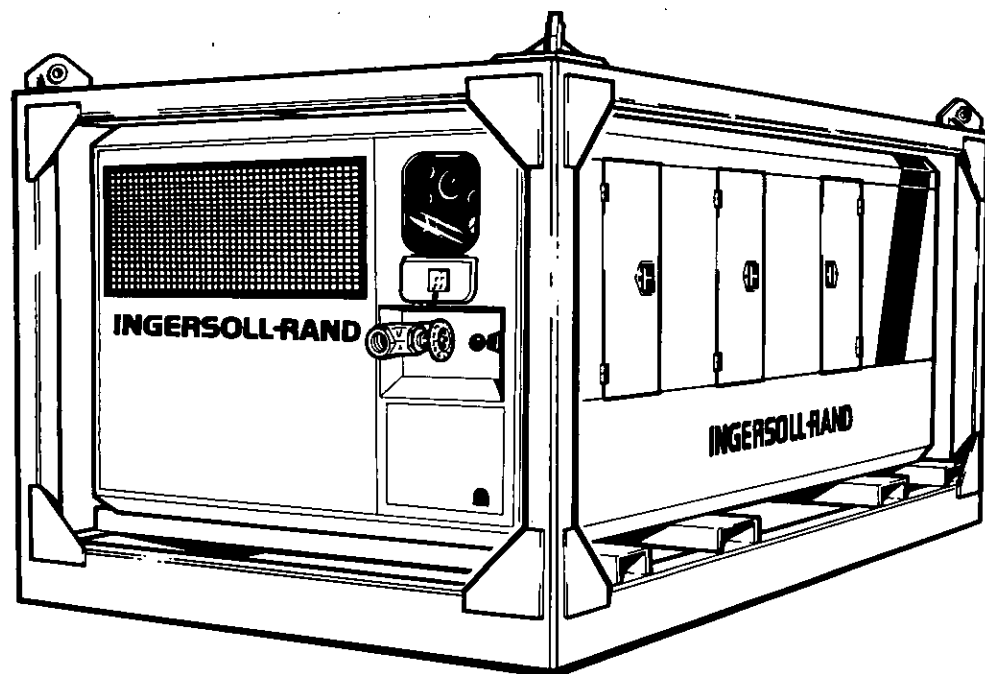


INGERSOLL-RAND

HP 750 O.S.A.



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SERIAL No. RANGE

FROM

890651

TO

890700

OPERATING & MAINTENANCE MANUAL
with spare parts list

MANUAL D'UTILISATION ET D'ENTRETIEN
avec catalogue de pieces detachees

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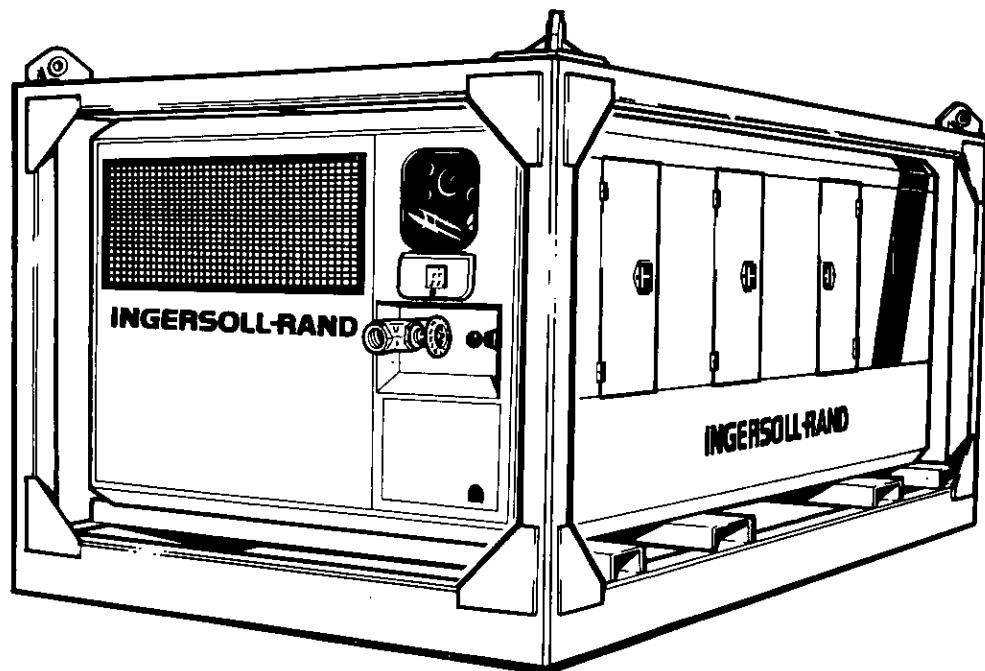
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con lista ricambi

MANUAL DE MANEJO Y MANTENIMIENTO
con Lista de Repuestos

دليل التشغيل والصيانة
مع قائمة قطع الغيار

INGERSOLL-RAND

HP 750 O.S.A.



PARTS BOOK C.P.N. 92668193

ISSUE No. 5

DATE OCTOBER 1988
Revised (09-12)

OPERATING & MAINTENANCE MANUAL

MANUAL D'UTILISATION D'ENTRETIEN

BEDIENUNGS-UND WARTUNGSANLEITUNG

LIBRO D'USO E MANUTENZIONE

MANUAL DE MANEJO Y MANTENIMIENTO

دليل التشغيل والصيانة

FOREWORD

In preparing this publication, every effort has been made to provide sufficient information to permit an operator to perform his duties so as to receive maximum performance and trouble free service from the compressor. All classes of equipment, regardless of how well built, require a certain amount of attention. The purpose of this publication is to acquaint an operator with the functions, operation and servicing of the various components, which were built with the very best of materials and workmanship, to obtain maximum life from the compressor.

Before starting the compressor, the instructions should be carefully read to obtain a thorough knowledge of the duties to be performed. Take pride in the compressor; keep it clean, and in good mechanical condition. For major servicing, not covered in this publication, consult your nearest Ingersoll-Rand Company Branch office, or the distributor from whom the compressor was purchased.

Correspondence with a distributor must always specify the serial number of the compressor as well as the model.

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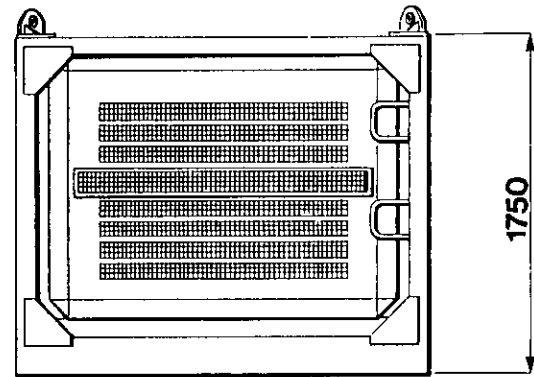
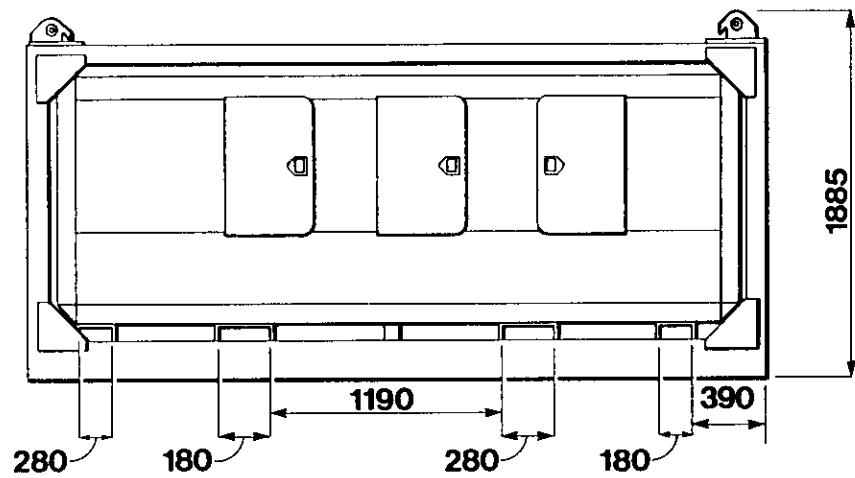
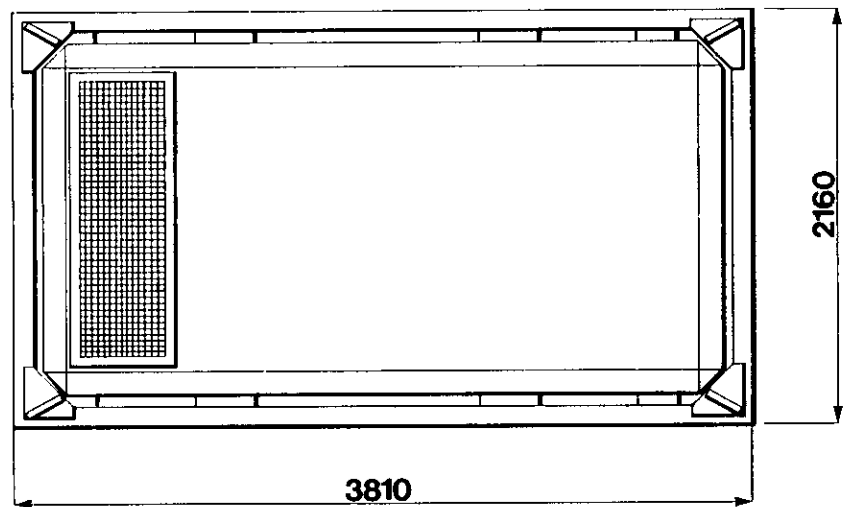
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GENERAL DATA



GENERAL DATA

COMPRESSOR	ENGINE	WEIGHTS
Model : HP 750 O.S.A. Actual Free Air Delivery : 750 cfm Normal Operating Pressure : 150 psig/10.3 Bar Maximum Pressure : 160 psig/11 Bar Cooling System : Oil Injection Lubricant/Coolant Capacity : 73 Litres	Model : Caterpillar 3306 DITA (Marine) Number of Cylinders : 6 Displacement : 10.5 Litres Compression Ratio : 15:1 Oil Capacity : 27.4 Litres Speed at Full Load : 2100 R.P.M. Speed at Idle : 1000 R.P.M. Fuel Tank Capacity : 68 Imp. Gallons Flame Trap : 44 kg. Water Cooling System Capacity : 109 Litres Anti-freeze Capacity : 50 Litres	Maximum Weight (including cradle) : 5000 kg Weight of Cradle : 1000 kg Shipping Weight : 5000 kg

OPERATION

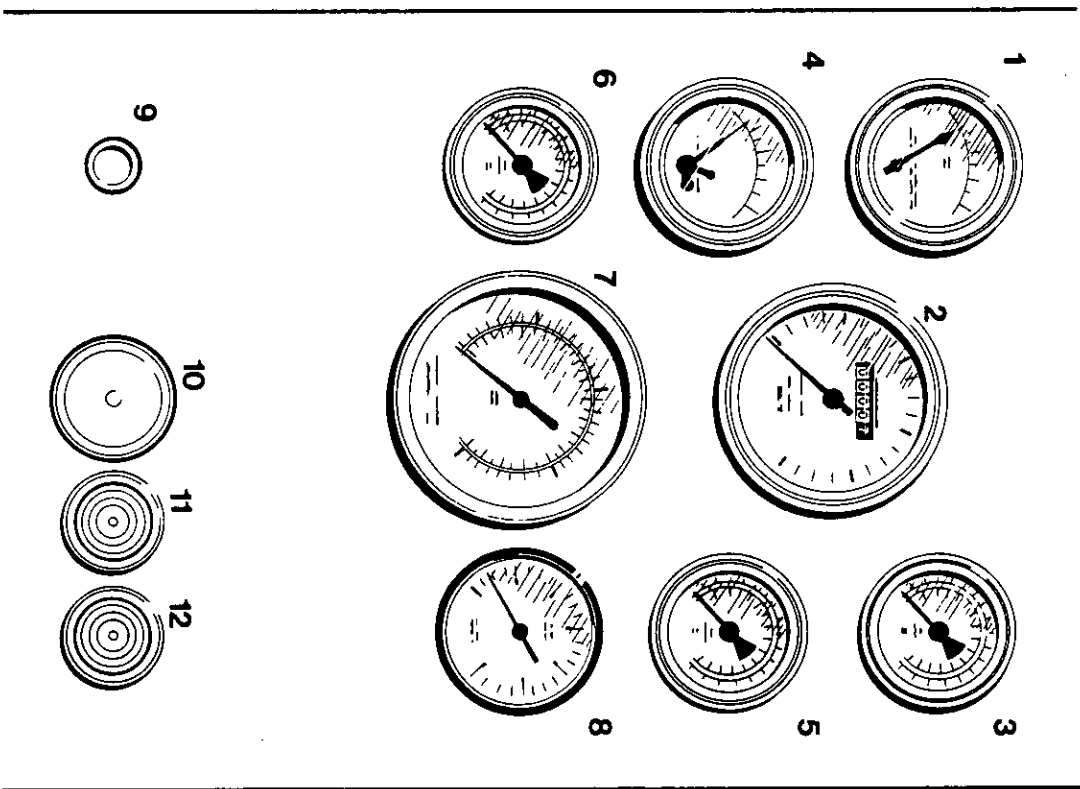
FONCTIONNEMENT

BEDIENUNG

NORME PER L'USO

FUNCIONAMIENTO

الاستعمال

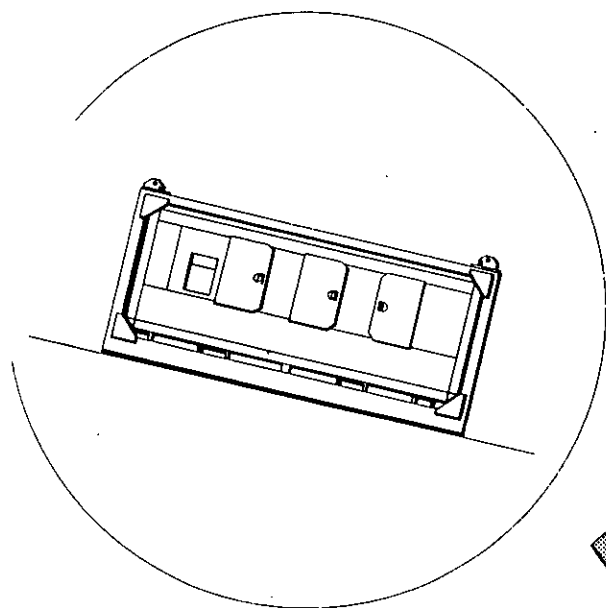


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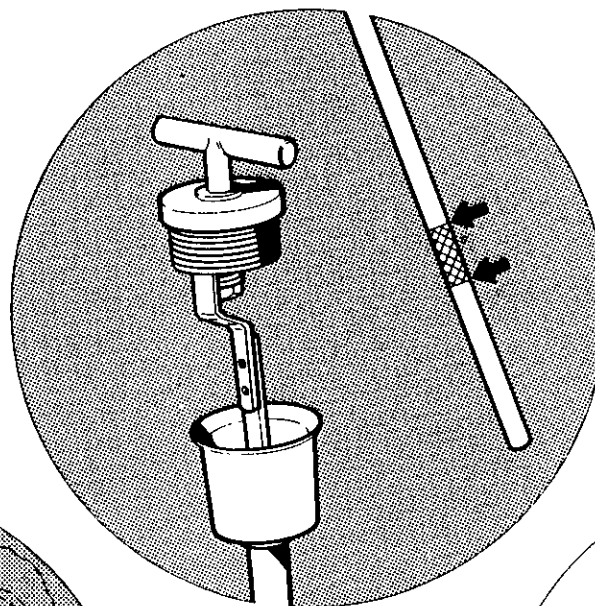
1. **Engine Water Temperature Gauge.**
Maximum temperature 100 deg. C.
2. **Engine R.P.M. and Hours Counter.**
Measures engine speed and the number of hours the machine has been operating. This gauge should be used to give service intervals
3. **Engine Oil Pressure Gauge.**
Depending on type of engine and efficiency of engine, this gauge should read approximately 60 p.s.i.
4. **Compressor Oil Temperature Gauge.**
Maximum temperature 120 deg C.
5. **Air Start Pressure Gauge.**
Measures air pressure in air start system. At 130 Lb. sq.in. will start the engine three times. A minimum of 50 lb. sq.in. is required to start the engine once.
6. **Safety System Pressure Gauge.**
Should show a pressure of 80 p.s.i. plus.
7. **Air Discharge Pressure gauge**
Shows air pressure available at service valve.
8. **Exhaust Temperature Gauge.**
Measures temperature at surface of exhaust system, maximum 200 Deg C.

OPERATION**FONCTIONNEMENT****BEDIENUNG****NORME PER L'USO****FUNCIONAMIENTO****التشغيل**

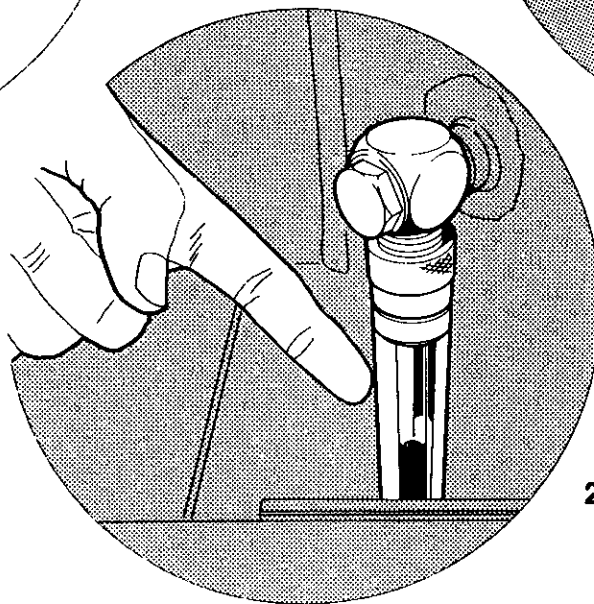
9. **Push After Warm-up Button.**
Refer to 'Starting'.
10. **Engine Start Button.**
Refer to 'Starting'.
11. **Override Reset Button.**
Re-charges pneumatic safety circuit after shutdown.
12. **Normal Stop Button.**
Refer to 'Stopping'.



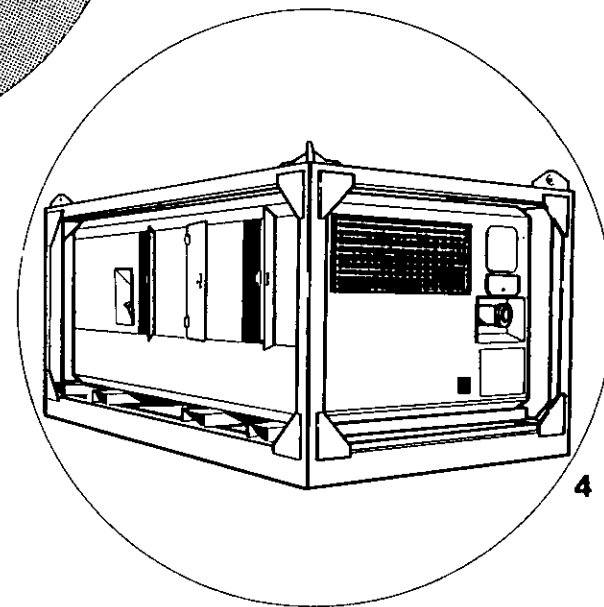
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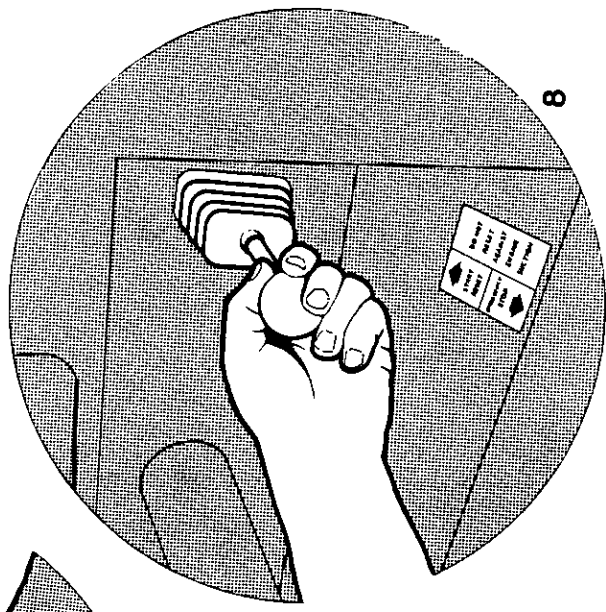
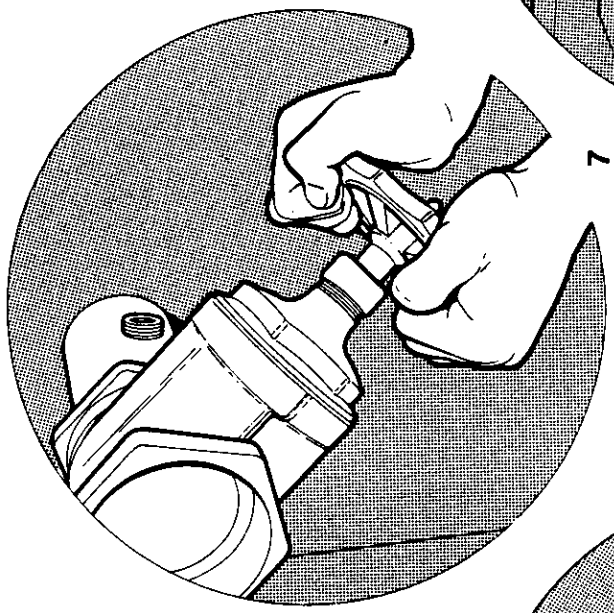
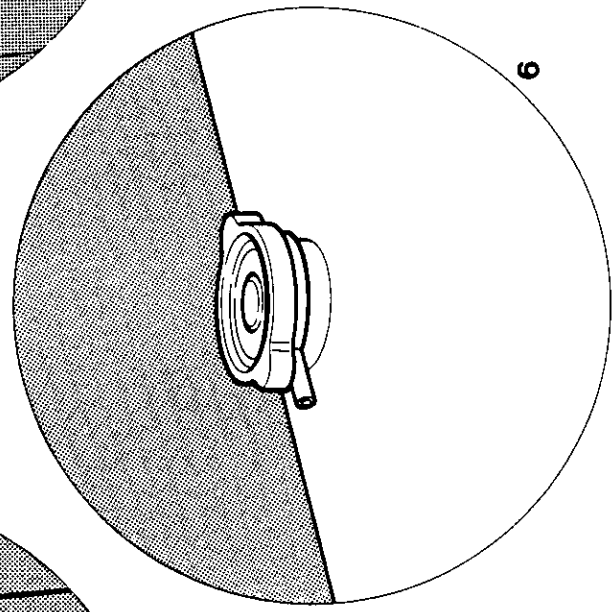
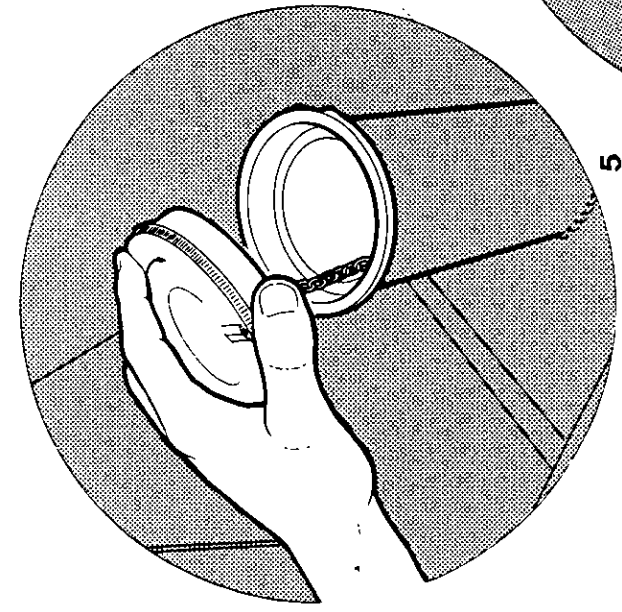
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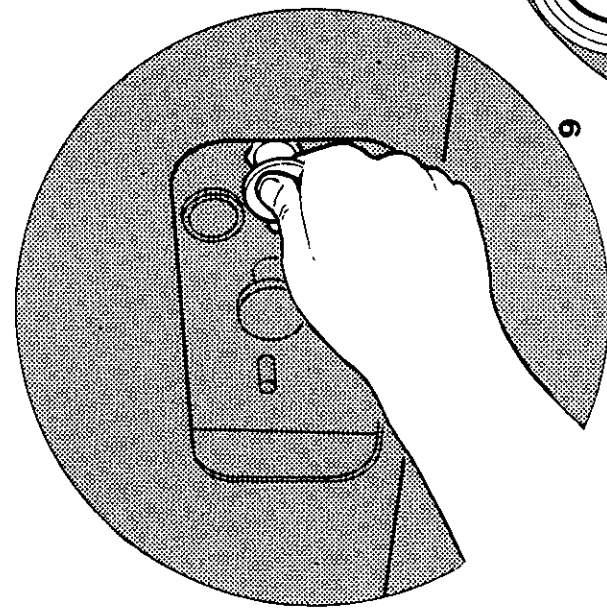


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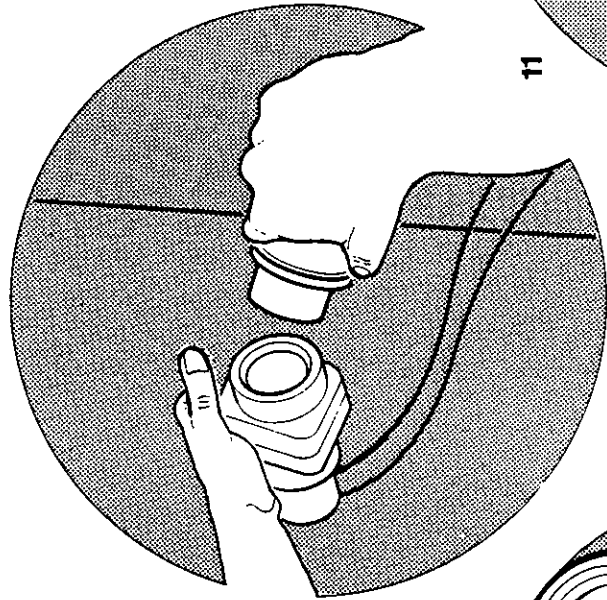


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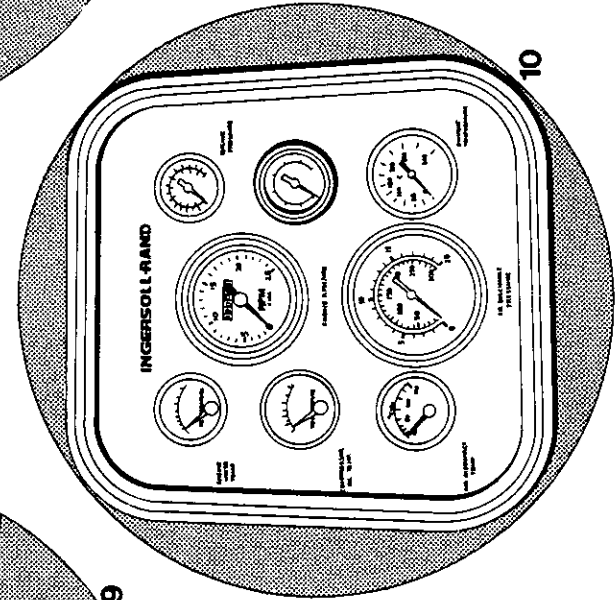




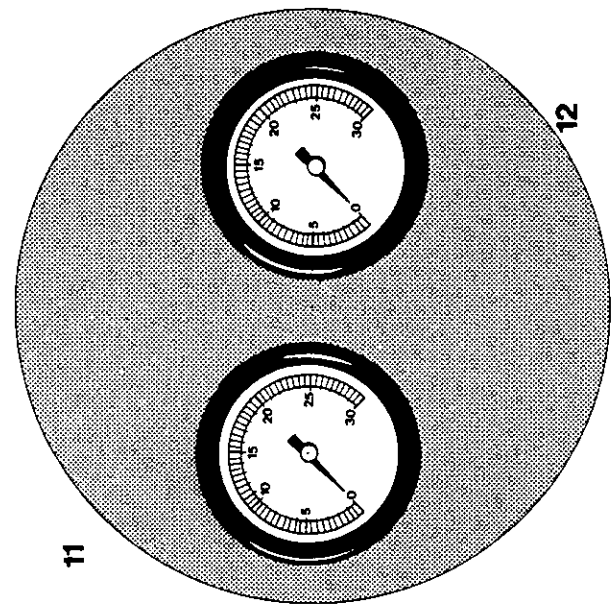
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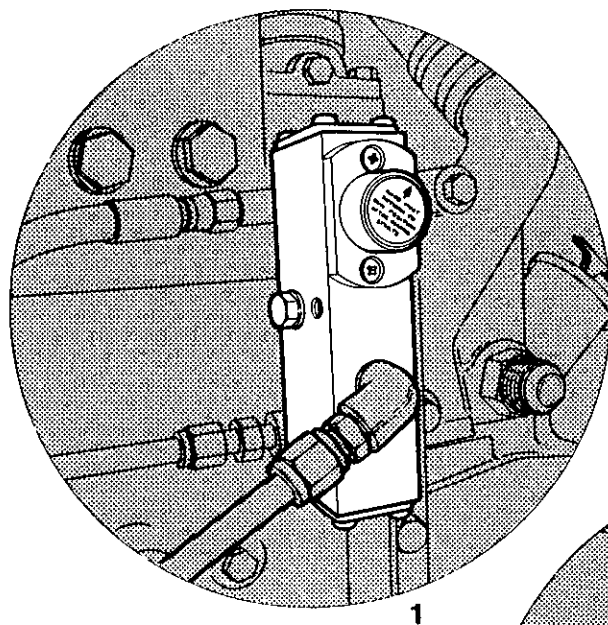


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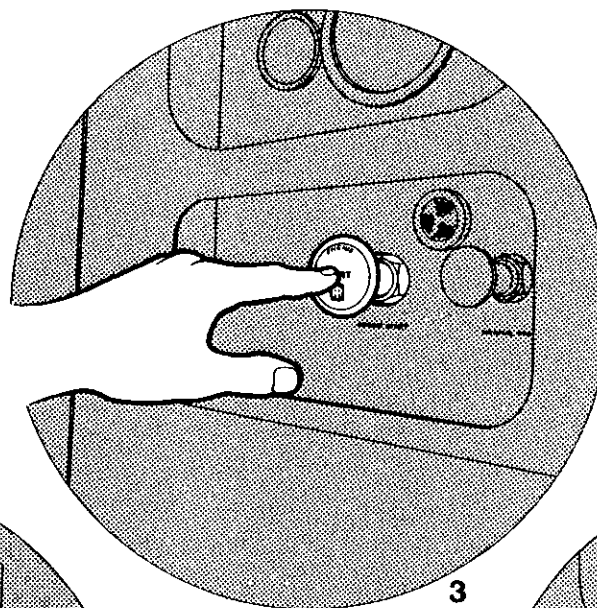
BEFORE STARTING

1. Place the unit in a level position.
2. Check the compressor oil level in the sight glass situated on the side of the receiver/separator. Oil level should be between maximum and minimum marks.
3. Check engine oil level and add oil if necessary up to full mark on dipstick.
4. Check all doors are closed.
5. Check fuel level. If unit has stood for a period without running turn fuel valve to start position and pump fuel hand pump until pressure shows green on fuel pressure gauge.
6. Check radiator coolant level.
7. Close service valve.
8. Check that speed valve and vibration valve have been reset by pressing reset button on each valve.
9. Check the air-start receiver is charged.
10. Check that yellow alert power supply is connected.
11. Check all doors are closed.

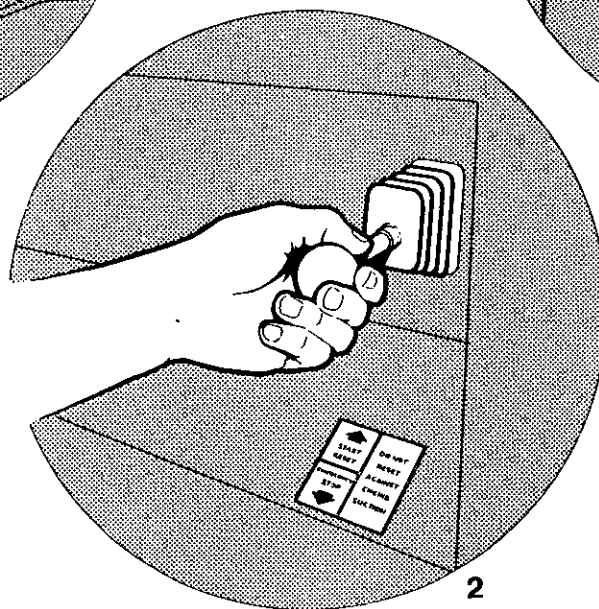
12. Check tell tales are green -
N.B. Engine oil pressure
and water loss indicators
may show red after normal
stopping. If system is O.K.
the indicators will go to
green on start up.



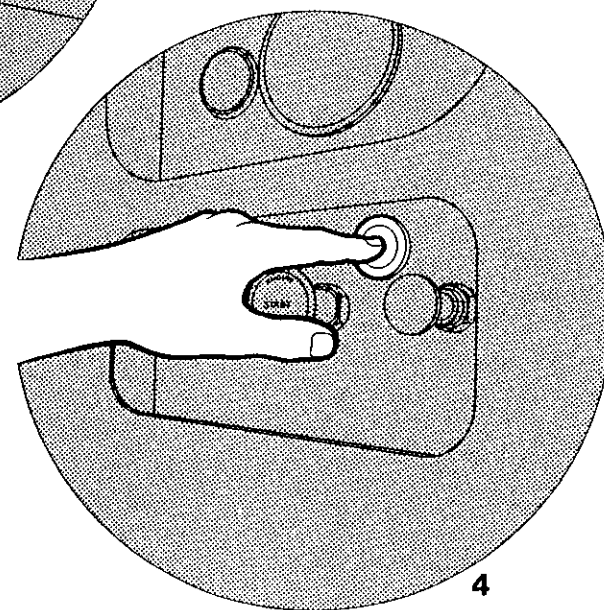
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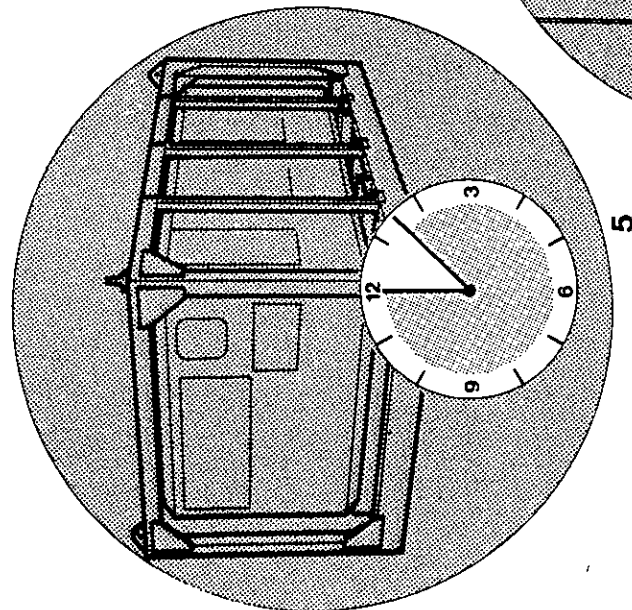
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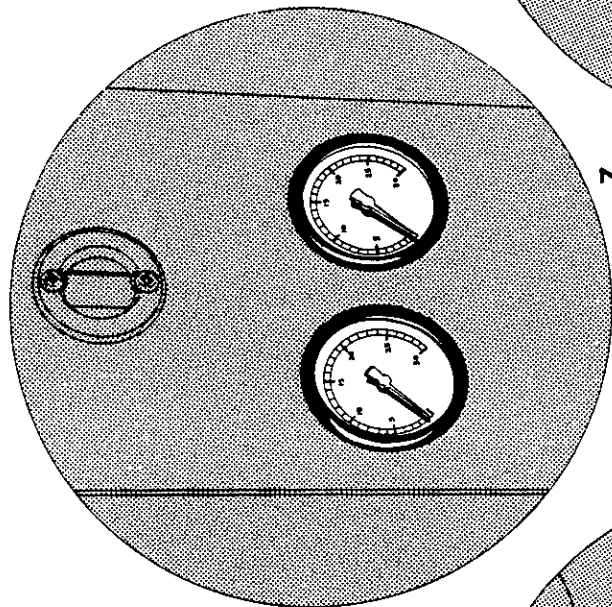
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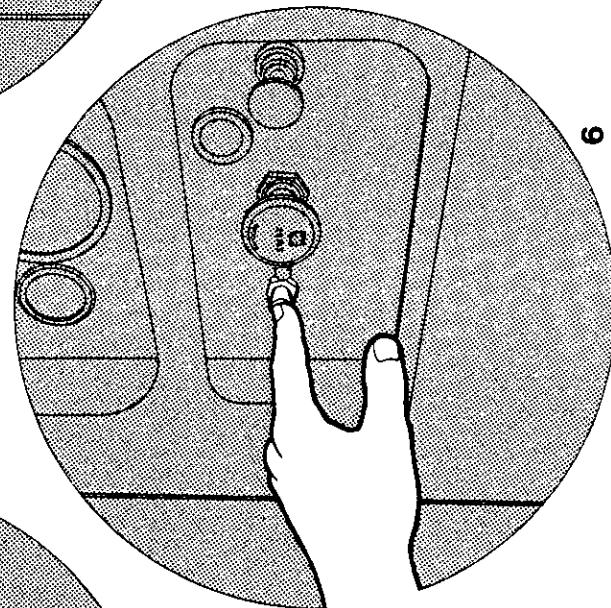
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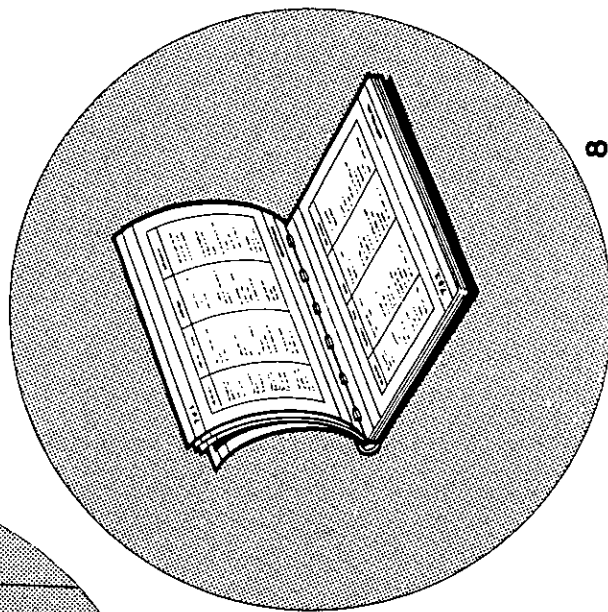
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8

STARTING

1. Turn knob on fuel valve to start position.
2. Lift the Start/Reset Emergency Stop Lever to the Start Reset position, and hold in position.
3. Press engine Start button. Release Start button when engine fires.
4. Press Reset green button and after 20 seconds release Start/Reset/Emergency Stop lever to central position
5. Allow machine to warm up for several minutes.
6. Press brass Start-Run button to engage regulation system.
7. When machine is running at full load check if air filter restriction gauges show less than 30", if not air filter element service is required.
8. If unit fails to run or shuts down refer to trouble shooting section of this manual.

STOPPING

1. Close service valve.
2. Allow machine to idle for several minutes.
3. Press normal Stop button.
4. Push horn stop button to silence shutdown warning horn.

EMERGENCY STOP

5. Move Start / Reset / Emergency Stop Lever down to stop position. N.B. Never use emergency stop level for normal stopping as this practice can lead to mechanical damage.

WARNING

If the engine safety system trips whilst the engine is being used in a hazardous area, indicated by a tell tale showing red/white do not attempt to restart until advice has been obtained from the safety officer or plant supervisor.

NOTE

To prevent condensation building up in fuel tank, refill the tank at the end of every shift.

GENERAL

The compressor is initially supplied with Ingersoll-Rand compressor lubricating oil sufficient for the first 500 hours of operation.

Check the compressor and engine oil level before starting a new compressor.

If for any reason the compressor oil has been drained, it must be refilled with clean new oil recommended by Ingersoll-Rand.

CAUTION

Some oil mixtures are incompatible and result in the formation of varnishes, shelacs or lacquers which may be insoluble. Such deposits can cause serious damage. To avoid such problems always specify Ingersoll-Rand compressor lubricating oil (5 litre container CPN 92735109, 25 litre container CPN 92735117).

ENGINE LUBRICATING OILS

Normal lubricating oil for engine
In SAE 10W 30 (MIL-L-2104C-CD).

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**COMPRESSOR LUBRICATING
AND COOLING OIL
RECOMMENDATIONS**

Ingersoll-Rand compressor lubricating oil is recommended for use in I-R Portable Compressors, 5 litre container CPN 92735109, 25 litre container CPN 92735117.

This oil conforms to the specifications found in section a) of the following table. If alternate lubricants are used they too should conform to these specifications.

CAUTION: Care should be taken to ensure that all down-stream components will be compatible with synthetic lubricants.

a) AMBIENT TEMPERATURE

125 DEG. F (51.7 DEG. C)

to

- 10 DEG. F (-23.3 DEG. C)

USE LUBRICANT:

MIL-L-46152 - SAE 10W

or

MIL-L-2104B - SAE 10W

or

DEXRON or DEXRON II

**AUTOMATIC TRANS-
MISSION FLUID****b) AMBIENT TEMPERATURE**

-10 DEG. F (-23.3 DEG. C)

to

-50 DEG. F (-45.6 DEG. C)

USE LUBRICANT

****MIL-L-23699B**

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MAINTENANCE

SERVICE HOURS	INTERVAL PERIOD	DESCRIPTION	MAINTENANCE REQUIRED
12		Exhaust flame arrestor	Clean element (P 4.5)
	daily	Check engine & air end lubricant level.	Clean dust collector boxes (P 4.6)
	daily	Air filters	
		Fuel tank	Refil to prevent condensation
50	weekly	Temperature probes	Visually Check tightness
50	weekly	Fuel shut off valve	Check reset knob
		Compressor oil filter	Replace after first 50 hours from new
100	2 weeks	Shutdown valve and linkage	Inspect, lubricate and shutdown test
	month	Coolers	Check for build up of foreign matter. Clean if necessary by blowing out with air or pressure wash.
		Compressor oil filter	Replace after first 150 hours from new.
500	6 months	Compressor oil filter	Replace (P 4.2)
500	6 months	Compressor oil	Replace (P 4.1)
500	—	Fan Belt	Engine
500	6 months	Hoses	Inspect (P 4.13)
1000	6 months	Engine breather	Clean element
1000	1 year	Air filter elements	Replace
	2 years	Heat exchanger	Clean interior
	2 years	Spark arrestor	Clean interior
As required		Cooling system	Add antifreeze and inhibitor
		Inlet flame trap	Clean element

**COMPRESSOR OIL
CHANGE**

Replace after 500 hours, or every six months of operation, whichever comes first.

NOTE

If compressor has been operated under adverse conditions, or has had long shutdown periods, an earlier oil change may be necessary as oil deteriorates with time as well as by operating conditions.

WARNING

DO NOT under any circumstances remove any drain plugs or open any drain valves from the compressor lubricating/cooling system without first checking all air pressure has been released, by checking discharge pressure gauge and by opening manual blowdown valve located on air regulation manifold behind air inlet filter.

CHANGE PROCEDURE

1. Remove plug from drain valve.
2. Open valve and drain into a suitable container.
3. When receiver separator tank, piping and oil cooler are completely drained, close the coolant drain valve.
4. Replace the plug into the drain valve.

5. Remove the oil filler plug situated on the side of the receiver/separator.

6. Re-fill the lubricating/cooling system until the oil level is between max. and min. marks on the oil level gauge.

7. See Section 2 Operation (Before Starting)

8. Start compressor (See Section 2 Operation)

9. Check for leaks.

COMPRESSOR OIL FILTERS

Replace after the first 50 hours, 150 hours and thereafter every 500 hours or every six months of operation, whichever comes first.

CHANGE PROCEDURE

1. Wipe off any external dirt from the filters to prevent any contamination from entering the lubricating/cooling system.

2. Turn the filters anti-clockwise and remove from housing.

3. Clean gasket seat on housing.

4. Install new Ingersoll-Rand replacement filters by offering up to the housing and turning clockwise until seal makes initial contact.

5. Tighten an additional 1/2 to 3/4 turns.

6. See Section 2 Operation
(Before Starting)

7. Start compressor
(See Section 2 Operation)

8. Check for leaks.

SCAVENGE TUBE

It is good preventative maintenance to check that the scavenge tube is clear of any obstructions each time the compressor lubricant is changed (a blocked scavenge will cause oil carryover).

COMPRESSOR OIL SEPARATOR ELEMENT

Normally the separator element will not require periodic replacement provided the air and oil filters are properly maintained.

ENGINE FILTERS

All must be serviced in accordance with the instructions found in the engine operator's manual.

AIR INTAKE VALVE

At 100 hours or 2 weeks operation (whichever comes first), inspect the valve linkage and control arm mechanism. Ensure that the roller on the trip lever is free to spin. Lubricate the valve spindle and all pivot points with thin oil.

Carry out an emergency stop test using the stop/reset lever by

hand or cable. Ensure that the valve moves freely, closes correctly and shuts down the engine.

If the operation of the valve appears satisfactory but the engine does not stop within a few seconds then the inlet system, including the manifold, should be checked for leaks. Any leaks should be suitably sealed.

AIR INTAKE VALVE SETTING INSTRUCTIONS

Slacken the adjuster until the trip lever spring is just loose. Tighten it nine complete turns, secure the locknut and wirelock the adjuster. Run the engine to maximum speed and check that there is no tendency for the SVD valve to vibrate excessively and shutdown.

When running the engine to check the operation of the valve, restrain the mechanism so that the valve is not allowed to fully close.

When testing shutdown, ensure that this is done at low speed and not more often than necessary.

FLAME ARRESTOR

Fit a clean element every 12 hours or more frequently if necessary. To remove the element, slacken all six captive bolts, draw two captive bolts

into loading bracket and half turn anti-clockwise to secure. Pivot flame trap element to approximately 45 deg. and remove. Clean by soaking in carbon removing solvent: e.g. Applied Chemicals 8-77, 8-38 or Castrol ICP 140 or similar.

CAUTION

Do not place a hot flame arrestor in the cleaning fluid.

HEAT EXCHANGER

On major overhaul, or in the event of shutdown due to excessive exhaust temperature not reconciled by other checks, clean the heat exchanger interior with a carbon solvent: e.g. Applied Chemicals 8-77, 8-38 or Castrol ICP 140.

Remove the heat exchanger from the machine, blank off the gas inlet ports, and with the outlet uppermost fill the casing with solvent and allow to soak for four hours. Empty and thoroughly hose out the interior. Remove all fluid from the heat exchanger, repeat if necessary. During this operation, **do not allow solvent into water passages.**

The heat exchanger gas ports should be blown out, refit the cooler and run the engine until warm. Top up the water system and check for leaks. A clean exhaust flame arrestor element must be fitted. It should be noted that after cleaning the heat exchanger, loose carbon particles may be released during the initial period, after which it is necessary to clean the exhaust flametrap.

AIR FILTER ELEMENTS

The air filters should be inspected and maintained daily.

Dust collector boxes should be cleaned daily; this will become more frequent in dusty operating conditions. Dust collector boxes must not be allowed to become more than half full.

It is recommended that air filter elements be replaced by new Ingersoll-Rand elements. However, if new elements are not at hand, the blocked elements may be cleaned and re-used. For cleaning, the following instructions must be adhered to:-

NEVER REMOVE AND REPLACE ELEMENTS WHEN COMPRESSOR IS RUNNING

REMOVAL AND CLEANING

1. Clean exterior of filter housing.
2. Remove end cap and empty dust collector box.
3. Unscrew hex.nut securing main element to housing.
4. Remove element.
5. Clean inside housing.
6. Clean element by directing a jet of dry compressed air at no more than 5 bar (73 P.S.I.) at an angle of 45 deg. to the

outside of element. Carefully blow any dust from each fold of the element.

NEVER USE COMPRESSED AIR TO BLOW THROUGH THE ELEMENT MEDIA.

7. Mark the number of services to the main element on the end of the safety element, which should be replaced at least every five (5) services of the main element.

8. Elements must not be cleaned and re-used.

INSPECTION

1. Check for cracks, holes or any other damage to the element by holding it up against a light or by passing a lamp inside.

2. Check the seal at the end of the cartridge and replace if any sign of damage is evident.

3. Renew, Safety element if inspection reveals damage to main element.

REPLACEMENT

1. Assemble the new or cleaned elements into the filter housing.

2. Ensure that the seal seats properly on the bottom of the housing.

3. Secure the element in housing by hand tightening the hex.nut.

4. Assemble the dust collector box parts ensuring they are correctly positioned with the lug interlocked with the slot in the cover rim.

5. Ensure that the arrow and 'top' marking on the collector box is correctly positioned.

6. Reset restriction indicator by depressing rubber diaphragm.

7. Before starting machine, check all clamps are tight.

AIR STARTER MOTOR

Normally the motor requires no maintenance except for topping up of the lubricator reservoir. But should the motor need to be removed for repairs the following points should be noted

1. When dis-assembling always mark adjacent parts on the motor housing cover, cylinder housing, gear case and drive housing so that these items can be located in the same position when the motor is re-assembled.

2. Do not dis-assemble the motor any further than necessary to replace a worn or damaged part.

3. Do not remove any part which is a press fit in or on a sub-assembly unless the removal of that part is necessary for replacement or repairs.

4. Always have a complete set of vanes, seals and O-rings on

hand before commencing any overhaul of a starter.

Never re-use old seals or O-Rings.

TESTING THE STARTER MOTOR

1. Turn the Drive Pinion by hand in the direction of starter rotation. The clutch should ratchet smoothly with a slight "clicking" action.

NOTE: Proper Starter rotation is indicated when facing the Drive Pinion. That is, a Starter having the letter "R" in the model number is designated as a right-hand rotation model, and the Drive Pinion will rotate clockwise when facing the Drive Pinion.

2. Turn the Drive Pinion in the opposite direction of the Starter rotation. The gearing and motor should rotate freely with no binding.

3. Attach an air hose to the "IN" port on the Drive Housing, and apply 50 psig (3.4 bar/345 kPa) air pressure. The Drive Pinion should move outward and air should escape from the "OUT" port.

4. Plug the "OUT" port and apply 150 psig (10.3 bar/1034 kPa) air pressure to the "IN" port. Check to make certain no air is escaping. Measure the distance from the face of the Drive Pinion farthest from the

mounting flange to the machined face of the mounting flange. It should be 2.75" (70.0 mm $\pm$ 1.5 mm). With the air pressure on and the Drive Shaft extended, push the Drive Pinion toward the Drive Housing until the Pinion rotates slightly and comes to a solid stop. While holding the Drive Pinion against the stop, measure again the distance from the face of the Drive Pinion to the machined face of the mounting flange. The difference between the two measurements must be 0.47" (12.0 mm $\pm$ 0.9 mm). Remove the pressure from the "IN" port and measure again the distance from the face of the Drive Pinion to the machined face of the mounting flange. It should be 1.82" (46.2 mm $\pm$ 1.5 mm).

5. Attach a 3/8" (9 mm) air hose to the inlet of the motor and apply 90 psig (6.2 bar/620 kPa) air pressure. The Starter motor should run smoothly.

6. Plug the exhaust port and apply 30 psig (2.1 bar/207 kPa) air pressure to the inlet of the motor. Immerse the Starter for thirty seconds in a non-flammable solvent. If the Starter is properly sealed, no bubbles will appear.

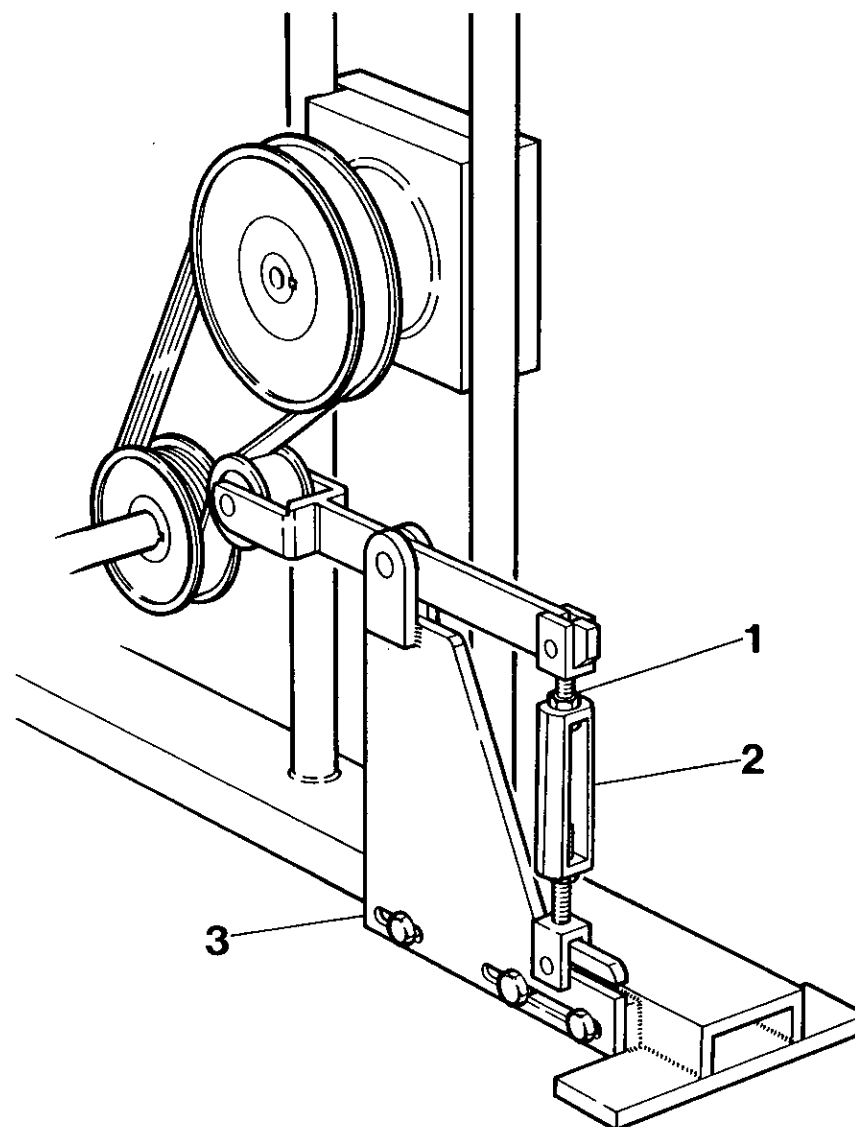
RADIATOR AND OIL COOLER

Each month it is recommended that the coolers be cleaned. When grease, oil and dirt accumulate on the cooling faces, the efficiency of the coolers becomes impaired.

To clean the oil cooler, direct a jet of compressed air, carrying a non-flammable safety cleaning solvent through the core of the oil cooler.

HOSES

At regular intervals, inspect all of the intake lines to and from the air cleaners, and all flexible hoses used for air lines, oil lines and fuel lines.



FAN BELT TENSIONING

The cooling fan is driven from the compressor male rotor by a poly-vee drive belt.

It is important that this belt is correctly tensioned preventing it from slipping. To adjust the tension of the belt, the following instructions must be adhered to:

A. Release turnbuckle locknut (1) and slacken turnbuckle body (2).

B. Slacken the four securing support plate (3).

C. Ensure support plate (3) is pushed fully forward towards the pulley.

D. Tighten screws to secure support (3).

E. Hand tighten turnbuckle body (2) and run machine. CORRECT BELT TENSION IS WHEN NO SLIPPAGE OCCURS ON CHANGE OF SPEED.

F. If belt squeals on change of speed or stopping of machine, increase the belt tension.

G. When correct tension is achieved, tighten turnbuckle locknuts (1).

PERIODICALLY CHECK TIGHTNESS OF ALL FAN MOUNTING BOLTS AND DRIVE PARTS. THE FAN MOUNTING NUT SHOULD BE TIGHTENED TO A TORQUE VALUE OF 260 LB.FT/80Nm.

N.B. Fan Drive Belt must be replaced after 500 hours to maintain anti-static properties.

SPEED AND PRESSURE
REGULATOR ADJUSTING
INSTRUCTIONS

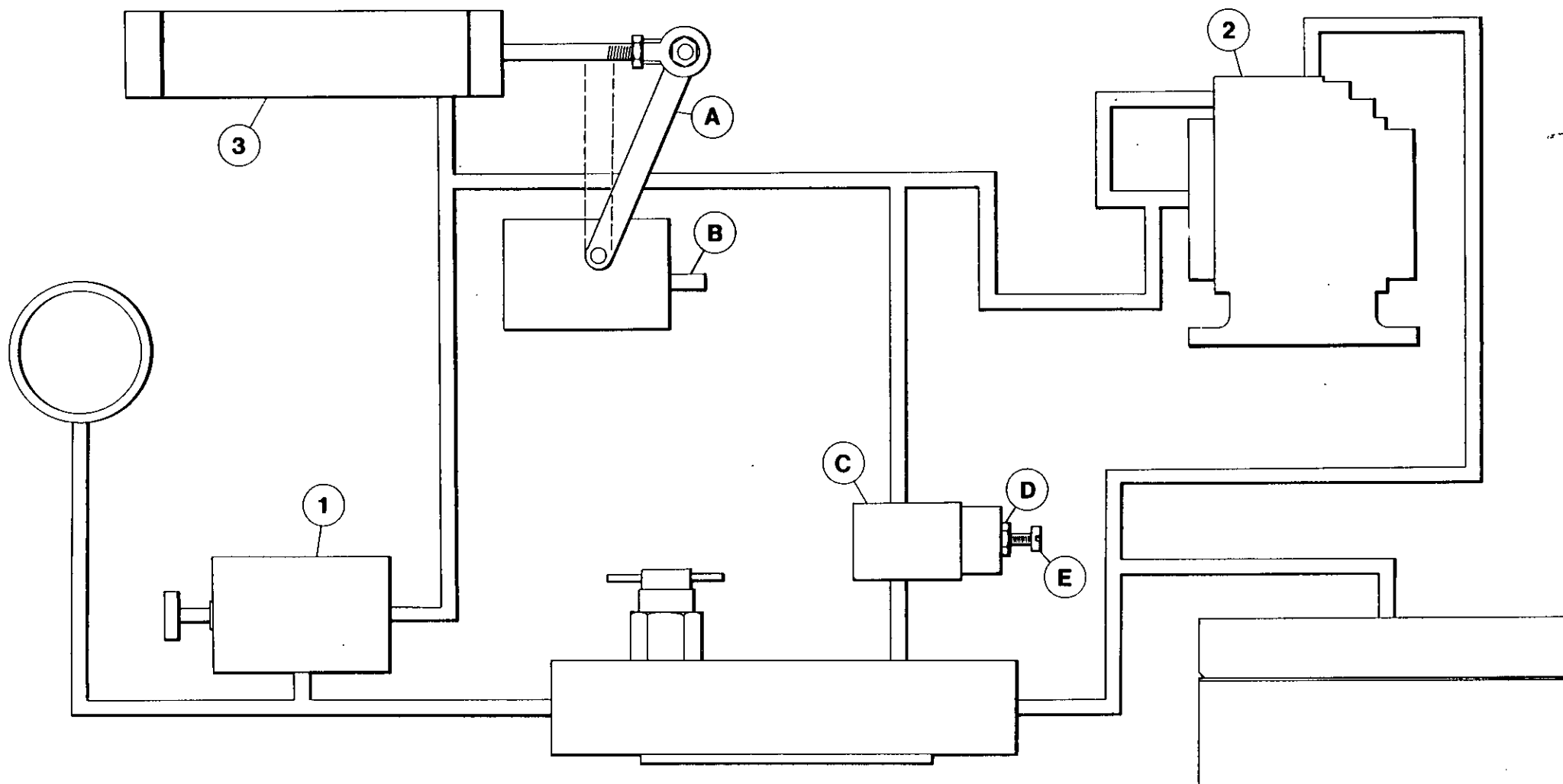
REGLAGE DU REGULATEUR
DE VITESSE ET DE PRESSION

DRUCK- UND DREHZAHL-
REGLER

ISTRUZIONI PER LA
TARATURE E DEL
REGOLATORE DE PRESSIONE
E DI VELOCITA'

REGULACION DEL
REGULADOR DE PRESSION Y
DE VELOCIDAD

تعليمات تعديل منظم
الضغط والسرعة



1 = 2-Way start/run valve.

2 = Inlet unloader

3 = Air cylinder (Speed
regulator)

C = Pressure regulator

Normally regulation requires no
adjusting, but if proper adjust-
ment is lost, proceed as follows:

Before starting engine :

1. Inspect throttle arm 'A' on
engine governor to see that it is
resting against full speed stop
'B'.

2. Loosen locknut 'D' on
adjustment screw 'E' and turn
anti-clockwise until no tension
is felt. Now turn screw one full
turn clockwise

After starting engine :

3. Allow unit to warm up
then press start-run valve 1.

4. Open and adjust service
valve on outside of machine to
maintain rated discharge pressure
on discharge gauge.

5. Ensuring that pressure is
maintained as required discharge
pressure, adjust regulator screw
'E' until throttle arm 'A' just lifts
off stop 'B'.

NOTE : Adjusting regulator screw clockwise will raise full speed pressure.

6. Close service valve. Engine will slow to idle speed 100 rpm.

TROUBLE SHOOTING

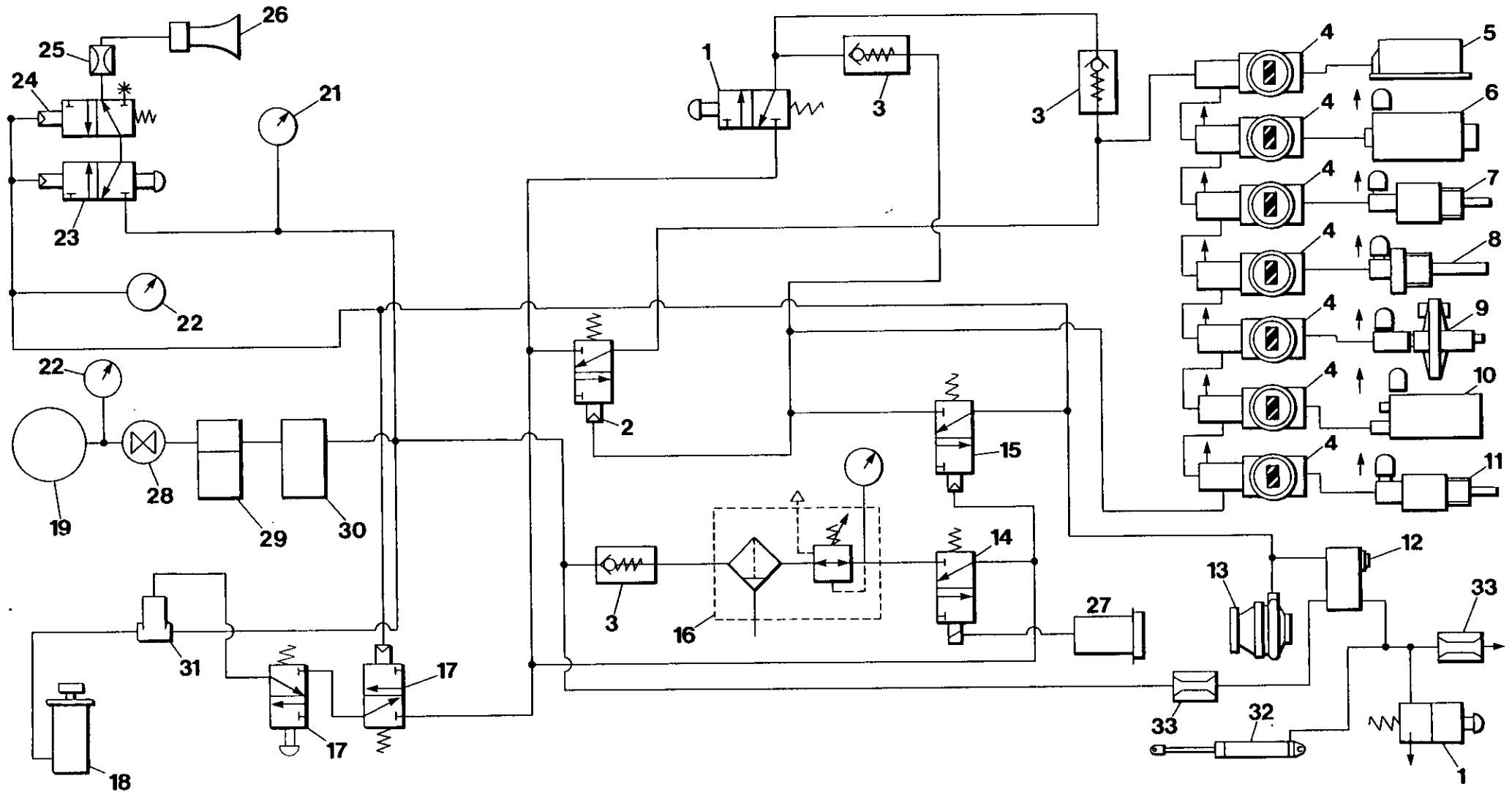
FAULT FINDING CHART	FAULT FINDING CHART
1. Engine Will Not Crank a) Insufficient pressure in air start tank. c) Relay Valve siezed. b) Yellow alert not connected or faulty. 2. Engine Will Not Start a) Low fuel level. b) Fuel system water trap full of water — drain off water and press button on top to return float. c) Reset on Overspeed and vibration valves not pressed. d) Fuel valve not reset, turn clockwise to start position. e) Normal stop button not pulled our or fuel pump lever stuck in stop position. f) Air entrapped in fuel system.	3. Engine Will Not Continue To Run After Pressing 'Reset' Button a) Safety system reset button not pressed for long enough to allow air pressure to build up Watch. safety system pressure gauge rising before releasing button. b) Air leak in safety system. See pneumatic diagram. c) Fault on machine indicated by tell-tales or faulty safety system valves. 4. Unit Prematurely Shuts Down a) Fault on machine indicated by tell-tales. b) Loss of air in safety system — check for leaks. c) Fuel starvation — check water trap in fuel system, check fuel level.

TROUBLE SHOOTING

FAULT FINDING CHART		FAULT FINDING CHART	
5. Excessive Vibration	a) Engine idle speed too low. Should be 1000/1100 r.p.m. b) Mechanical fault, e.g. broken fan or coupling.	8. Excessive Oil Carry Over in Discharge Air	a) Blocked scavenge line. Check scavenge line and orifice. b) Punctured separator element.
6. Engine Stalls on Idle	a) Idle speed too low. b) Unloader not closing properly.	9. Safety Valve Blows	a) Operating pressure too high. b) Regulator out of adjustment. c) Faulty regulator valve.
7. Air Discharge Capacity Too Low.	a) Engine speed too low. Maximum 2100 r.p.m. b) Blocked air cleaner. Check gauge. c) High pressure air escaping.	10. Engine Speed Too Low	a) Incorrect setting of throttle arm. b) Blocked fuel filter. c) Faulty regulator valve. d) Blocked silencer on regulator valve.

AIR STARTER MOTOR TROUBLE SHOOTING GUIDE

Trouble	Probable Cause	Solution
Loss of Power	Worn Motor Parts	Remove the motor from the Motor Housing and disassemble the motor. Examine all parts and replace any that are worn or damaged. Use the following guidelines for determining unserviceable parts: Vanes — Install a set of new vanes if any vane is cracked, spalled or worn to the extent that its width is 0.67" (17 mm) or less at either end. Rotor Bearings — Replace if any roughness or looseness is apparent. Rotor — Replace if the body has deep scoring that cannot be removed by polishing with emery cloth. Cylinder Housing — Replace if there are any cracks or deep scoring. End Plates — Clean up scoring by rubbing it with emery cloth placed on a flat surface.
	Inadequate Lubrication	Check the lubricator, inlet hose, fitting and oil supply hose to make sure they are vacuum tight and free of leaks. Tighten all joints and replace the lubricator if necessary.
Air or Gas Leakage	Worn O-rings	Check the End Plate O-rings and Drive Housing O-ring plug the exhaust. Apply 30 psig (2.1 bar/207 kPa) air to the inlet and immerse the unit for 30 seconds in nonflammable solvent. If bubbles appear, replace the O-ring, Gaskets or seals.
Pinion does not engage the flywheel	Broken clutch jaws or other broken parts	Disassembly of the Piston and Clutch
Motor runs, pinion engages but does not rotate	Broken shafting, Gearing or Clutch Jaws	Disassembly of the Piston and Clutch
Excessive butt engagements	Dry helical spline	Disassembly of the Piston and Clutch. Lubricate the helical spline with Ingersoll-Rand Grease No. 28.



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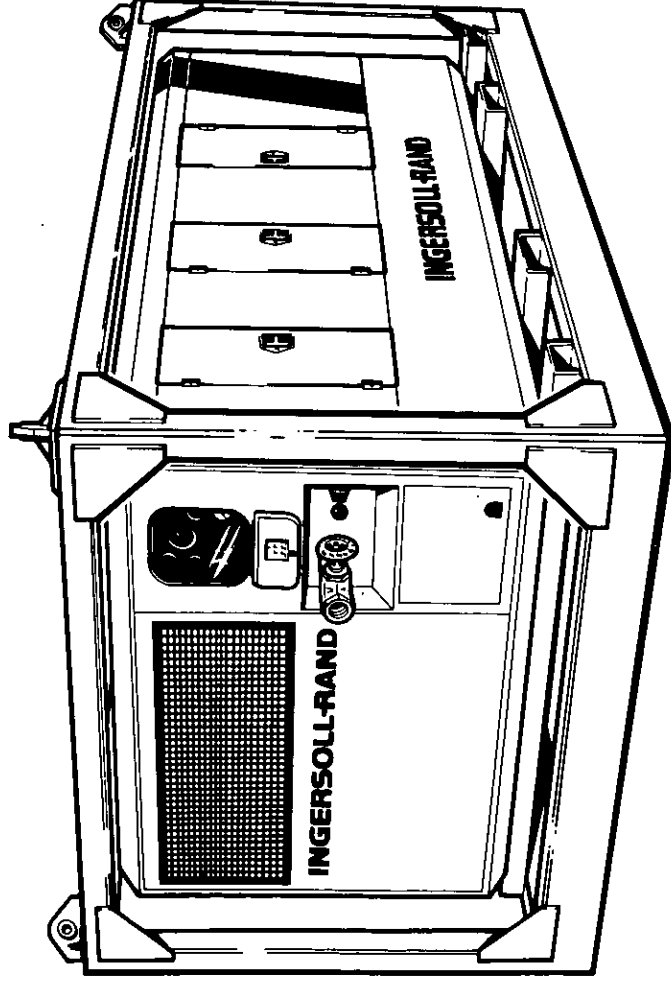
Item	Description
1.	Safety System Reset Button
2.	Safety System Energizing Relay
3.	Check Valve.
4.	Tell-Tale Indicator Relays.
5.	Engine Vibration Sensor.
6.	Engine Overspeed Sensor.
7.	Engine Water Temp. Sensor.
8.	Engine Exhaust Temp. Sensor
9.	Engine Water Loss Sensor
10.	Engine Oil Pressure Sensor
11.	Compressor Discharge Temp. Sensor
12.	Fuel Shutoff Valve
13.	Air Intake Shut-off Valve
14.	"Yellow Alert" Solenoid Valve
15.	"Yellow Alert" Shutdown Relay.
16.	Filter Regulator.
17.	Starter Inhibitor Relay.
18.	Starter Motor.
19.	Start System Air Reservoir.
20.	Start Button.
21.	Start System Pressure Gauge.
22.	Safety System Pressure Gauge.
23.	Horn Isolate Button.
24.	Horn Relay.
25.	Orifice (1 mm).
26.	Horn.
27.	"Yellow Alert" Electrical Socket.
28.	Ball Valve
29.	Filter
30.	Lubricator
31.	Relay Valve
32.	Cylinder
33.	Orifice

TORQUE VALUE CHART

FASTENING	lb ft	Nm
Drive Pins to Flywheel	340	500
Element to A/E Hub	340	500
Drive Ring to Flywheel	18	24
A/End to Engine	20	27
Rear Mtg. Brackets to Eng	140	190
Mtg. Bracket to A/End	140	190
Resilient Mounts to Frame	140	190
Cylinder Brkt. to Engine	20	27
Engine Exh. Manifold Conn	20	27
Autella Clamps	35	47
Unloader Valve to A/E	140	190
Oil Manifold to A/E	63	85
Lift Bail to T/Frame	260	352
Cover to Sep Tank	140	190
Sep Tank to T/Frame	63	85
Fan to Fan Hub	63	85
Nut on Fan Shaft	260	352
Taper Lock Bushes	35	47
Disch Pipe to A/End	140	190
Disch Pipe to Sep Tank	63	85
Exh Pipe to Turbo	25	35
Exh Pipe to Eng + Cooler	175	230

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HP 750 O.S.A.



SPARE PARTS LIST

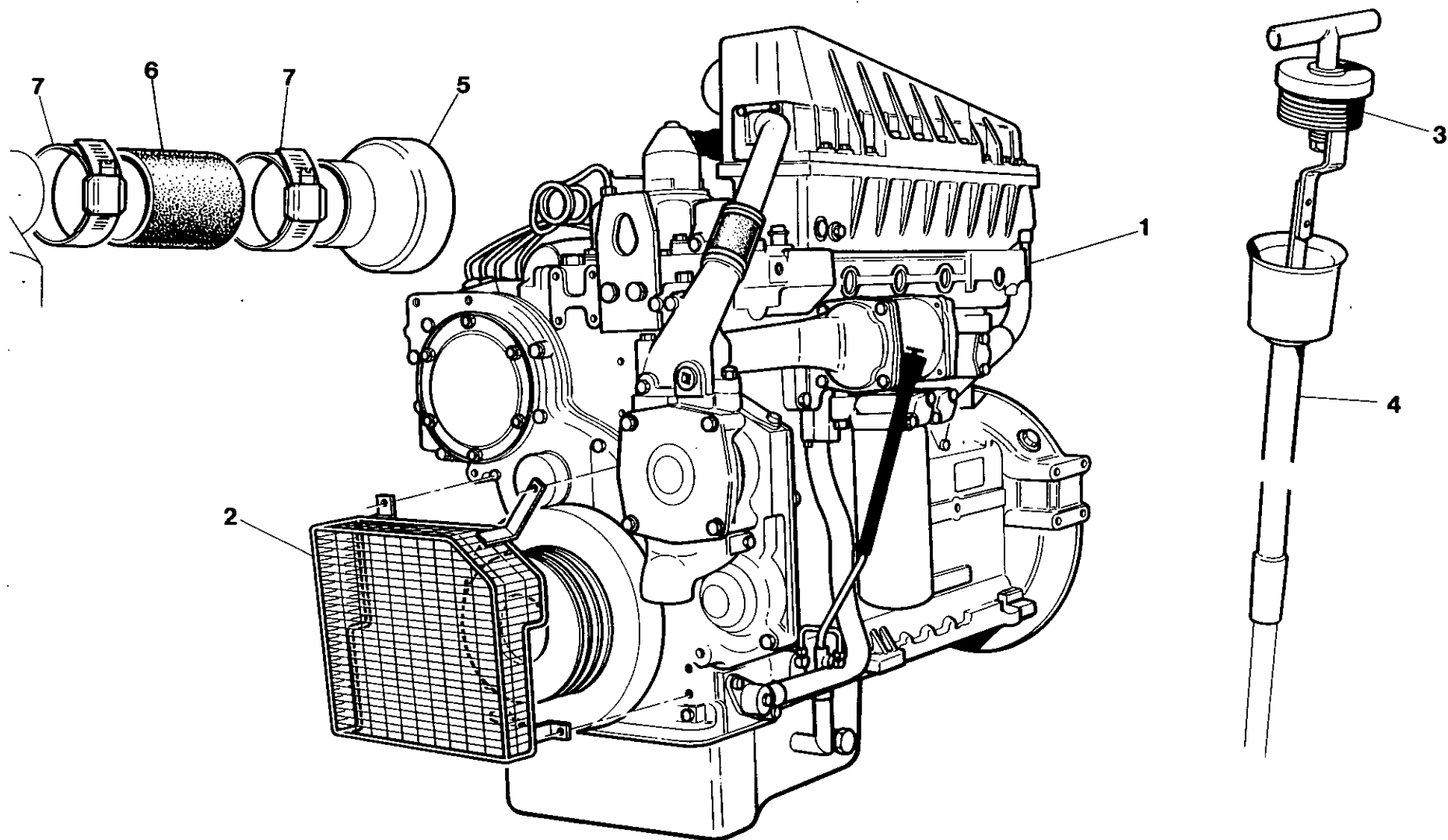
CATALOGUE PIECES DETACHEES

ERSATZTEILLISTE

LISTA DE REPUESTOS

LISTA RICAMBI

قائمة قطع الغيار

**7.1.0****INGERSOLL-RAND**

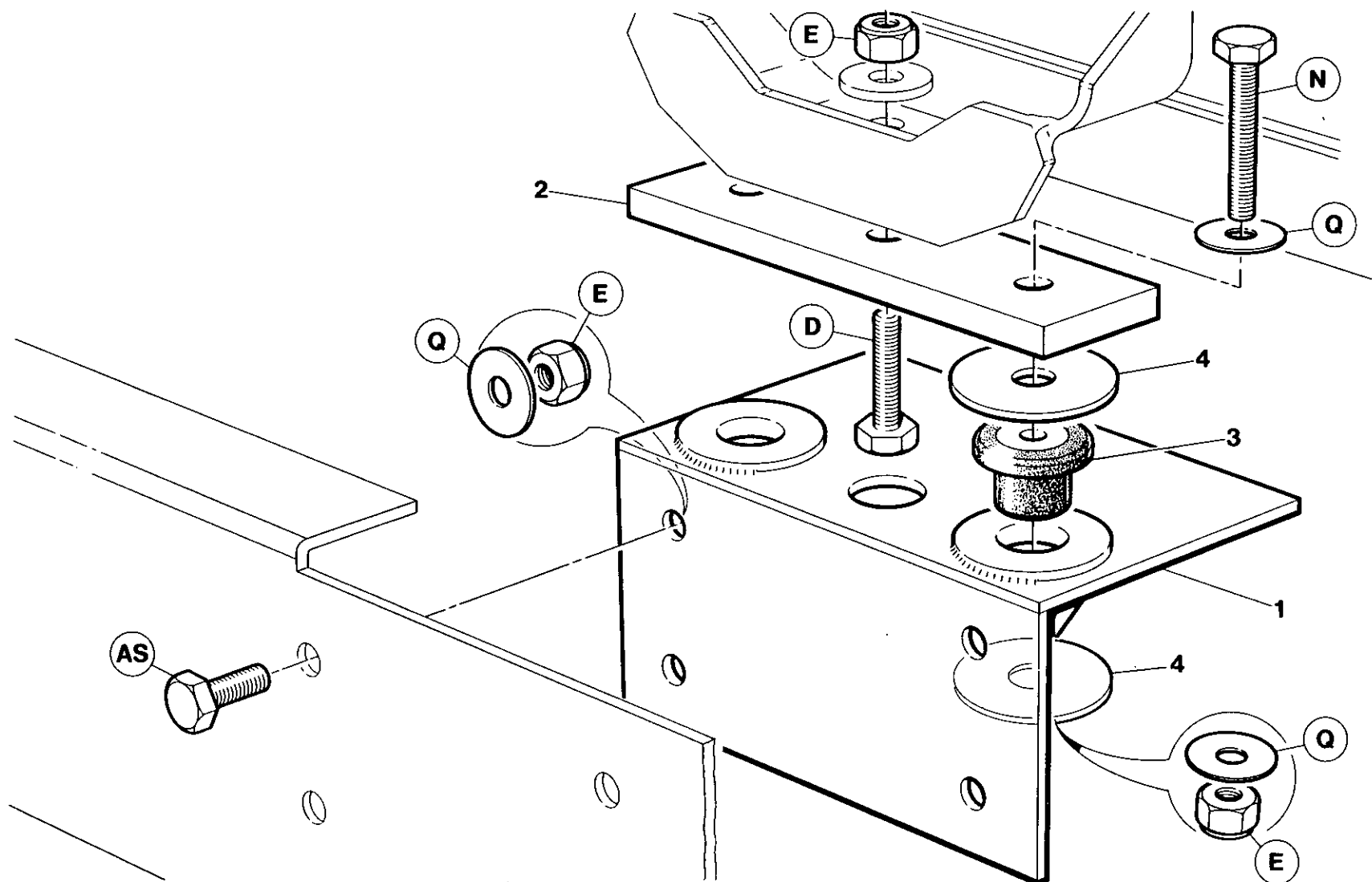
Item	C.P.N.	Qty	DRIVERS	DIVERS	ANTRIEB	GRUPPO MOTORE	ACCIONAMIENTO	أجهزة التدوير :
1	++++++	1	Engine					
2	92540806	1	Guard					
3	92546399	1	Dipstick					
4	92661917	1	Tube					
5	92546381	1	Breather Filter					
6	92662022	1	Hose					
7	92253111	2	Clip					

++++++ Items supplied by engine manufacturer

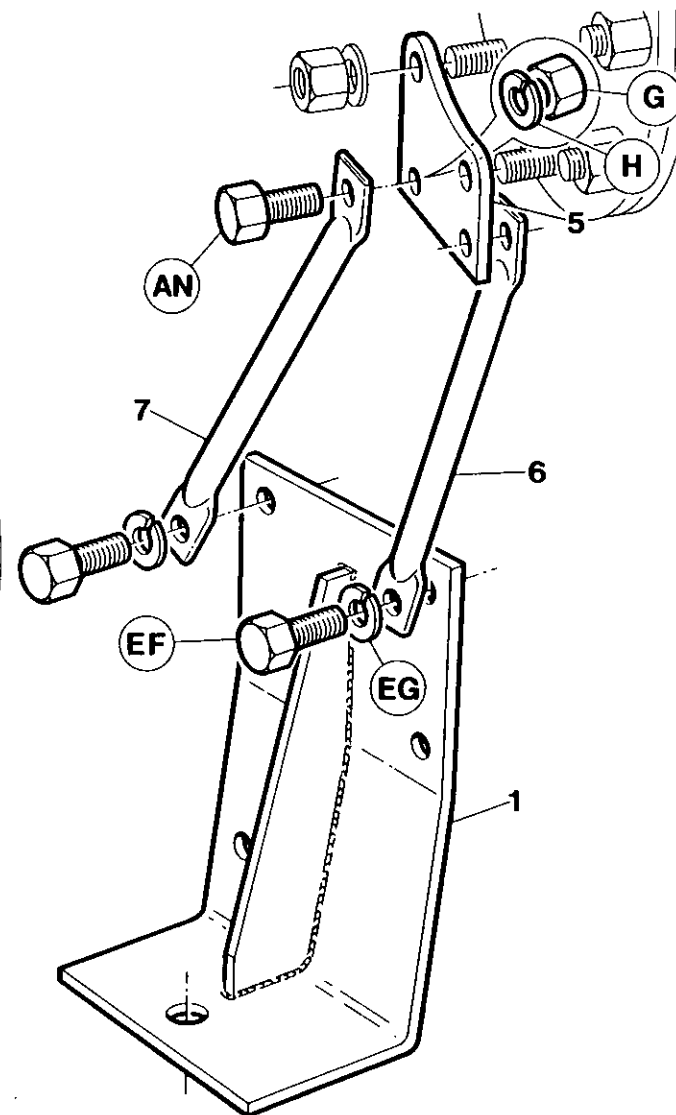
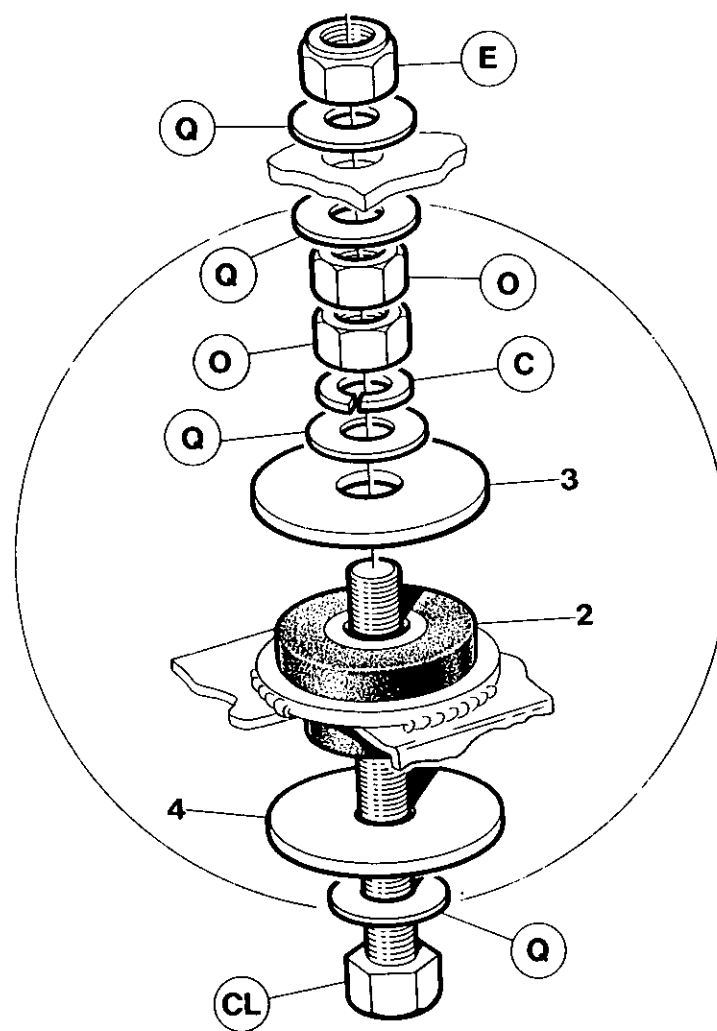
Item	C.P.N.	Qty	DRIVERS	DIVERS	ANTRIEB	GRUPPO MOTORE	ACCIONAMIENTO	اجهزة التدوير
Caterpillar 3306 Direct Injection Turbocharged and Jacket Water Aftercooled Diesel Engine Consisting of :-								
7Z8602		1	Basic engine arrangement - breakdown as follows :-					
CENTRAL STRUCTURE								
8N5286		1	Cylinder block group					
7N1342		1	Cover group					
6N8079		1	Crankshaft group					
2P6224		1	Crankshaft seal group					
2W1177		1	Rod and piston group					
1N4406		1	Single camshaft group					
REAR STRUCTURE								
6N5233		1	Flywheel housing group					
815077		1	Flywheel Group					
LOWER STRUCTURE								
3N2899		1	Oil pan group					
3N2898		1	Oil level gauge group					
LUBE SYSTEM								
2P1784		1	Engine oil pump group					
2P6105		1	Engine oil lines group					
2P6855		1	Oil filler group					
1P4244		1	Breather group					
COOLING SYSTEM								
7N5909		1	Water pump group					
4W6157		1	Water lines group					
7W1324		1	Filter base cooler group					
6N8492		1	Water lines group (aftercooler)					
INTAKE & EXHAUST SYSTEM								
1W8483		1	Exhaust manifold group					
2W1576		1	Turbocharger group					
6N9317		1	Air lines group					
6N5960		1	Water aftercooler group					
4W6957		1	Turbo oil lines group					

Item	C.P.N.	Qty	DRIVERS	DIVERS	ANTRIEB	GRUPPO MOTORE	ACCIONAMIENTO	أجهزة التدوير :
UPPER STRUCTURE								
8N0246		1	Cylinder head group					
7N9536		1	(Cylinder head) fastener group					
7N8026		1	Valve mechanism group					
8N3286		1	Engine lifting group					
8N4745		1	Cover group					
FRONT STRUCTURE								
8N0303		1	Front housing group					
2P6528		1	Front housing cover group *					
1W3802		1	Front housing fastener group					
1W4563		1	Front gear group *					
7N0744		1	Engine support group					
1W4410		1	Damper group					
3N2884		1	Crankshaft pulley group					
3N2886		1	Seal adaptor group					
* SEE TACHO DRIVE CUSTOMISING SECTION								
FUEL SYSTEM								
2W1011		1	Secondary filter group					
2W1508		1	Fuel injection lines group					
2W1605		1	Drain lines group					
4W1876		1	Fuel priming pump group					
2W6275		1	Governor and fuel injection pump group					
2W4160		1	Fuel transfer and mounting group					
MISCELLANEOUS								
8N9033		1	Coolant outlet plug					
CUSTOMIZING								
3N3392		1	Fumes disposal group					
2W0693		1	Service meter group					
2W1299		1	Regulator housing group					
1W8497		1	Water lines group					
1W6401		1	Fuel gauge group					
6N6093		1	Exhaust elbow group					
8N1963		1	Front fastener					

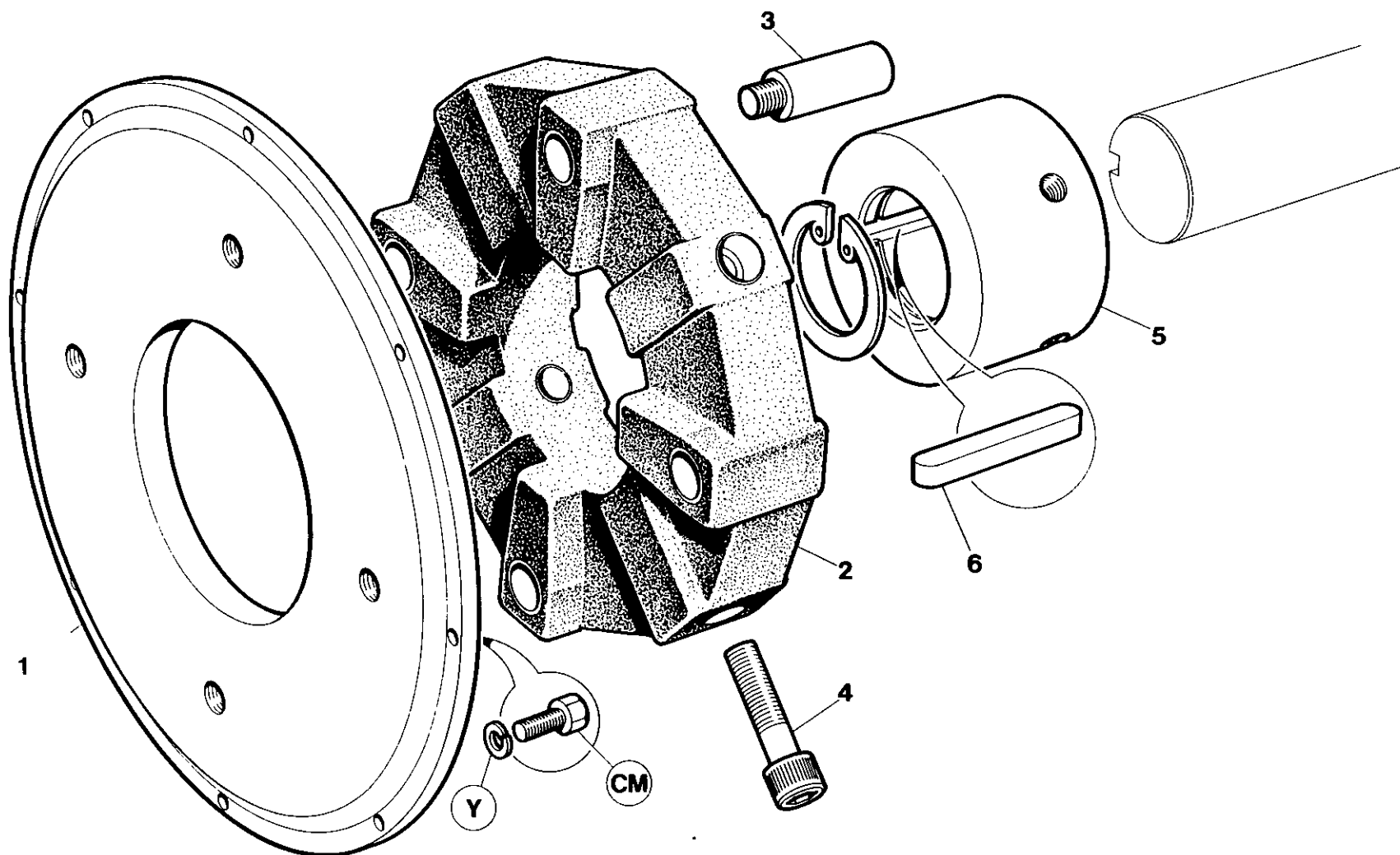
Item	C.P.N.	Qty	DRIVERS	DIVERS	ANTRIEB	GRUPPO MOTORE	ACCIONAMIENTO	أجهزة التدوير
	1W5374	1	Fuel priming pump group					
	2W7699	1	Manual shut off					
	1W6901	1	Fuel air ratio control					
	Leverton	1	Front tachometer frive arrange- ment as shown on Leverton G.A. No. B40716. Consisting of :-					
	1W2316	1	Adaptor assembly					
	OS1615	3	Bolt					
	9S211	3	Clamp					
	4N538	1	Coupling					
	EN1417	1	Modified bolt to Drg. No. D70331 Bolt Part No. (Cat) 7N2602 (Part of 1W4563 front timing gear group).					
	EN1614	1	Drive tang to Drg. No D70330					
	EN1029	1	Adaptor to Drg. No. B40715 welded to 2P8701 cover (part of 2P6528 front housing cover group)					
			LITERATURE					
	B40716	1	G.A. front tacho drive for 3304 and 3306 engines.					
	B40715	1	Adaptor and assembly to cover d drawing					
	D70330	1	Drive tang drawing					
	D70331	1	Bolt modification drawing above drawing available on request.					
	HEBP1451	1	Engine parts book Supplied with each engine					
	SEBU5779	1	Operation guide					



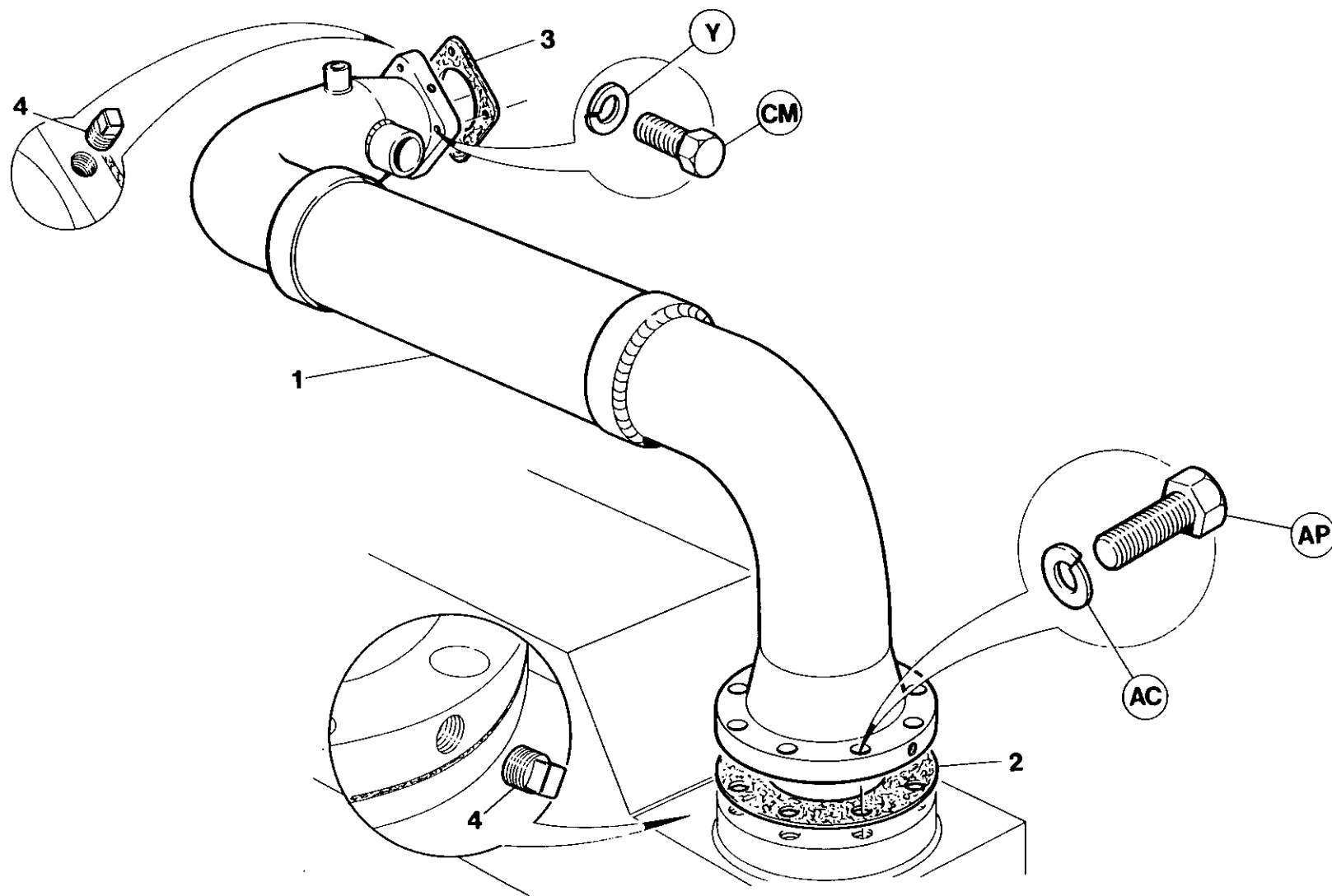
Item	C.P.N.	Qty	DRIVERS	DIVERS	ANTRIEB	GRUPPO MOTORE	ACCIONAMIENTO	أجهزة التدوير :
1	92517713	1	Front Bracket					
2	92519917	1	Mounting Bar					
3	92062157	2	Mount					
4	35273937	4	Snubber Washer					



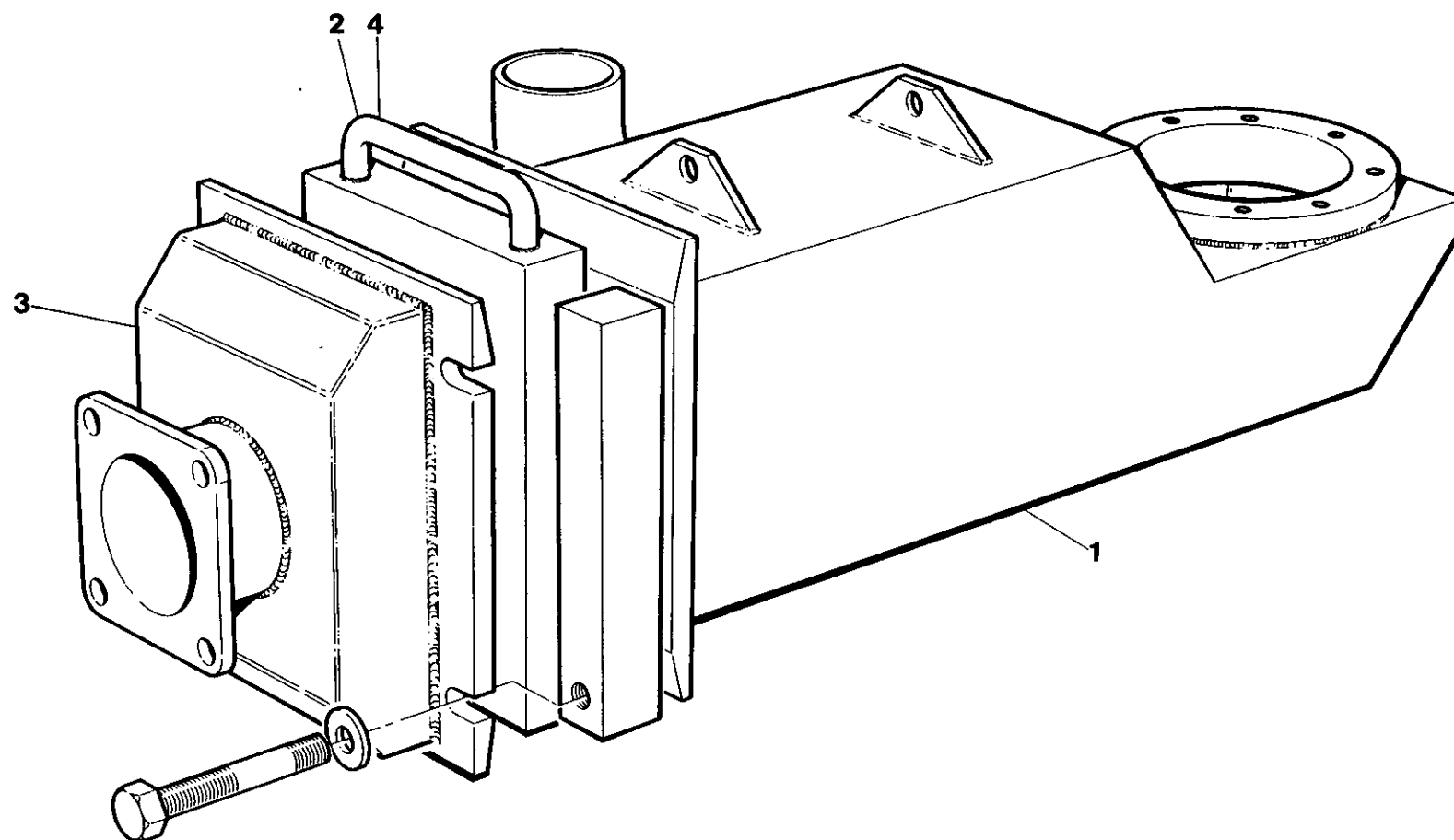
Item	C.P.N.	Qty	DRIVERS	DIVERS	ANTRIEB	GRUPPO MOTORE	ACCIONAMIENTO	أجهزة التدوير :
1	92028372	2	Mount					
2	92062157	2	Mount					
3	35273937	2	Snubber Washer					
4	35101468	2	Snubber Washer					
5	92549187	1	Support Plate					
6	92549286	1	Strut					
7	92549294	1	Strut					



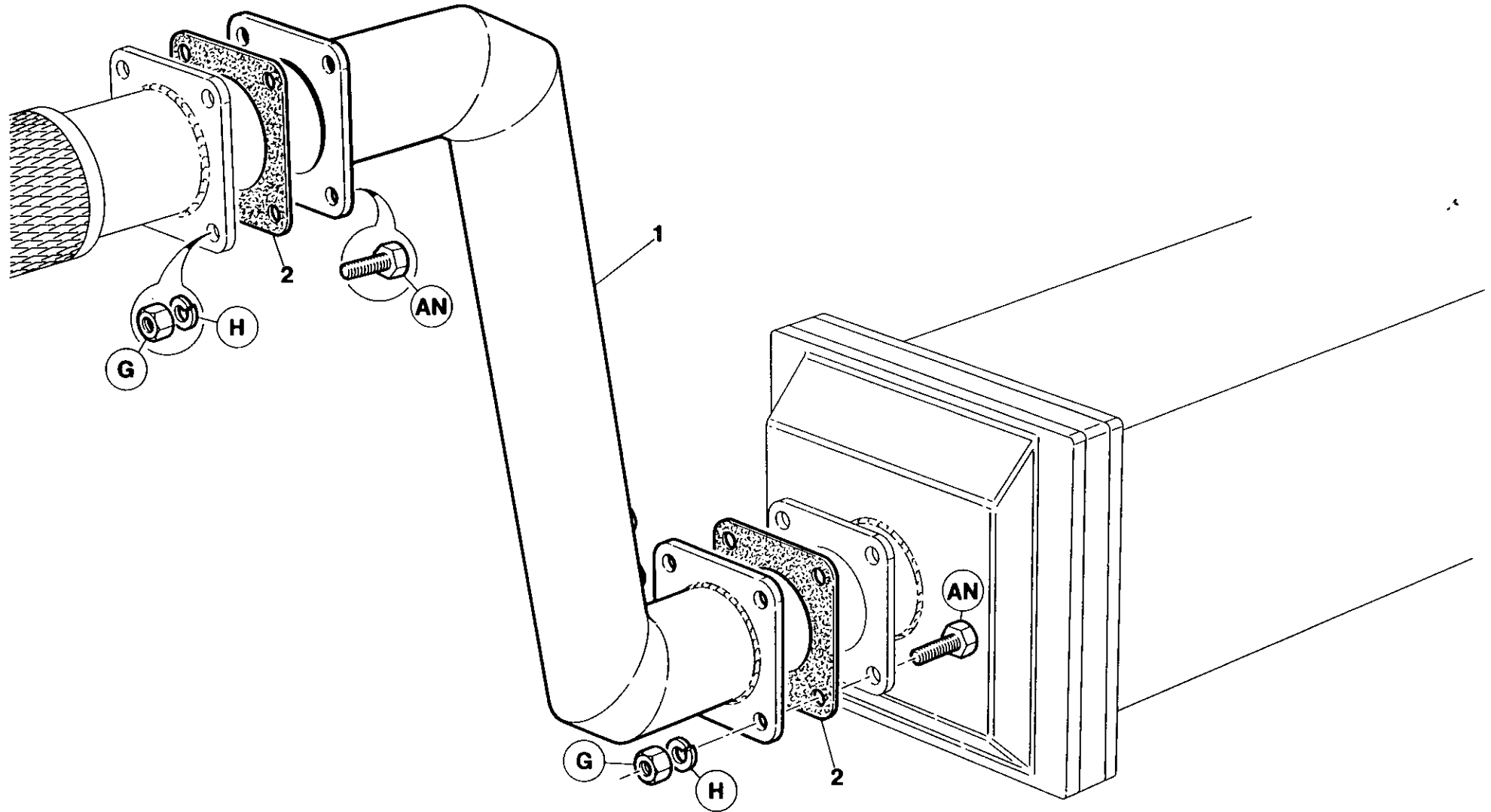
Item	C.P.N.	Qty	DRIVERS	DIVERS	ANTRIEB	GRUPPO MOTORE	ACCIONAMIENTO	أجهزة التدوير :
(1-5)	92066208	1	Coupling Assy					
1	92034438	1	Drive Plate					
(2-5)	92677715	1	Element Assy					
2	92041441	1	Element					
3	92041458	4	Bolt					
4	92041466	4	Bolt					
5	92034446	1	Hub					
6	95264560	1	Key					



Item	C.P.N.	Qty	DRIVERS	DIVERS	ANTRIEB	GRUPPO MOTORE	ACCIONAMIENTO	اجهزة التدوير :
1	92544345	1	Pipe					
2	92546407	1	Gasket					
3	92546423	1	Gasket					
4	92354653	2	Plug					

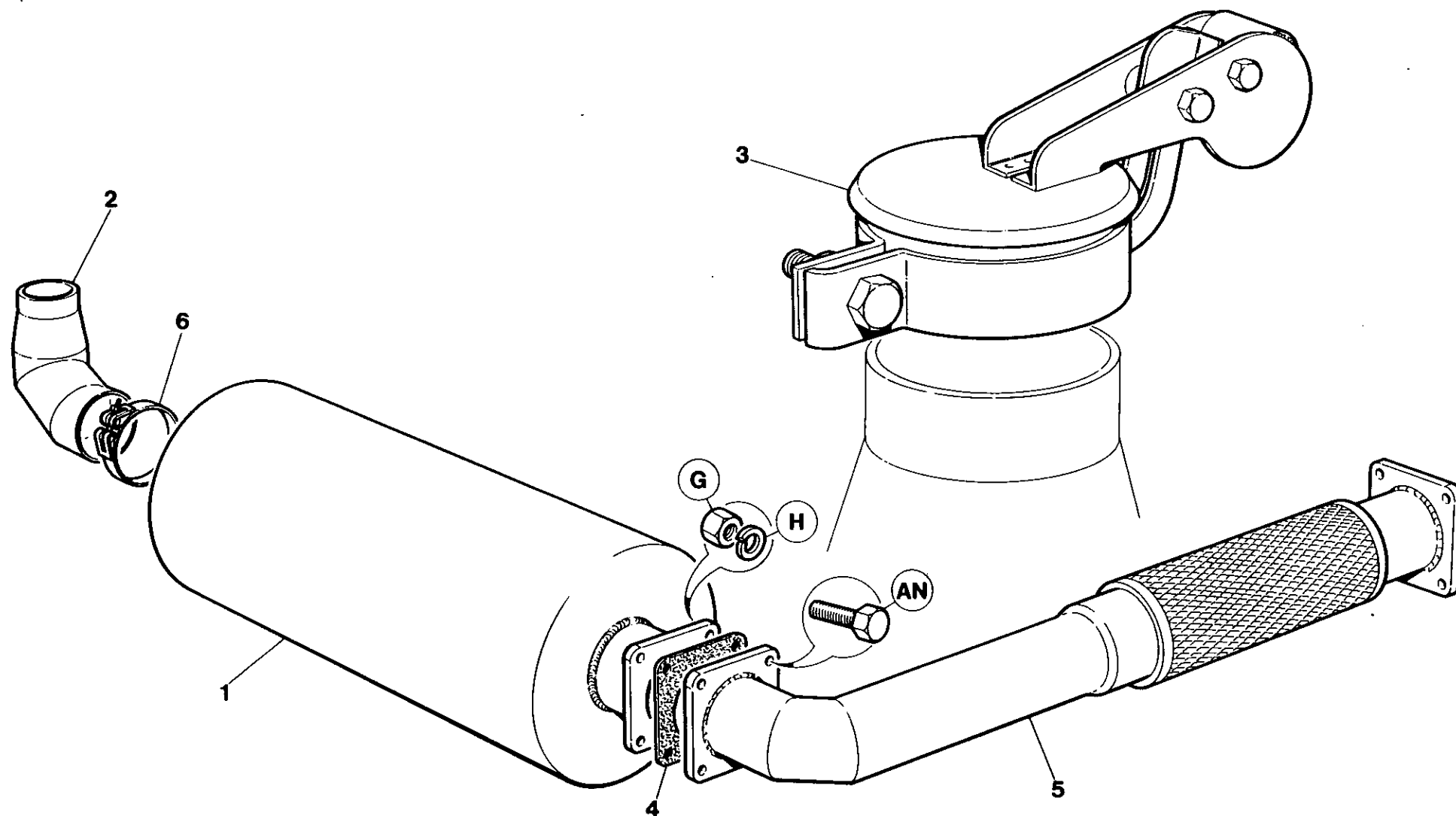


Item	C.P.N.	Qty	DRIVERS	DIVERS	ANTRIEB	GRUPPO MOTORE	ACCIONAMIENTO	أجهزة التدوير :
(1-3)	92661933	1	Cooler Assy					
1	92544329	1	Cooler					
2	92546431	1	Flame Trap					
3	92546456	1	Outlet Box					
4	92657030	1	Dummy Flame Trap					

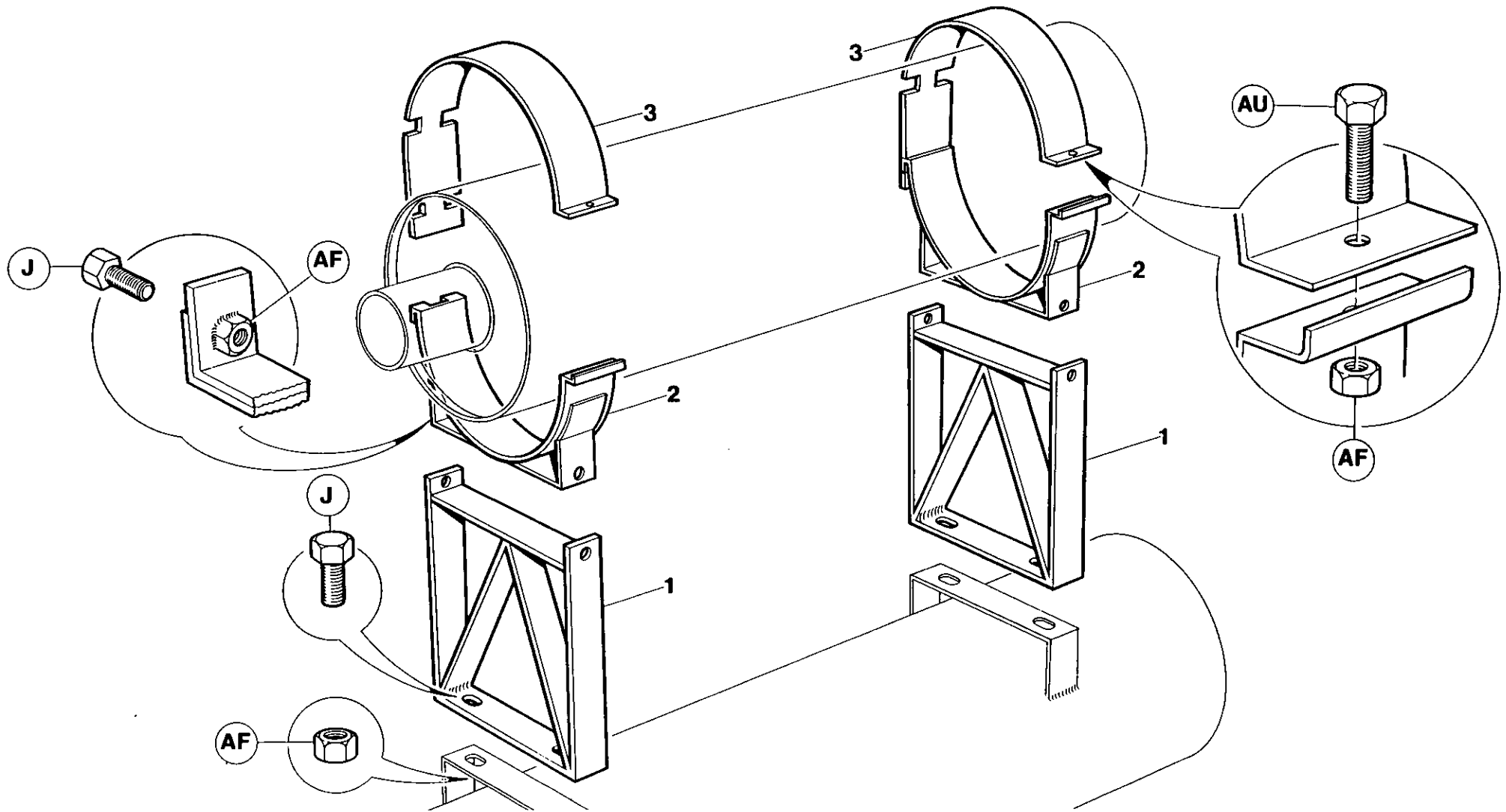


Item	C.P.N.	Qty	DRIVERS	DIVERS	ANTRIEB	GRUPPO MOTORE	ACCIONAMIENTO	اجهزة التدوير :
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1	92677509	1	Pipe					
2	92517846	2	Gasket					

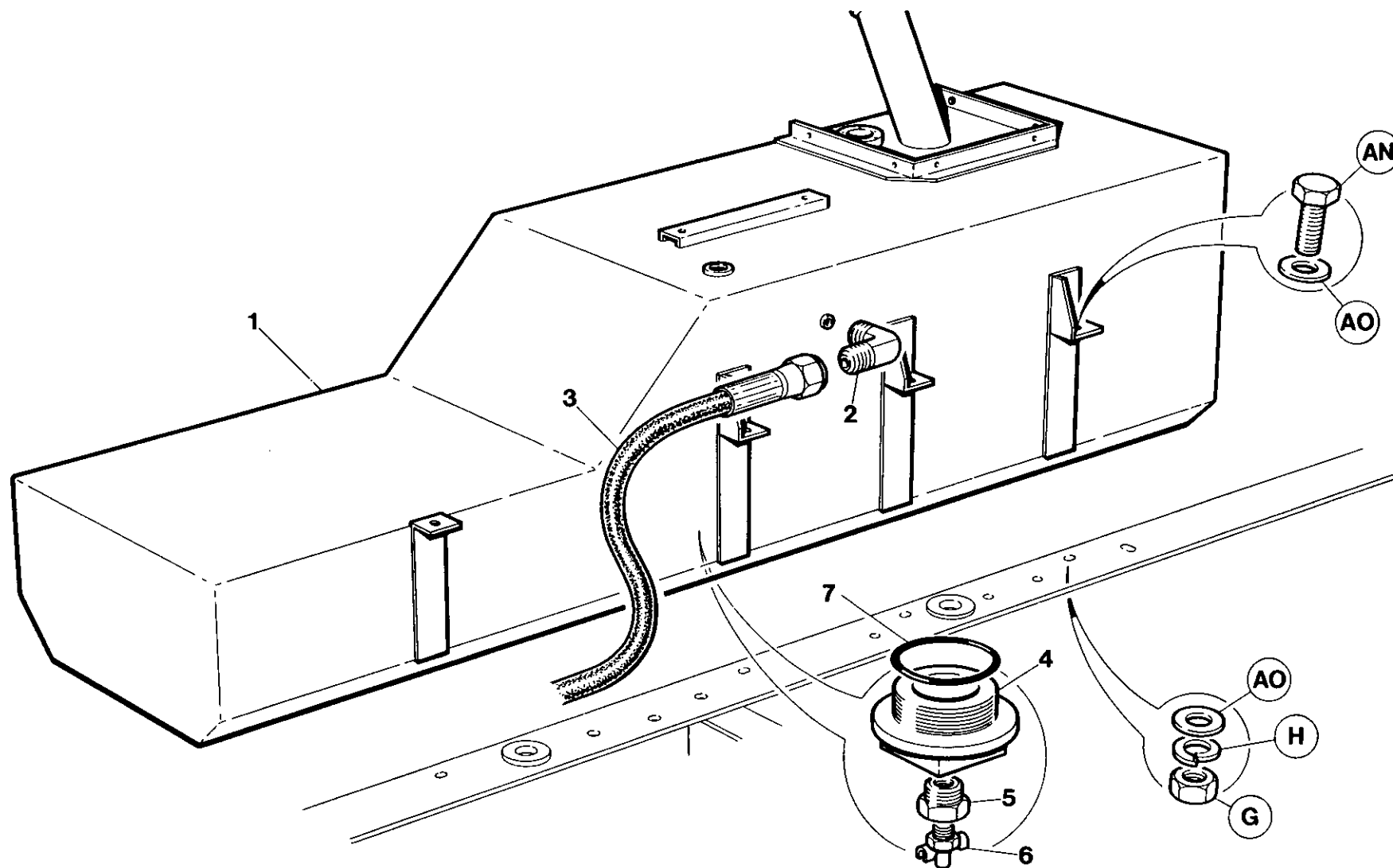


Item	C.P.N.	Qty	DRIVERS	DIVERS	ANTRIEB	GRUPPO MOTORE	ACCIONAMIENTO	أجهزة التدوير :
1	92544360	1	Spark Arrestor					
2	92546621	1	Tailpipe					
3	92252964	1	Raincap					
4	92517846	1	Gasket					
5	92679190	1	Pipe					
6	92548627	1	Clamp					

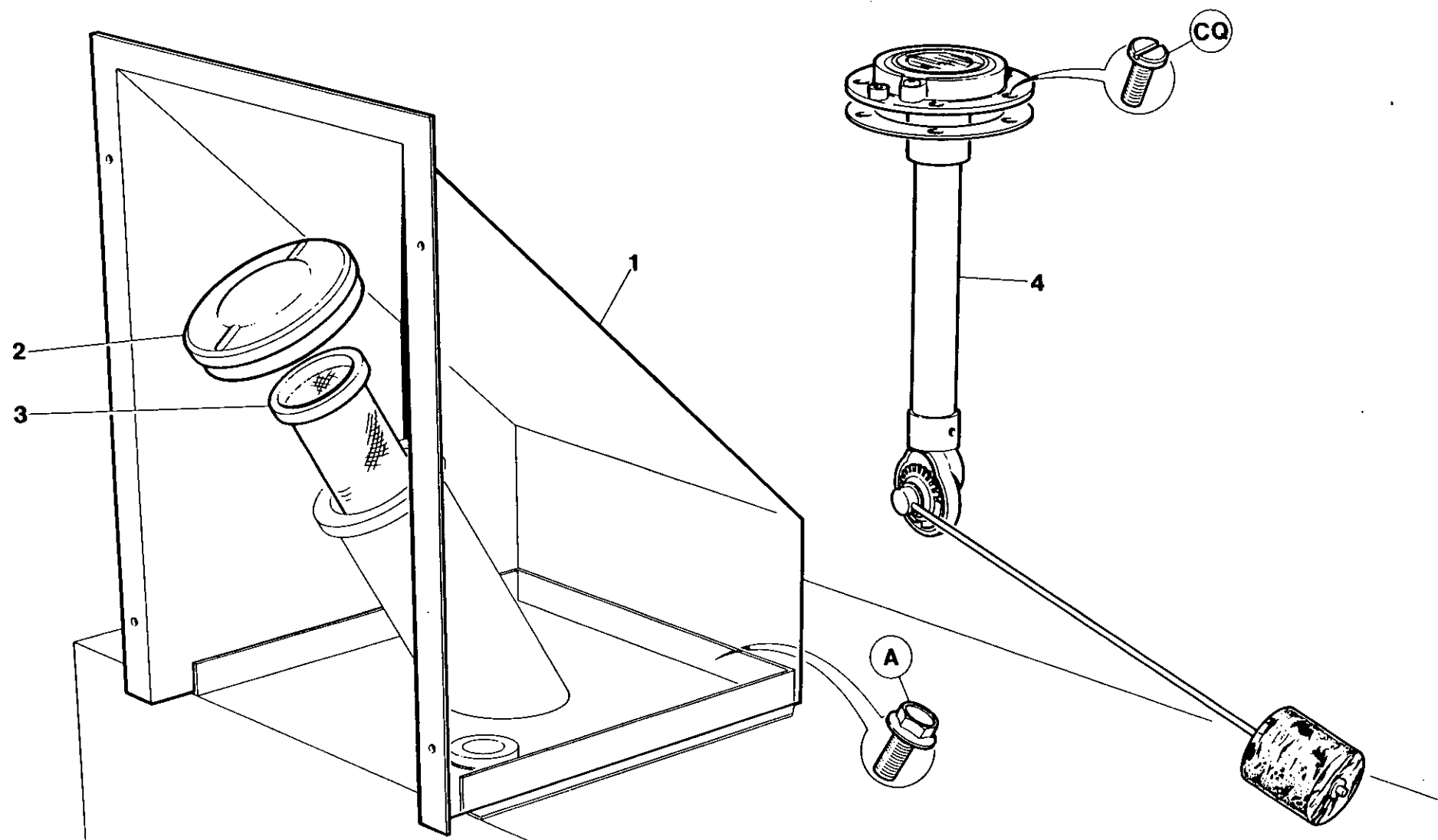


Item	C.P.N.	Qty	DRIVERS	DIVERS	ANTRIEB	GRUPPO MOTORE	ACCIONAMIENTO	أجهزة التدوير :
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1	92549401	2	Support					
2	92055326	2	Mount					
3	92053875	2	Strap					

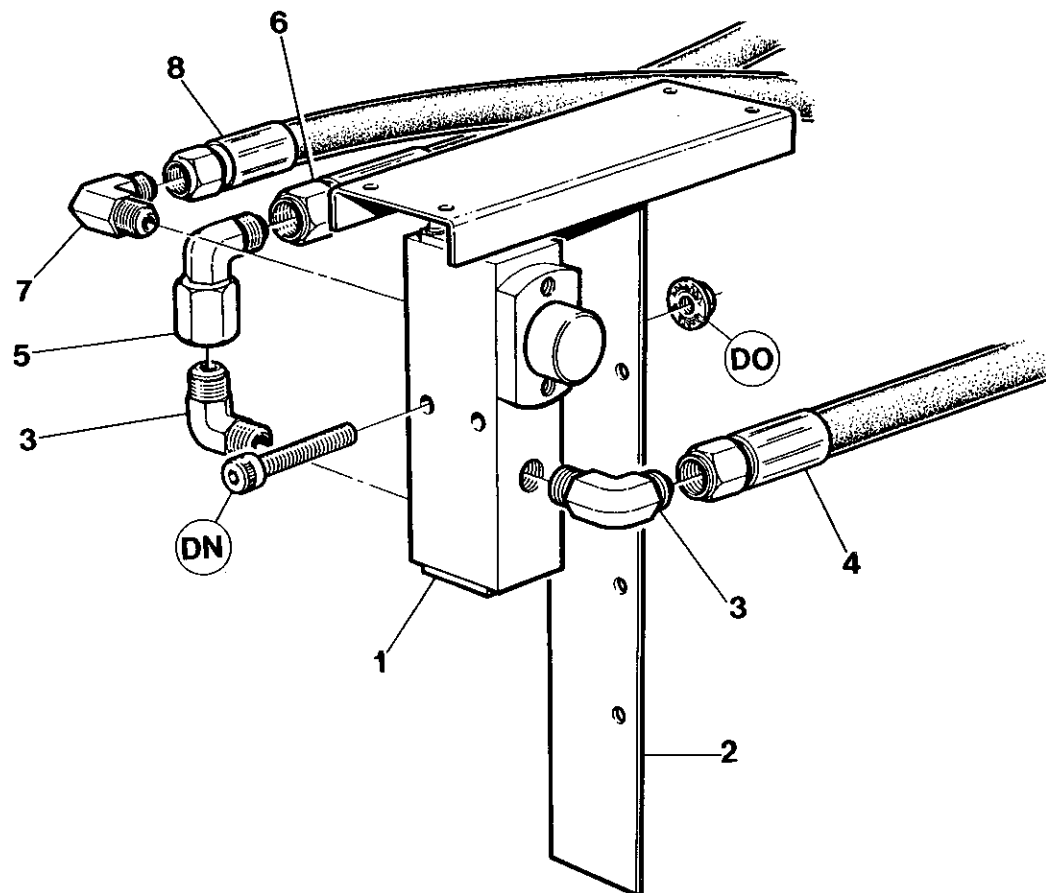


Item	C.P.N.	Qty	DRIVERS	DIVERS	ANTRIEB	GRUPPO MOTORE	ACCIONAMIENTO	اجهزة التدوير
1	92540186	1	Tank					
2	92395458	1	Adaptor					
3	92753573	1	Hose					
4	92549450	1	Plug					
5	92354380	1	Bush					
6	92258706	1	Cock					
7	95358032	1	O-Ring					



Item	C.P.N.	Qty	DRIVERS	DIVERS	ANTRIEB	GRUPPO MOTORE	ACCIONAMIENTO	أجهزة التدوير :
1	92540574	1	Box					
2	92120013	1	Cap					
3	92043058	1	Filter					
4	35804905	1	Gauge					

Item	C.P.N.	Qty	DRIVERS	DIVERS	ANTRIEB	GRUPPO MOTORE	ACCIONAMIENTO	أجهزة التدوير :
1	92547793	1	Water Trap					
2	92477207	1	Elbow					
3	92549658	1	Hose					
4	92395540	1	Elbow					
5	92395557	1	Elbow					
6	92548882	1	Hose					
7	35288166	1	Connector					
8	92069038	1	Valve					



Item	C.P.N.	Qty	DRIVERS	DIVERS	ANTRIEB	GRUPPO MOTORE	ACCIONAMIENTO	أجهزة التدوير :
1	92546779	1	Fuel Shut-Off Valve					
2	92546787	1	Support					
3	92395458	2	Elbow					
4	92690577	1	Hose					
5	92708437	1	Elbow					
6	92520428	1	Hose					
7	92394261	1	Elbow					
8	92547652	1	Hose					

AIR END

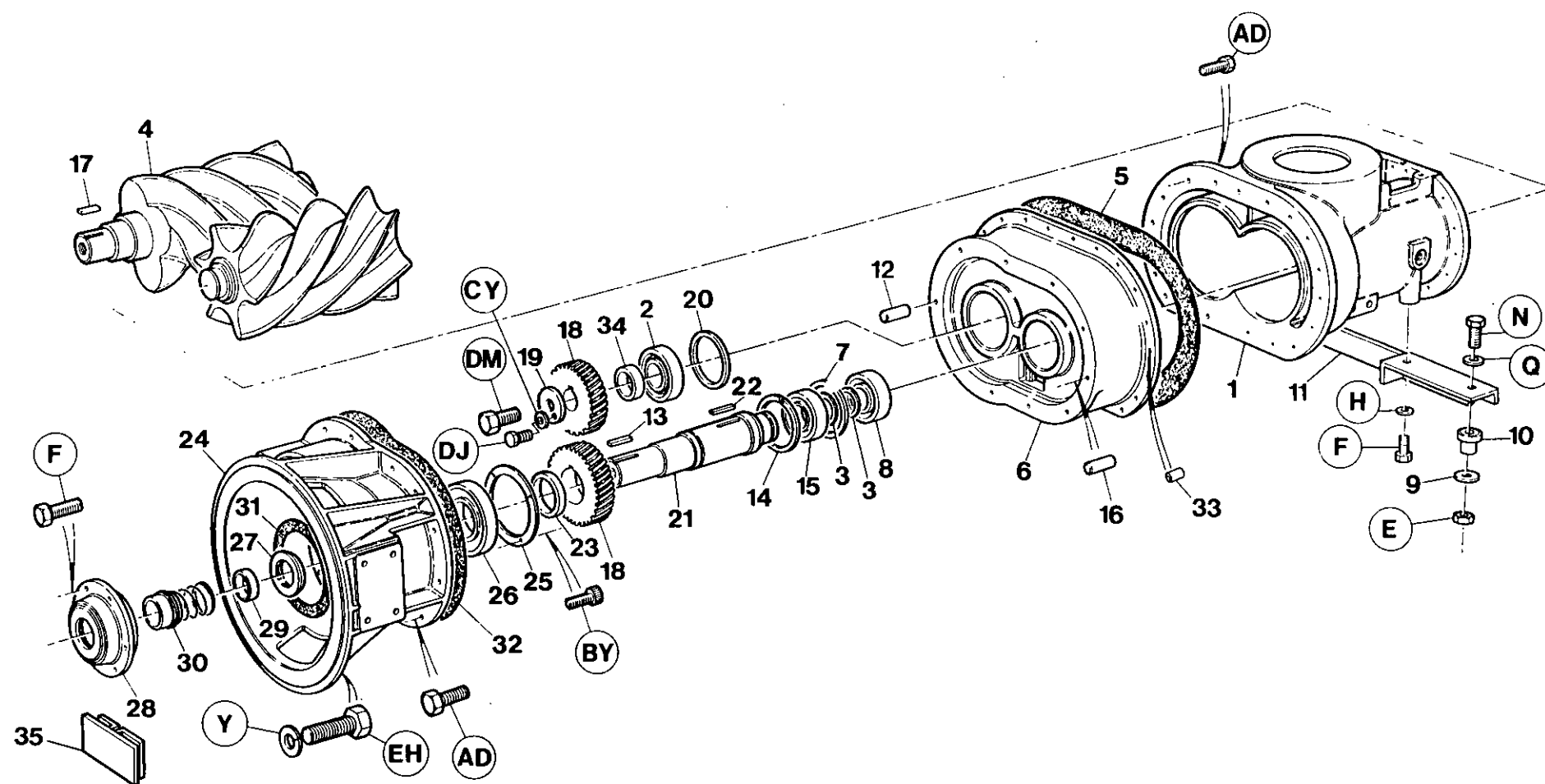
COMPRESSEUR

VERDICHTERTEIL

GRUPPO
COMPRESSORE

COMPRESOR

طرف تفريغ الهواء :



7.2.0

Rev.1 10/88

INGERSOLL-RAND

Item	C.P.N.	Qty	AIR END	COMPRESSEUR	VERDICHTERTEIL	GRUPPO COMPRESSORE	COMPRESOR	طرف تفريغ الهواء :
1	92548429	1	Housing					
2	35313350	1	Bearing					
3	95096806	2	Retaining Ring					
4	39141742	1	Rotor Set					
5	35597723	1	Gasket					
6	92548437	1	Housing					
7	35262963	1	Spacer					
8	35313568	1	Bearing					
9	35273937	2	Washer					
10	92062157	2	Mount					
11	92067339	1	Mount					
12	35290881	2	Pin					
13	92707801	1	Key					
14	95223178	2	Retaining Ring					
15	35264977	1	Bearing					
16	95239919	1	Pin					
17	95381091	1	Key					
18	92075498	1	Gear Set					
19	92697804	1	Clamp Plate					
20	95043345	1	Retaining Ring					
21	92756519	1	Shaft					
22	92707793	1	Key					
23	35269232	1	Spacer					
24	92512490	1	Gearcase					
25	35573070	1	Plate					
26	35601517	1	Bearing					
27	35104082	1	Nut					
28	35592757	1	Cover					
29	35337583	1	Spacer					
30	35593508	1	Seal					
31	35210087	1	Gasket					
32	35572494	1	Gasket					
33	92539927	1	Pin					
34	35262955	1	Spacer					
35	92117480	2	Cover					

AIR END

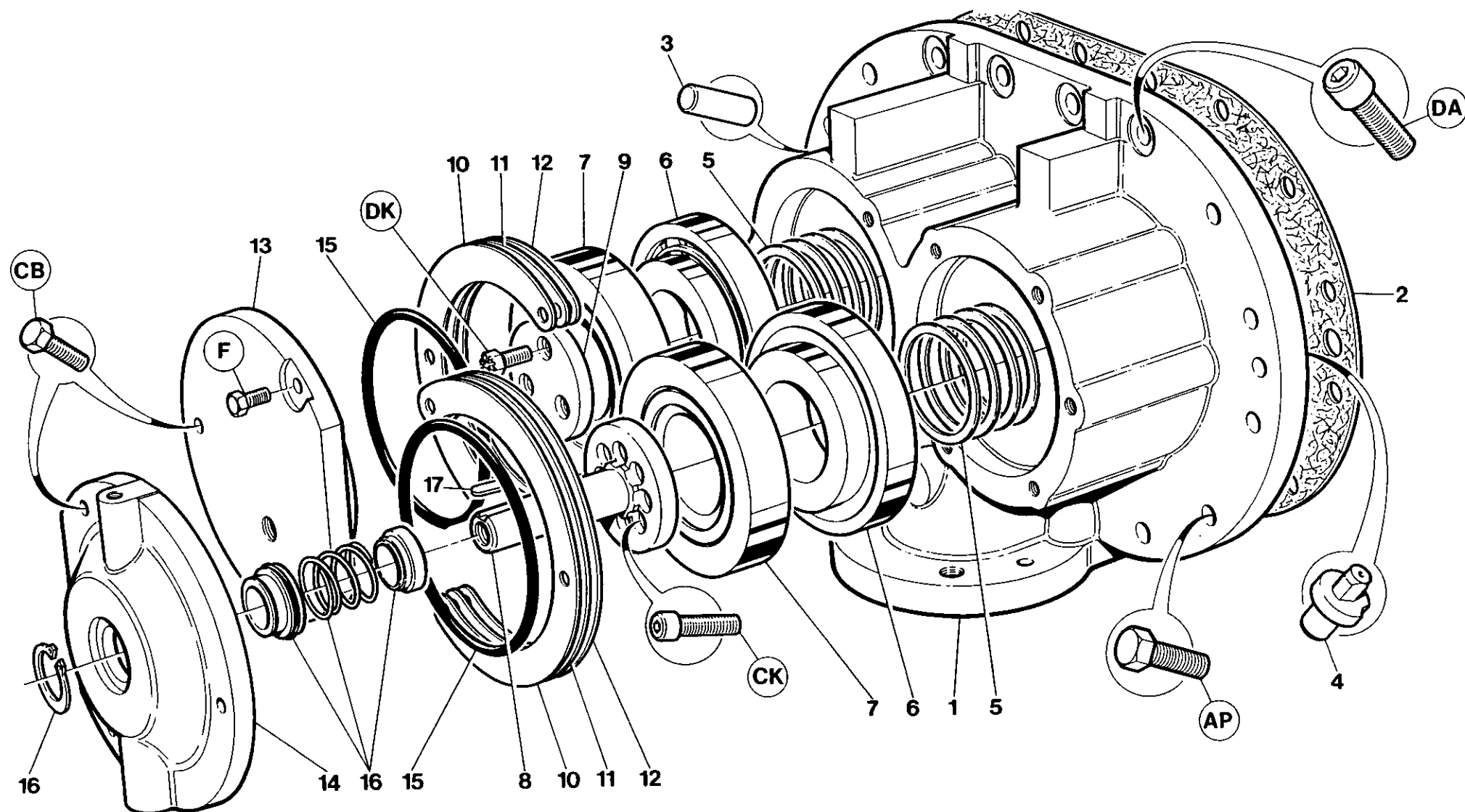
COMPRESSEUR

VERDICHTERTEIL

GRUPPO
COMPRESSORE

COMPRESOR

طرف تفريغ الهواء :

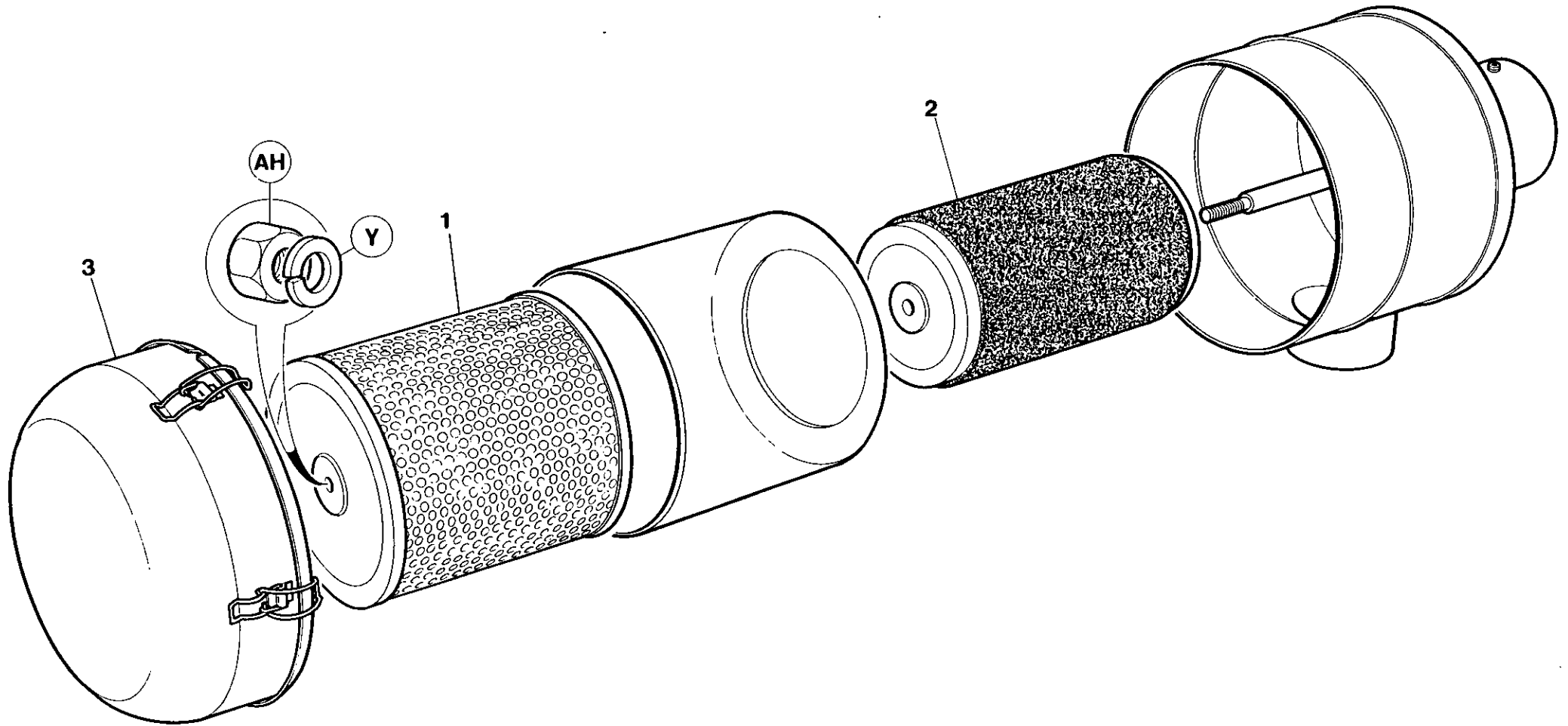


7.2.2

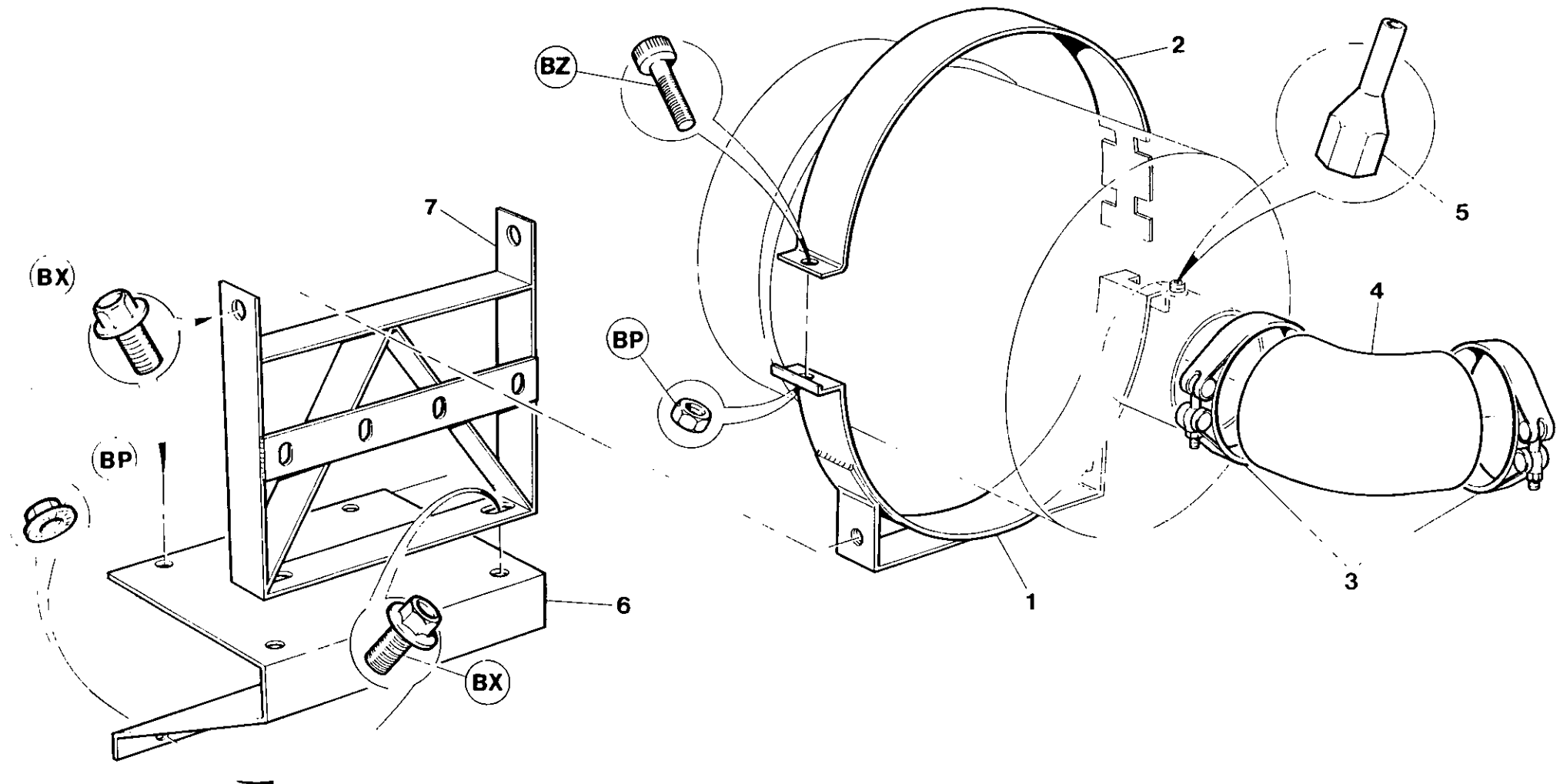
INGERSOLL-RAND

Item	C.P.N.	Qty	AIR END	COMPRESSEUR	VERDICHTERTEIL	GRUPPO COMPRESSORE	COMPRESOR	طراف تفریغ الهواء :
1	92548445	1	Rear Bearing Housing					
2	35594571	1	Gasket					
3	95239927	1	Pin					
4	35290881	1	Pin					
5	35299361	2	Shim Set					
6	39437686	2	Bearing					
7	39438221	2	Bearing					
8	92680354	1	Shaft					
9	39436977	1	Retainer					
10	39437009	4	Shim					
11	39437017	6	Shim					
12	39437025	4	Shim					
13	92675818	1	Cover					
14	92546365	1	Cover					
15	95023388	2	O-Ring					
16	35593482	1	Seal					
17	92702356	1	Key					

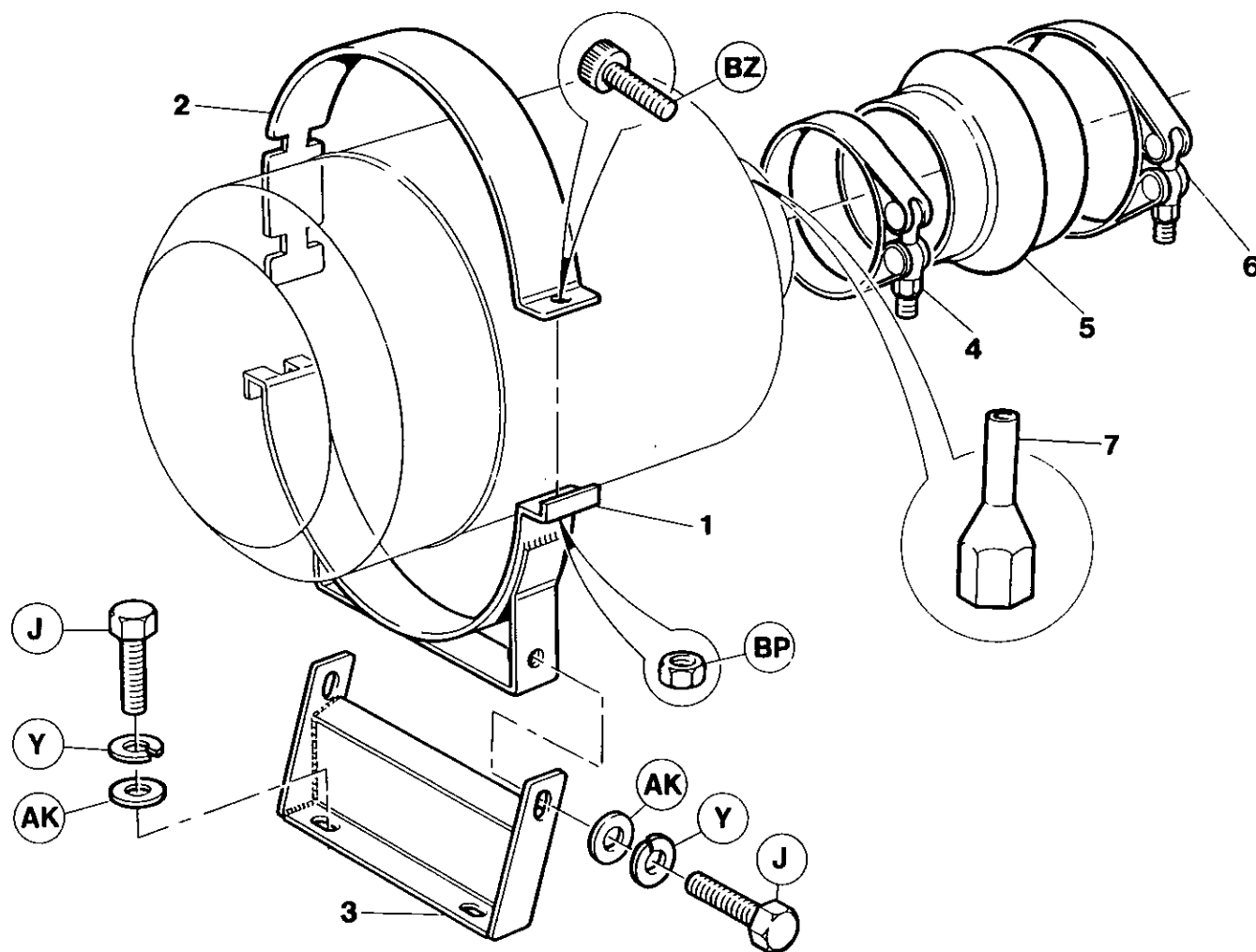
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Item	C.P.N.	Qty	AIR INTAKE SYSTEM	ADMISSION D'AIR	LUFTEINLASS-SYSTEM	SISTEMA DI AMMISSIONE	SISTEMA DE ADMISION DE AIRE	جهاز سحب الهواء :
(1-3)	92055300	2	Air Filter Assy					
1	92035948	1	Element					
2	92035955	1	Safety Element					
3	92035963	1	End Cap					

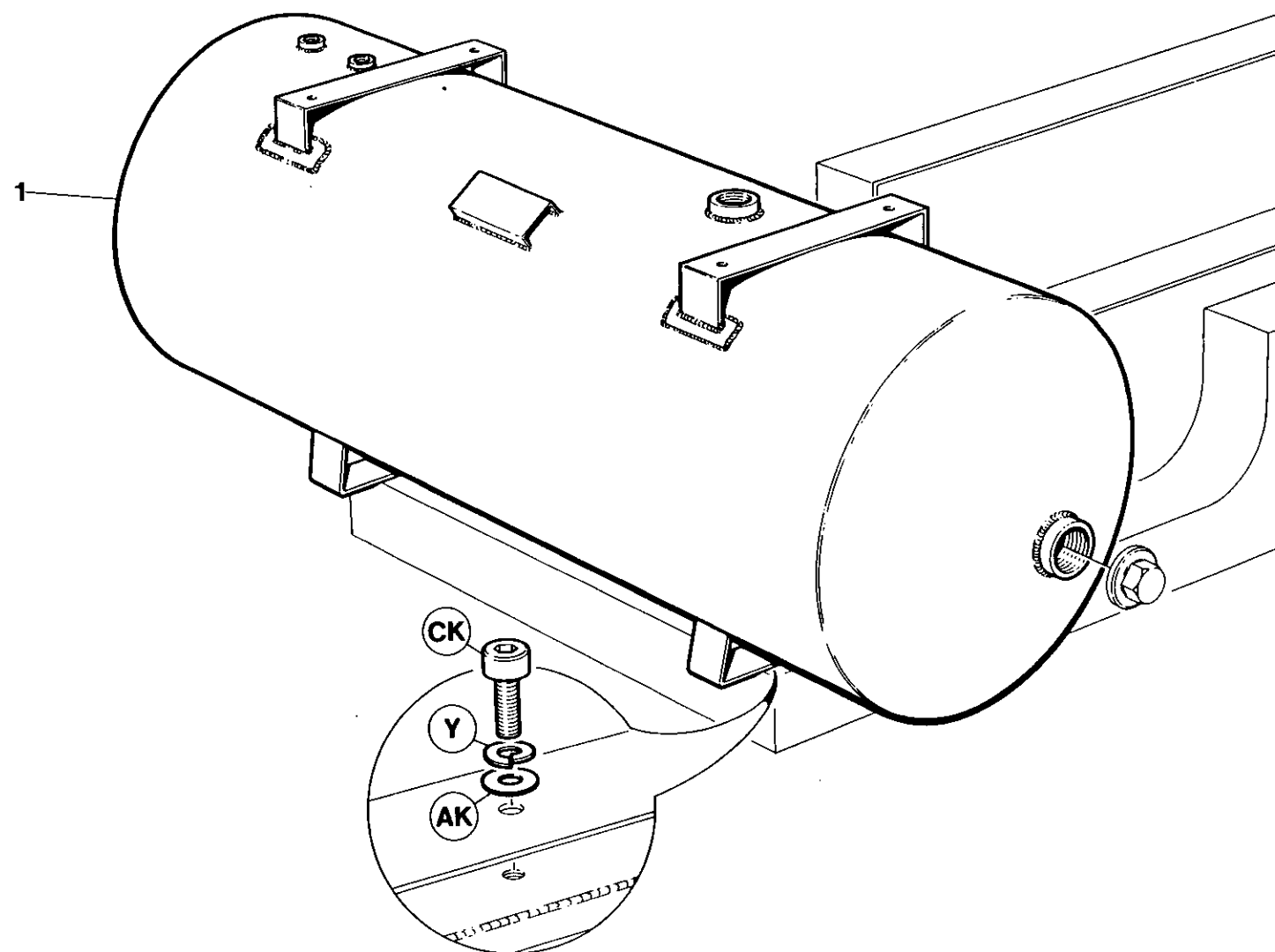


Item	C.P.N.	Qty	AIR INTAKE SYSTEM	ADMISSION D'AIR	LUFTEINLASS-SYSTEM	SISTEMA DI AMMISSIONE	SISTEMA DE ADMISION DE AIRE	جهاز سحب الهواء :
1	92055326	1	Mount					
2	92053875	1	Strap					
3	92472943	2	Clamp					
4	35117845	1	Elbow					
5	92055235	1	Tailpiece					
6	92657188	1	Bracket					
7	92657196	1	Bracket					



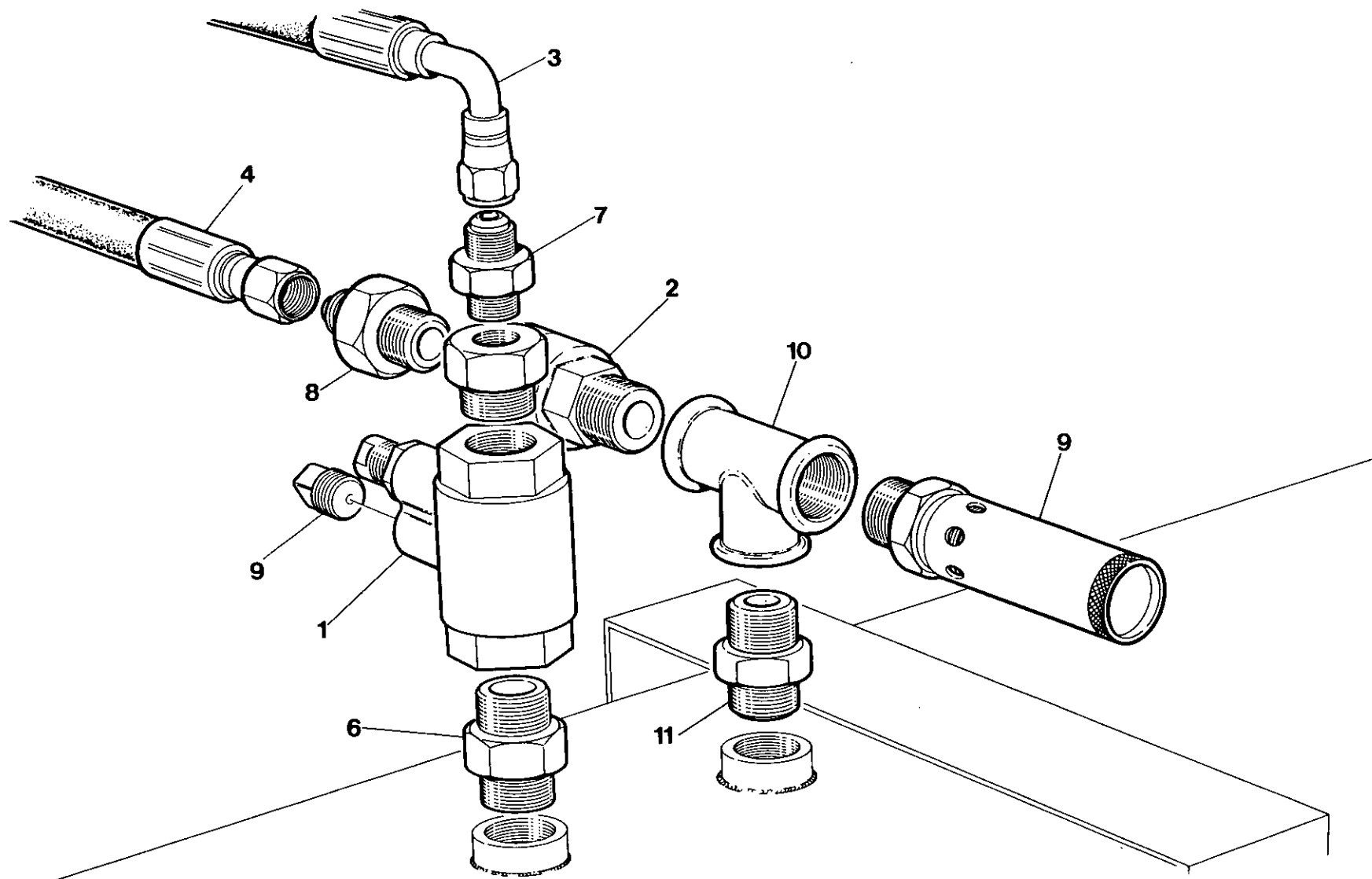
Item	C.P.N.	Qty	AIR INTAKE SYSTEM	ADMISSION D'AIR	LUFTEINLASS-SYSTEM	SISTEMA DI AMMISSIONE	SISTEMA DE ADMISION DE AIRE	جهاز سحب الهواء :
1	92055326	1	Mount					
2	92053875	1	Strap					
3	92058593	1	Support					
4	92472943	1	Clamp					
5	35112333	1	Hose					
6	92472950	1	Clamp					
7	92055235	1	Tailpiece					

Item	C.P.N.	Qty	AIR INTAKE SYSTEM	ADMISSION D'AIR	LUFTEINLASS-SYSTEM	SISTEMA DI AMMISSIONE	SISTEMA DE ADMISION DE AIRE	جهاز سحب الهواء :
1	92544337	1	Inlet Valve					
2	92546498	1	Gasket					
3	92546449	1	Adaptor					
4	92751932	1	Turbo Connection					
5	92677509	1	Gasket					
6	92751957	1	Bracket					
7	92702166	1	Valve					



Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
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1	92657964	1	Receiver Composite					
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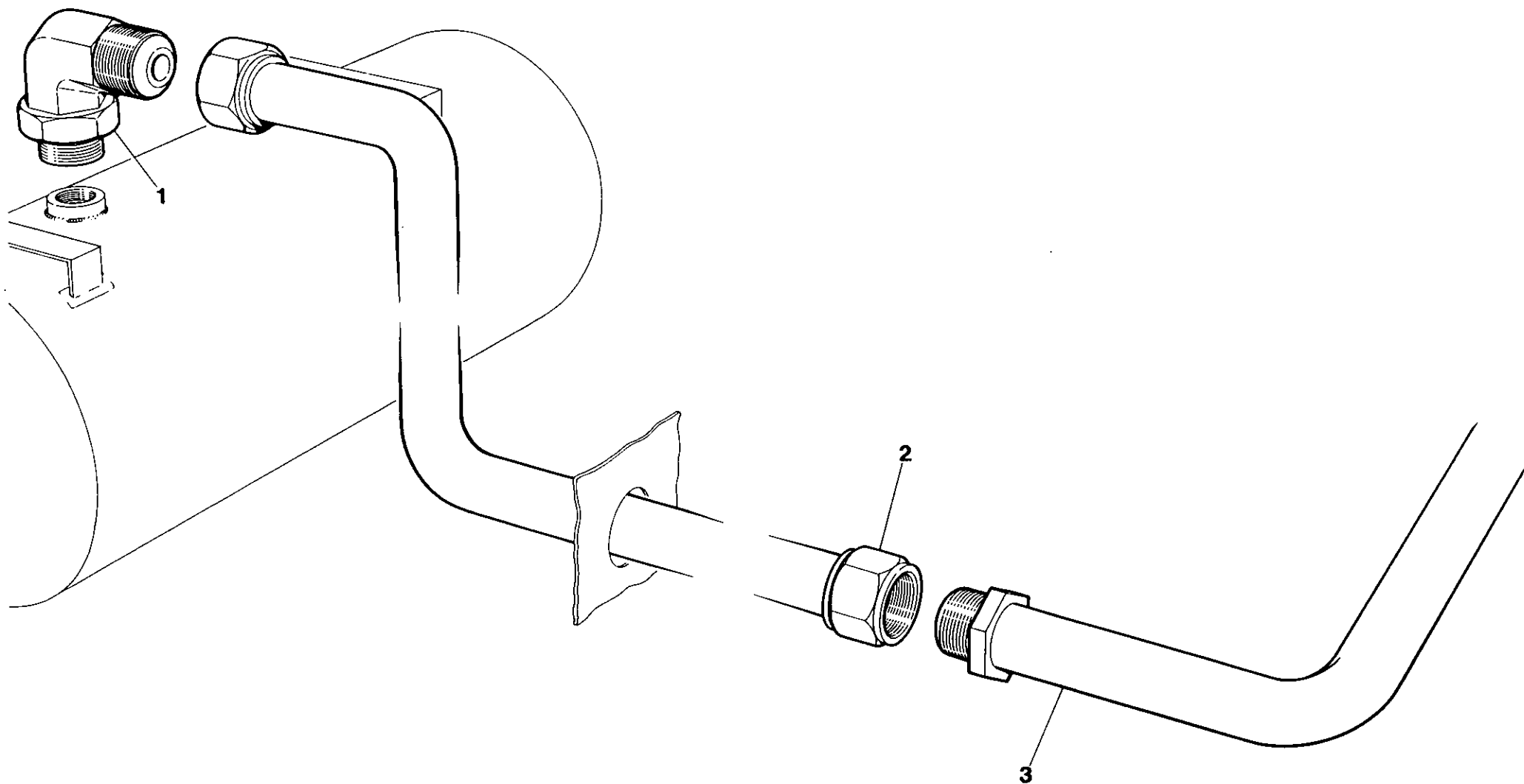
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Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	03604428	1	Check Valve					
2	03457280	1	Check Valve					
3	92546878	1	Hose					
4	92520386	1	Hose					
5	92252733	1	Reducing Bush					
6	92255934	1	Nipple					
7	92492800	1	Connector					
8	92478270	1	Connector					
9	92354661	1	Plug					
10	92517010	1	Valve					
11	92258755	1	Tee					
12	92008382	1	Nipple					

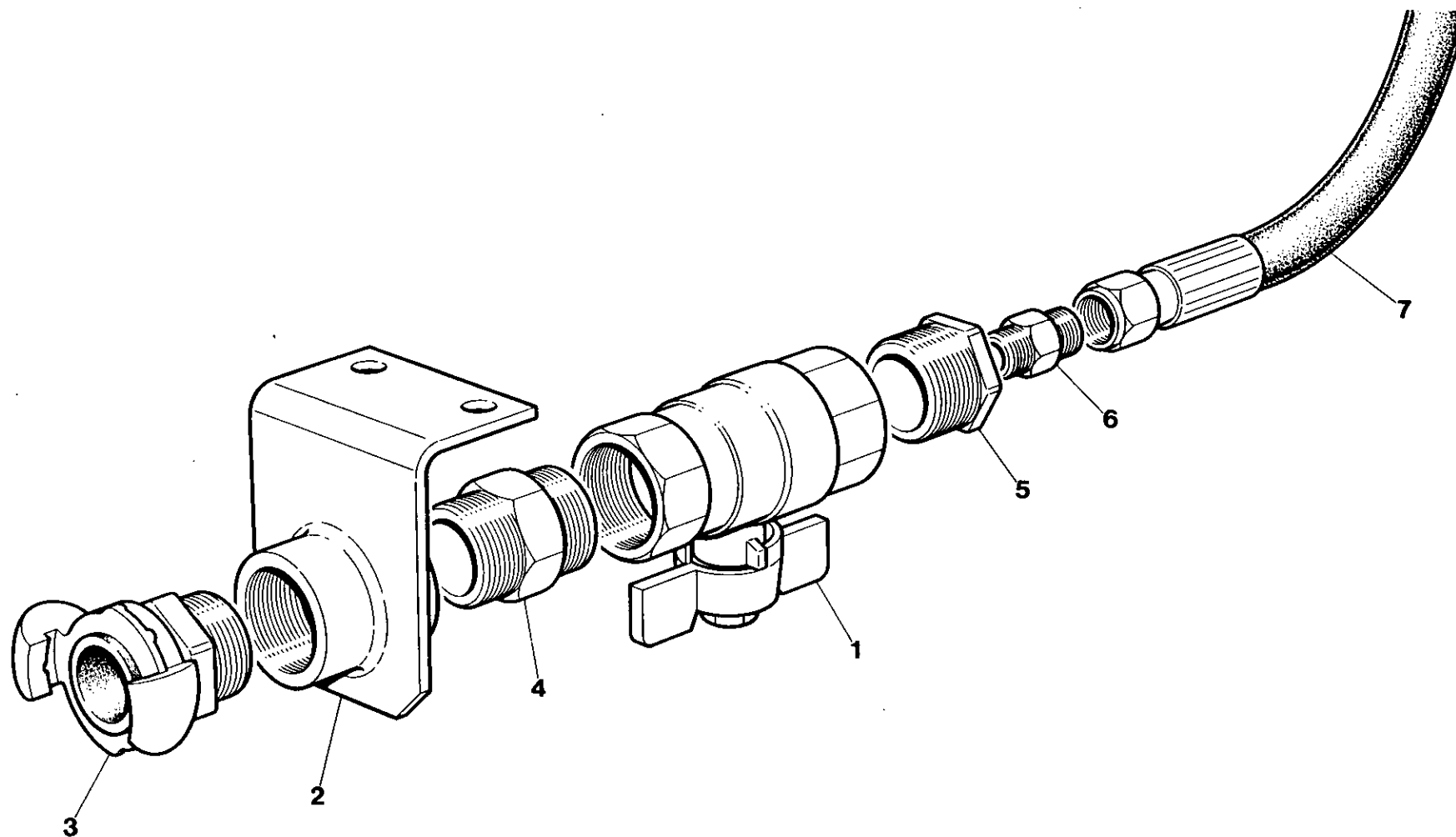
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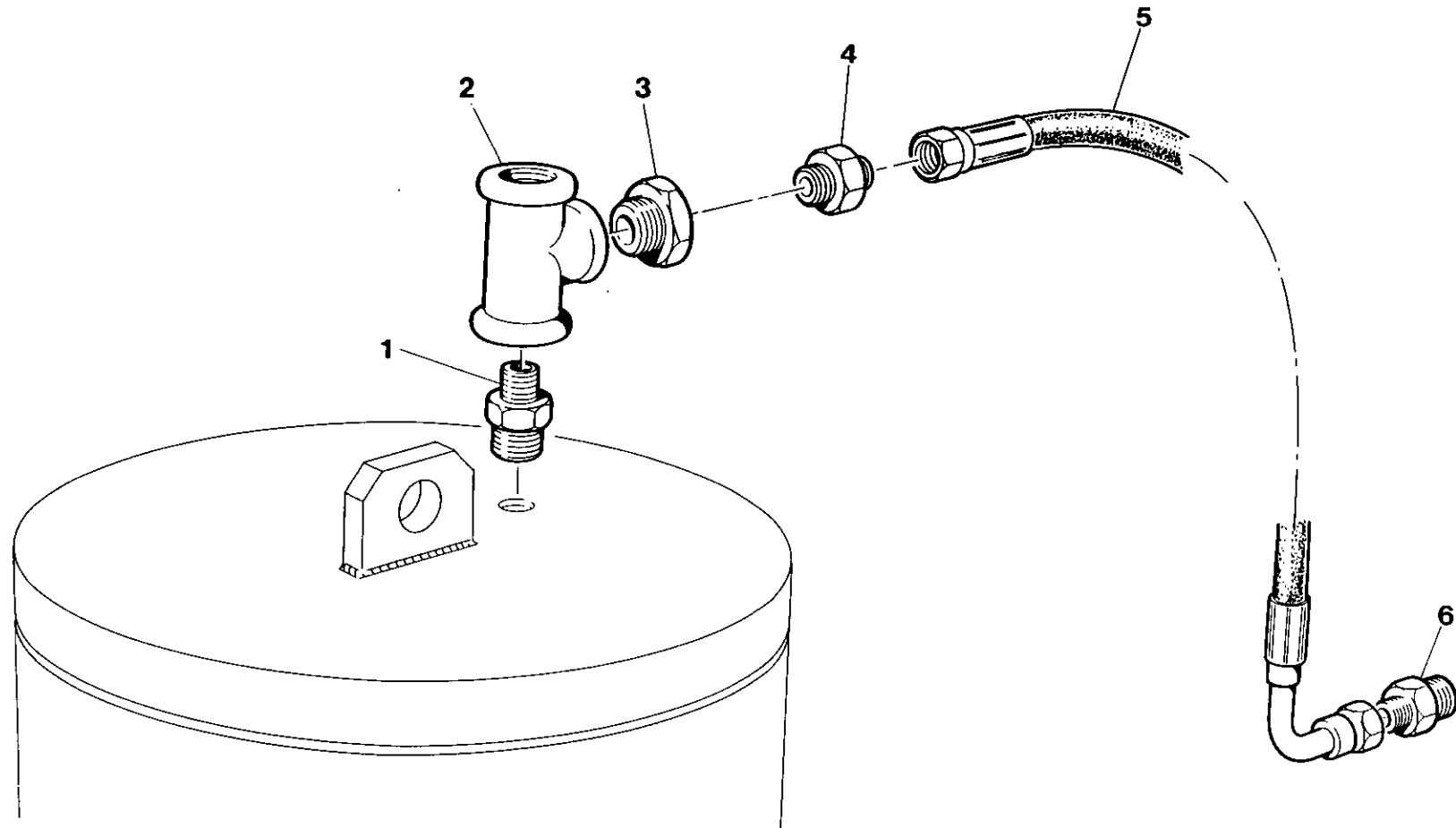
INGERSOLL-RAND



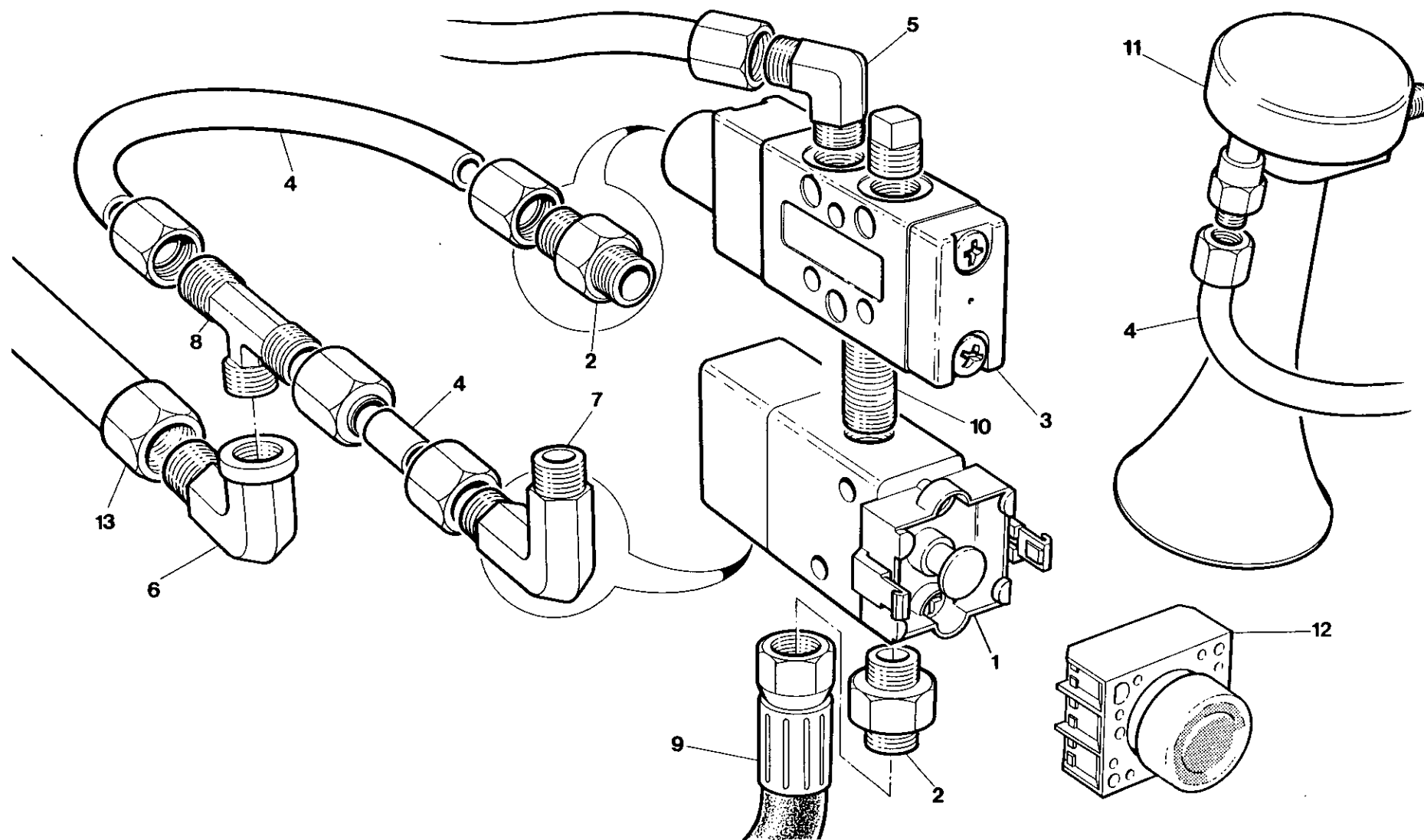
Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	92478221	1	Elbow					
2	92536432	1	Tube					
3	92708478	1	Tube					



Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	92294461	1	Valve					
2	92657048	1	Bracket					
3	92178524	1	Coupling					
4	92255934	1	Nipple					
5	92252741	1	Reducing Bush					
6	92478270	1	Connector					
7	92546878	1	Hose					



Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	92255934	1	Nipple					
2	92258755	1	Tee					
3	92252733	1	Reducing Bush					
4	92492800	1	Connector					
5	92546878	1	Hose					
6	92544246	1	Adaptor					



Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	92681014	1	Push Button Valve					
2	92029651	2	Connector					
3	92547736	1	Pilot Valve					
4	92490358	2m	Tube					
5	92067958	1	Elbow					
6	35301225	1	Elbow					
7	92395433	1	Elbow					
8	92100957	1	Tee					
9	92547652	2	Hose					
10	92512854	1	Nipple					
11	92661867	1	Horn					
12	92686856	1	Button Assy					
13	92698315	1	Tube					

REGULATION

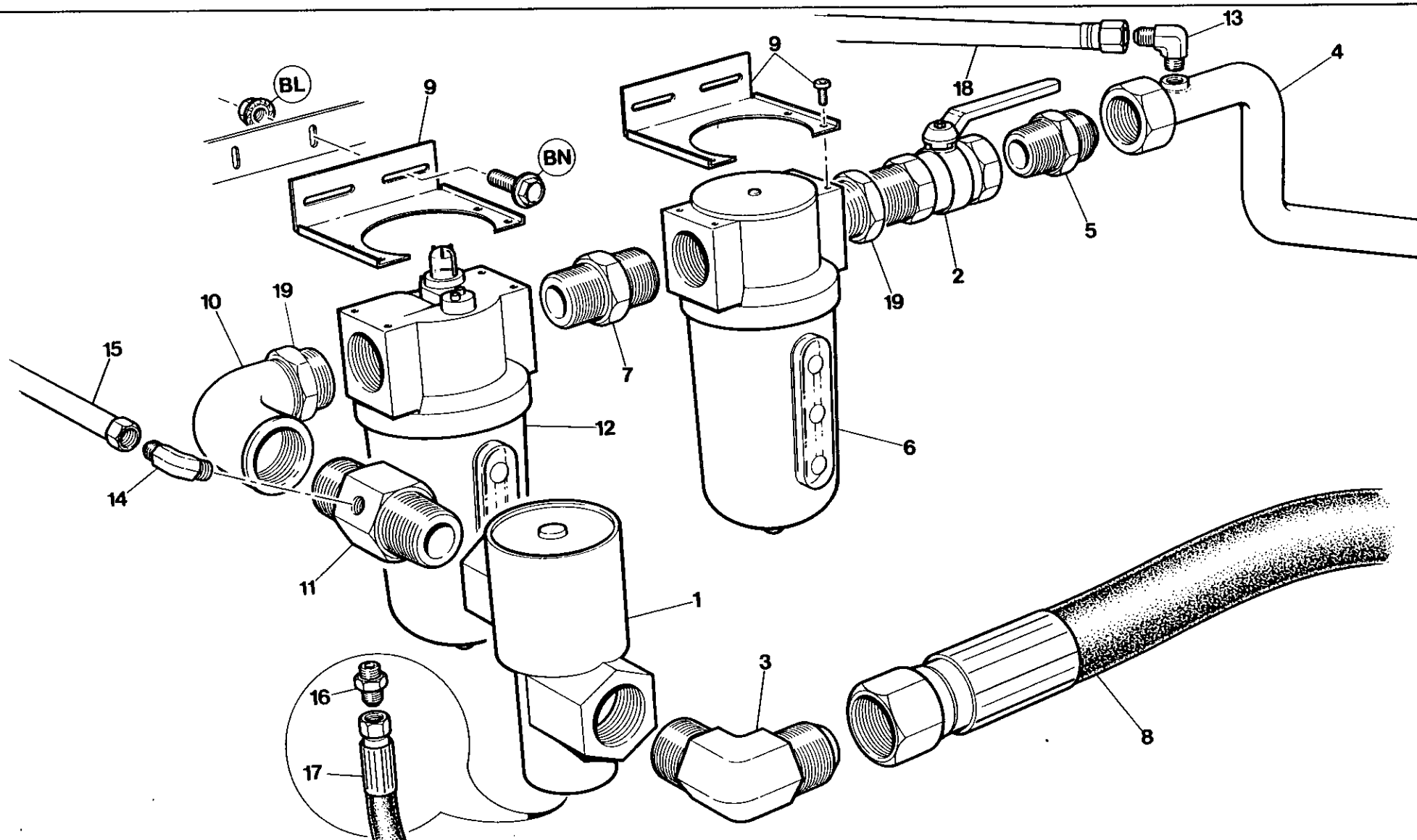
REGULATION

REGELUNG

REGOLAZIONE

REGULACION

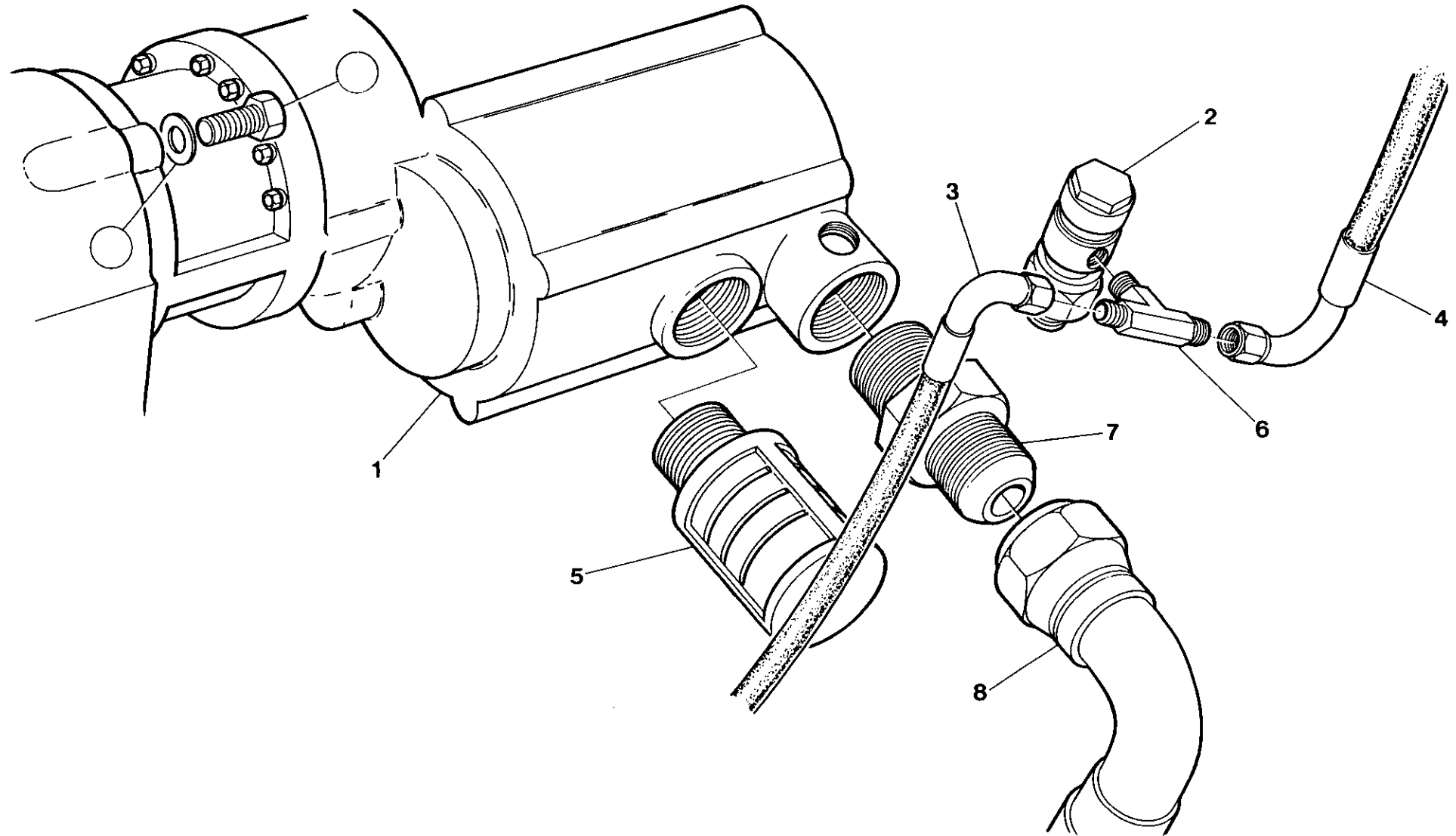
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**7.4.12**

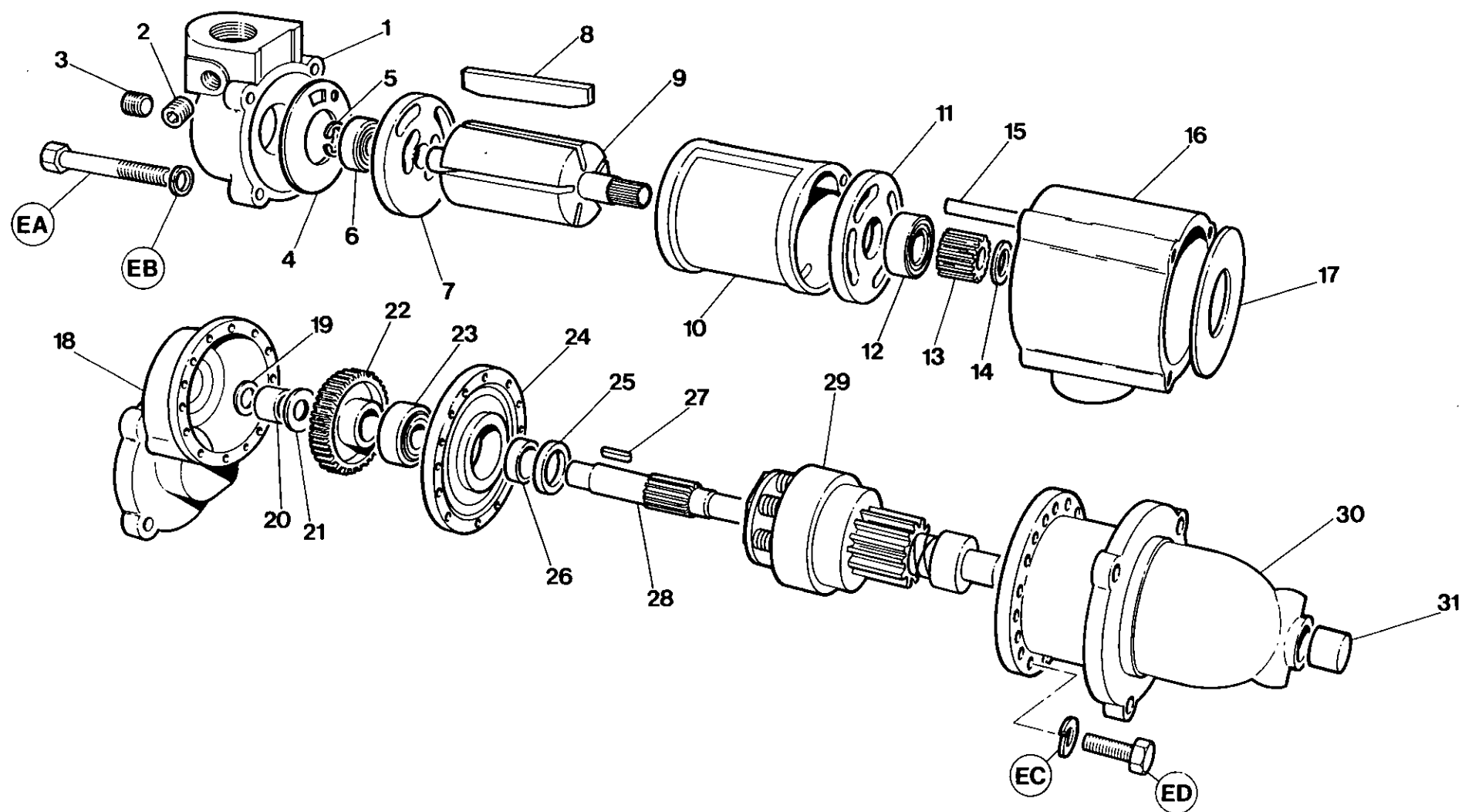
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Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	03691102	1	Relay Valve					
2	92111228	1	Valve					
3	92511344	1	Elbow					
4	92708478	1	Tube					
5	92478262	1	Adaptor					
6	92708486	1	Filter					
7	92185800	1	Adaptor					
8	92708510	1	Hose					
9	92708593	1	Bracket					
10	92253913	1	Elbow					
11	92708502	1	Nipple					
12	92708494	1	Lubricator					
13	92395458	1	Elbow					
14	92394261	1	Elbow					
15	92698307	1	Tube					
16	92478569	1	Adaptor					
17	92520394	1	Hose					
18	92698299	1	Tube					
19	92763283	2	Reducer					



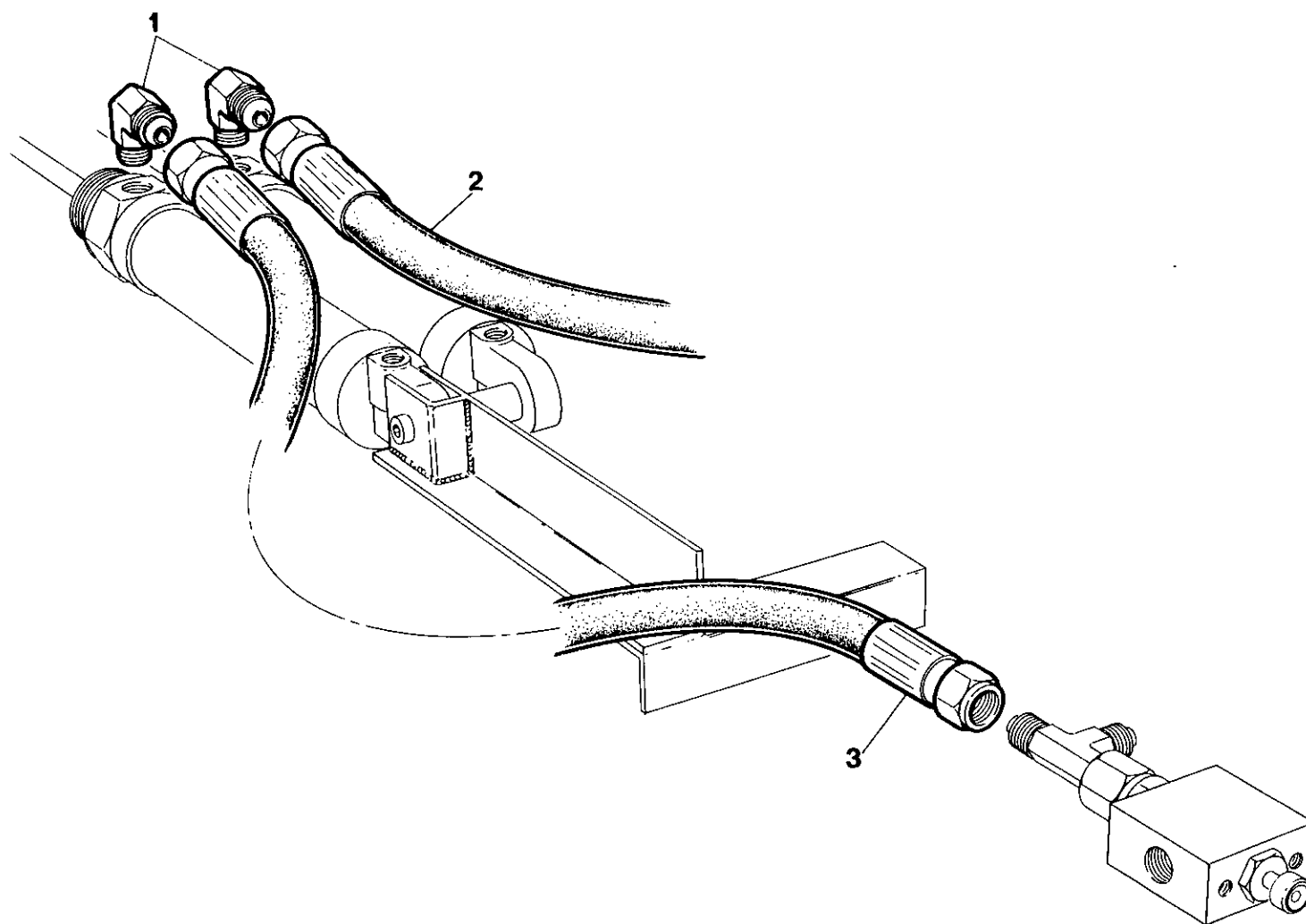
Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	01126648	1	Air Starter Comp.					
2	03604378	1	Lubricator					
3	92753573	1	Hose					
4	92753565	1	Hose					
5	03607504	1	Muffler					
6	92109875	1	Tee					
7	92478379	1	Adaptor					
8	92708510	1	Hose					



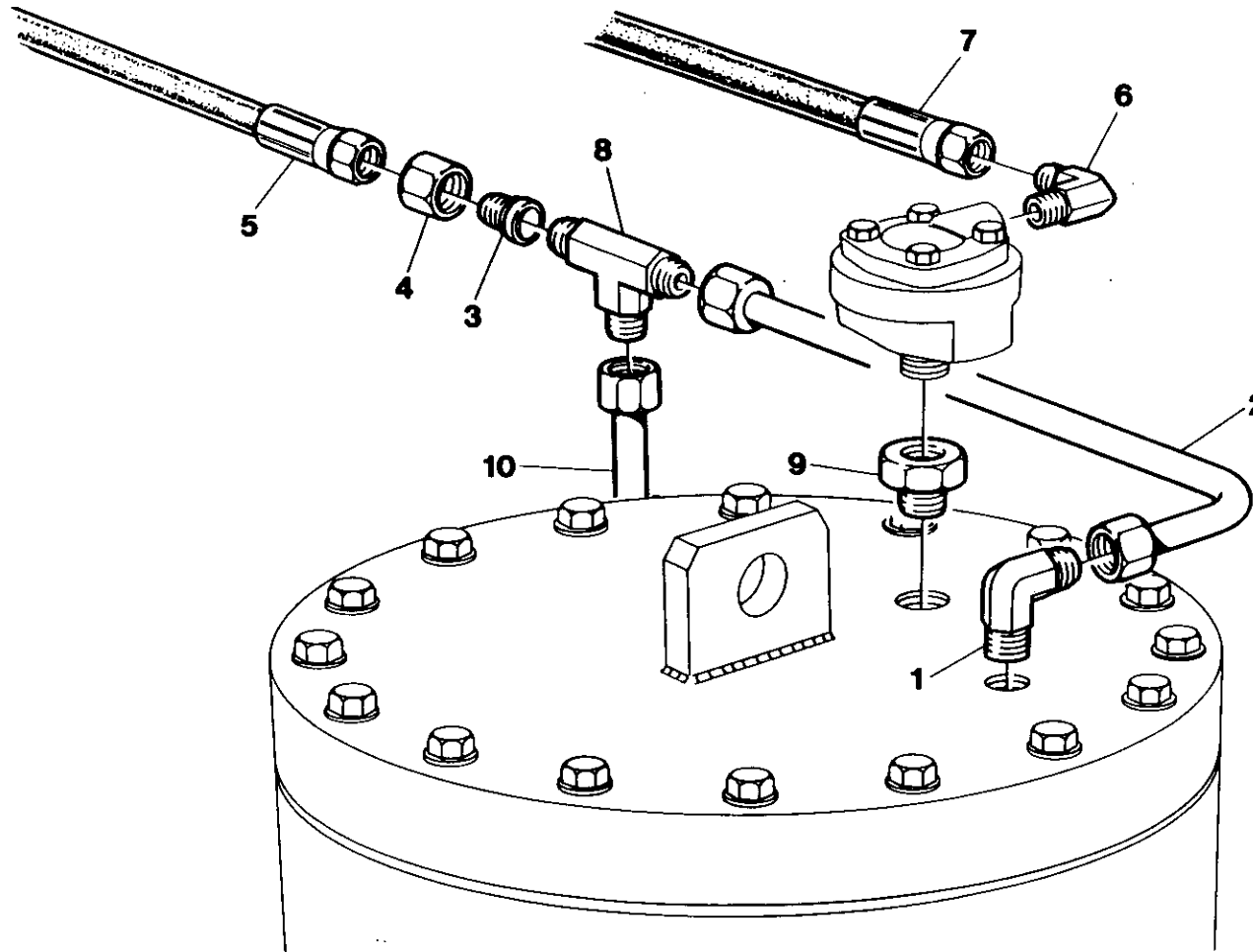
Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1-31	01126648	1	Air Starter Complete					
1-3	03606928	1	Housing Assembly					
2	03141520	2	Plug					
3	03086212	1	Plug					
4	03020823	1	Gasket					
5	03085628	1	Retainer					
6	03144995	1	Bearing					
7	03020492	1	Plate					
8	03404365	1	Valve Packet Set					
9	03020666	1	Rotor					
10	03021672	1	Cylinder					
11	03020476	1	Plate					
12	03020526	1	Bearing					
13	03390234	1	Pinion					
14	03020716	1	Retainer					
15	03020724	1	Dowel					
16	03020617	1	Housing					
17	03020831	1	Gasket					
18-20	03020591	1	Gear Case Assembly					
19	03020534	1	Washer					
20	03021094	1	Bearing					
21	03020500	1	Washer					
22	03390226	1	Drive Gear					
23	03141579	1	Bearing					
24-25	03021102	1	Gear Case Cover Assy					
25	03020815	1	Seal					
26	03020559	1	Collar					
27	03021219	1	Key					
28	03020757	1	Shaft					
29	03020877	1	Starter Drive					
30	03019858	1	Drive Housing Assembly					
31	03608494	1	Bearing					
*32	03388709	1	Nameplate					
*33	03154226	3	Nameplate Screw					

* Not Illustrated

Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	92517721	1	Bracket					
2	92700319	1	Cylinder					
3	92169630	1	Ball Joint					
4	92708411	1	Cylinder					
5	92517911	1	Lever					
6	92281427	4	Tye Rap					
7	92677319	2	Bellows					
8	92708429	1	Spacer					
9	92549278	1	Muffler					

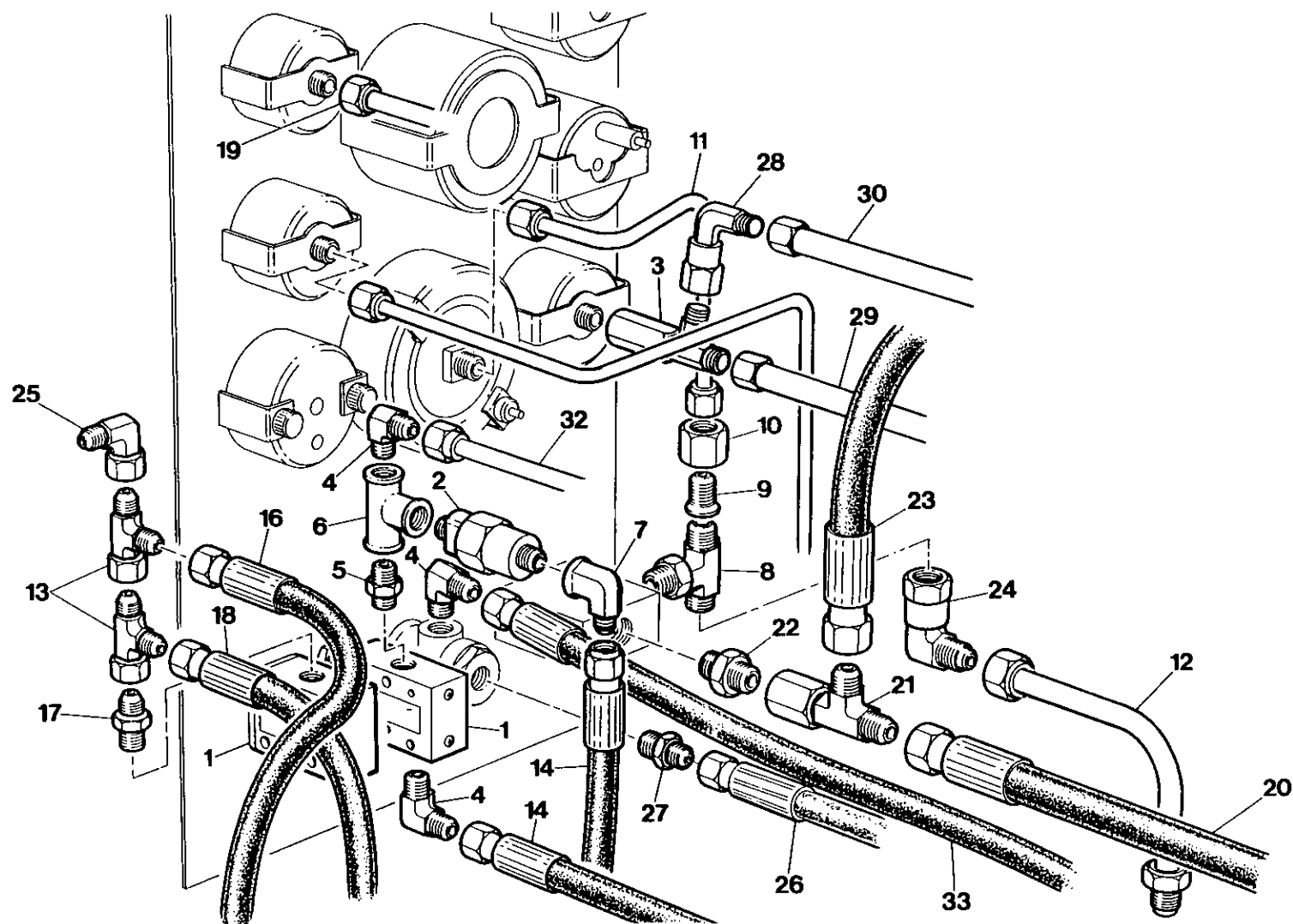


Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	92441294	2	Elbow					
2	92547652	1	Hose					
3	92520386	1	Hose					

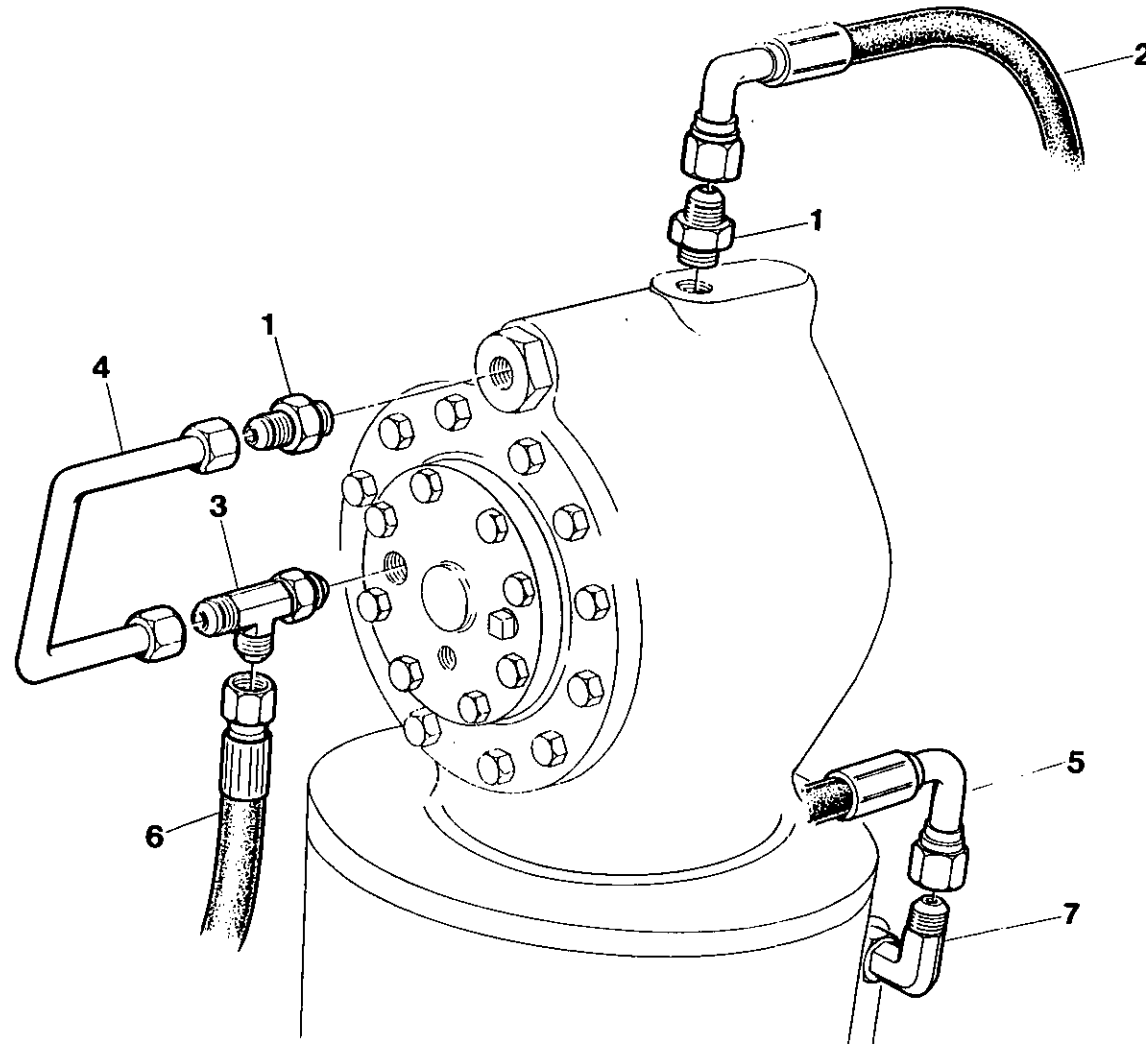


Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	92058064	1	Elbow					
2	92058072	1	Tube					
3	35296227	1	Reducer					
4	35296219	1	Nut					
5	92049097	1	Hose					
6	35301126	1	Elbow					
7	92079474	1	Hose					
8	92083245	1	Tee					
9	92351170	1	Reducing Bush					
10	92058080	1	Tube					

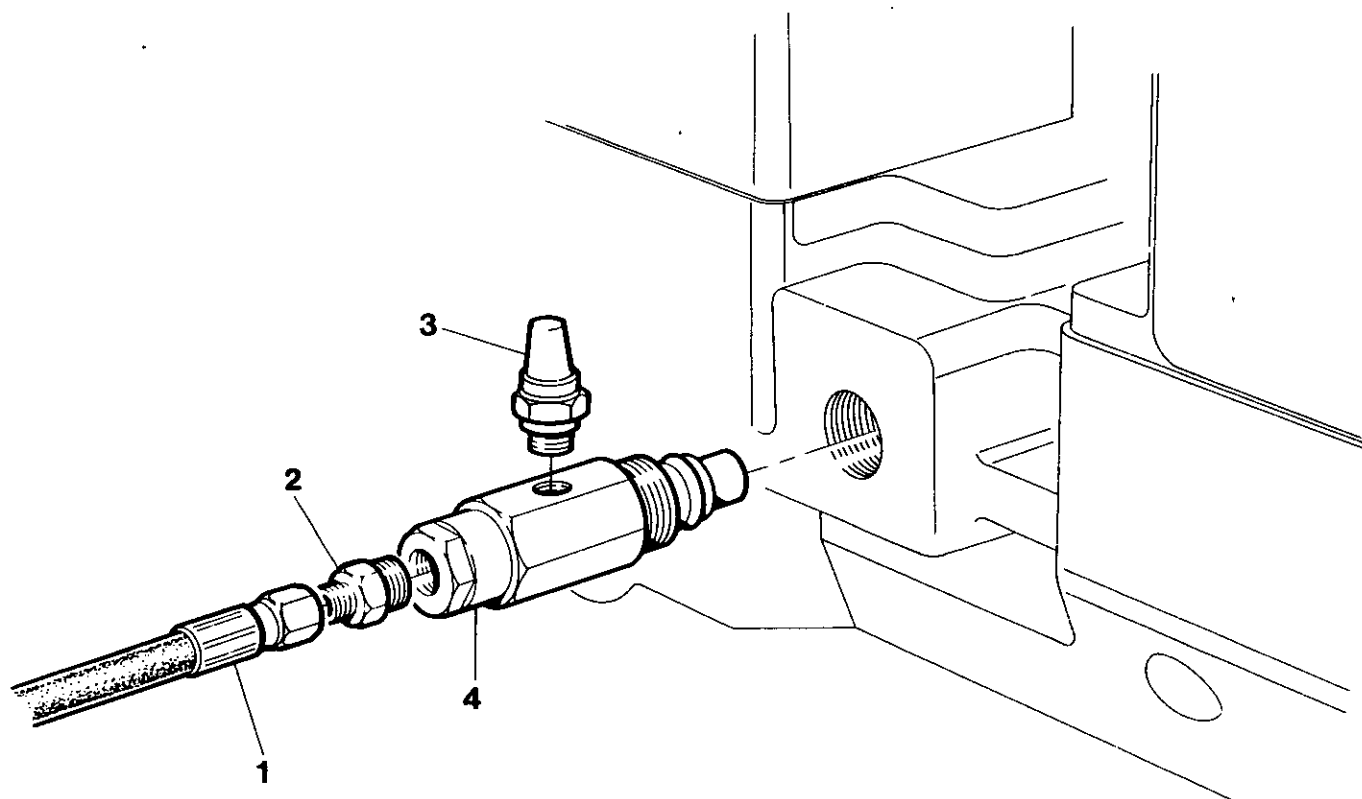
Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	92058718	1	Manifold					
2	92043017	1	Valve					
3	92098235	1	Connector					
4	92478387	2	Connector					
5	92513175	1	Orifice					
6	92513183	1	Silencer					
7	35359090	1	Regulator Valve					
8	92042936	1	Connector					
9	92058106	1	Tube					
10	92058080	1	Tube					
11	92395466	1	Adaptor					
12	92354661	1	Plug					
13	92478569	2	Connector					
14	92520410	1	Hose					
15	92702778	1	Bracket					



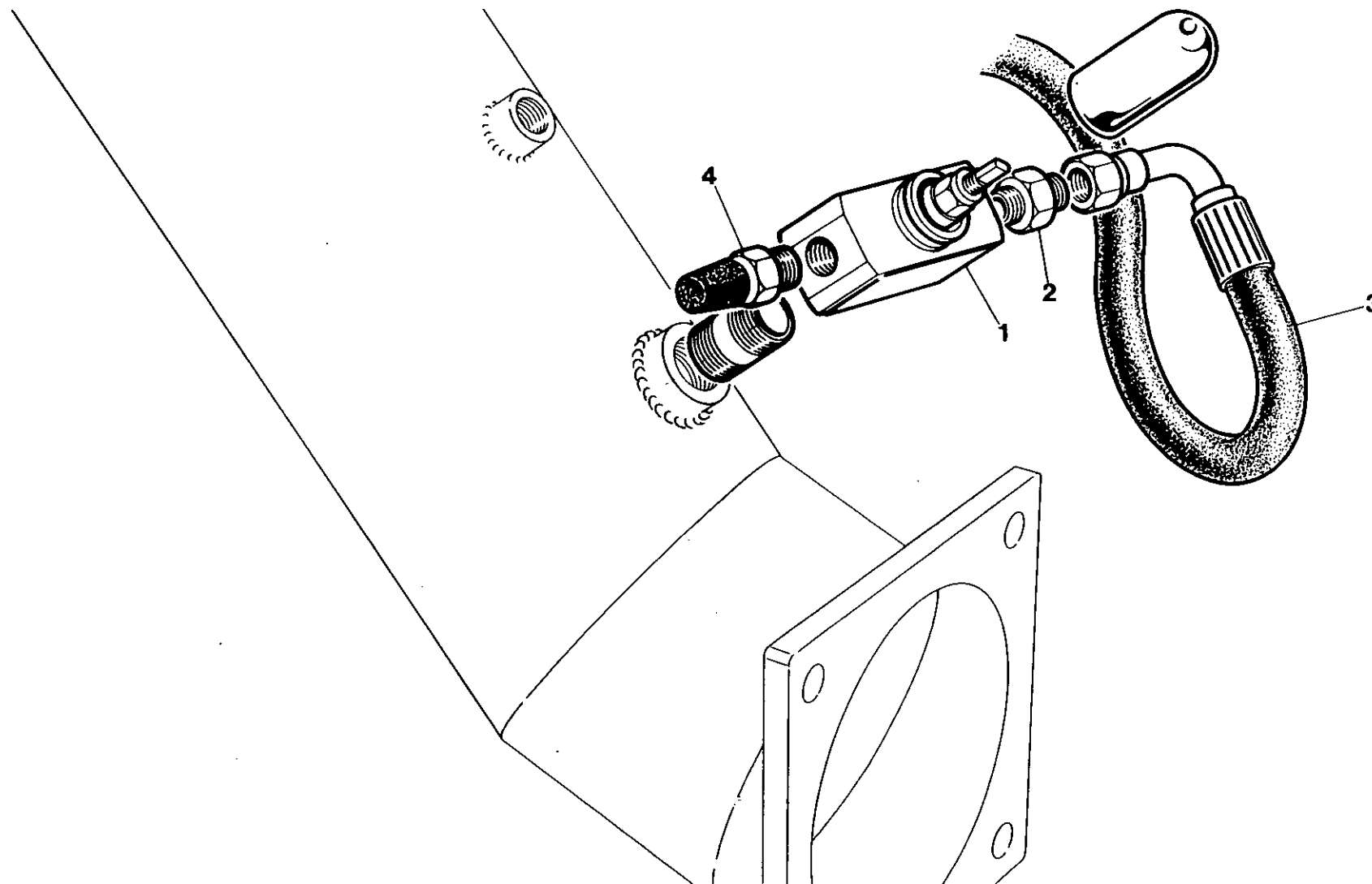
Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	92681006	2	Valve					
2	92547777	1	Valve					
3		1	Tee					
4	92395433	3	Elbow					
5	92354521	1	Nipple					
6	92258714	1	Tee					
7	35301225	1	Elbow					
8	35279843	1	Tee					
9	92394295	1	Reducer					
10	92394352	1	Nut					
11	92058767	1	Tube					
12	92050335	1	Pipe					
13	92100957	2	Tee					
14	92100924	2	Hose					
15	92698299	1	Tube					
16	92690577	1	Hose					
17	92479674	1	Adaptor					
18	92547652	1	Hose					
19	92681402	1	Tube					
20	92649097	1	Hose					
21	35283084	1	Tee					
22	35283076	1	Connector					
23	92529378	1	Hose					
24	35283068	1	Elbow					
25	92708437	1	Elbow					
26	92520410	1	Hose					
27	92478569	1	Adaptor					
28		1	Elbow					
29	92681394	1	Tube					
30	92698315	1	Tube					
31	92698299	1	Tube					
32	92679570	1	Tube					
33	92520394	1	Hose					



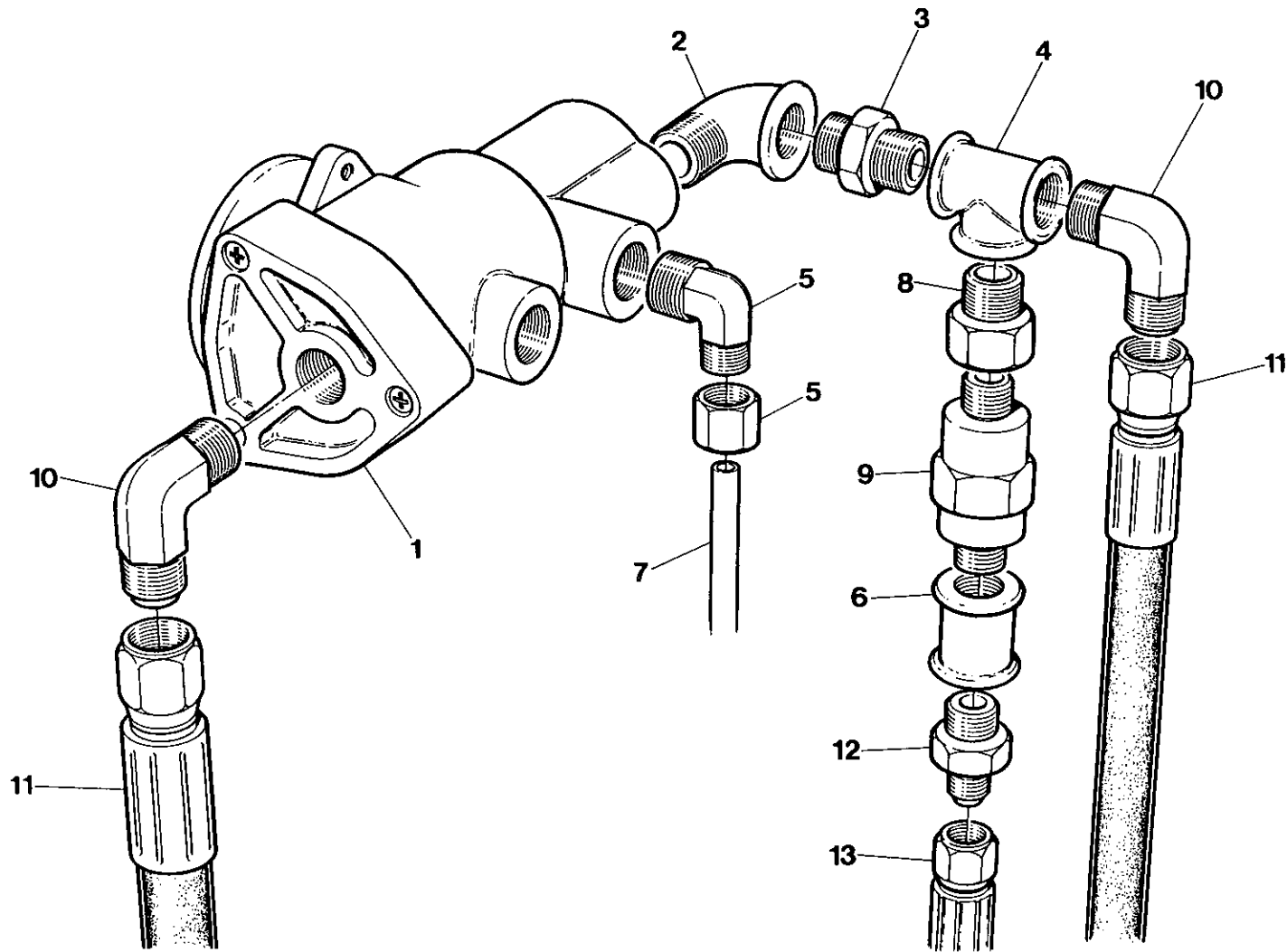
Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	35283076	1	Connector					
2	92049097	1	Hose					
3	35279850	1	Tee					
4	92058163	1	Tube					
5	92079474	1	Hose					
6	92520386	1	Hose					
7	35279827	1	Elbow					



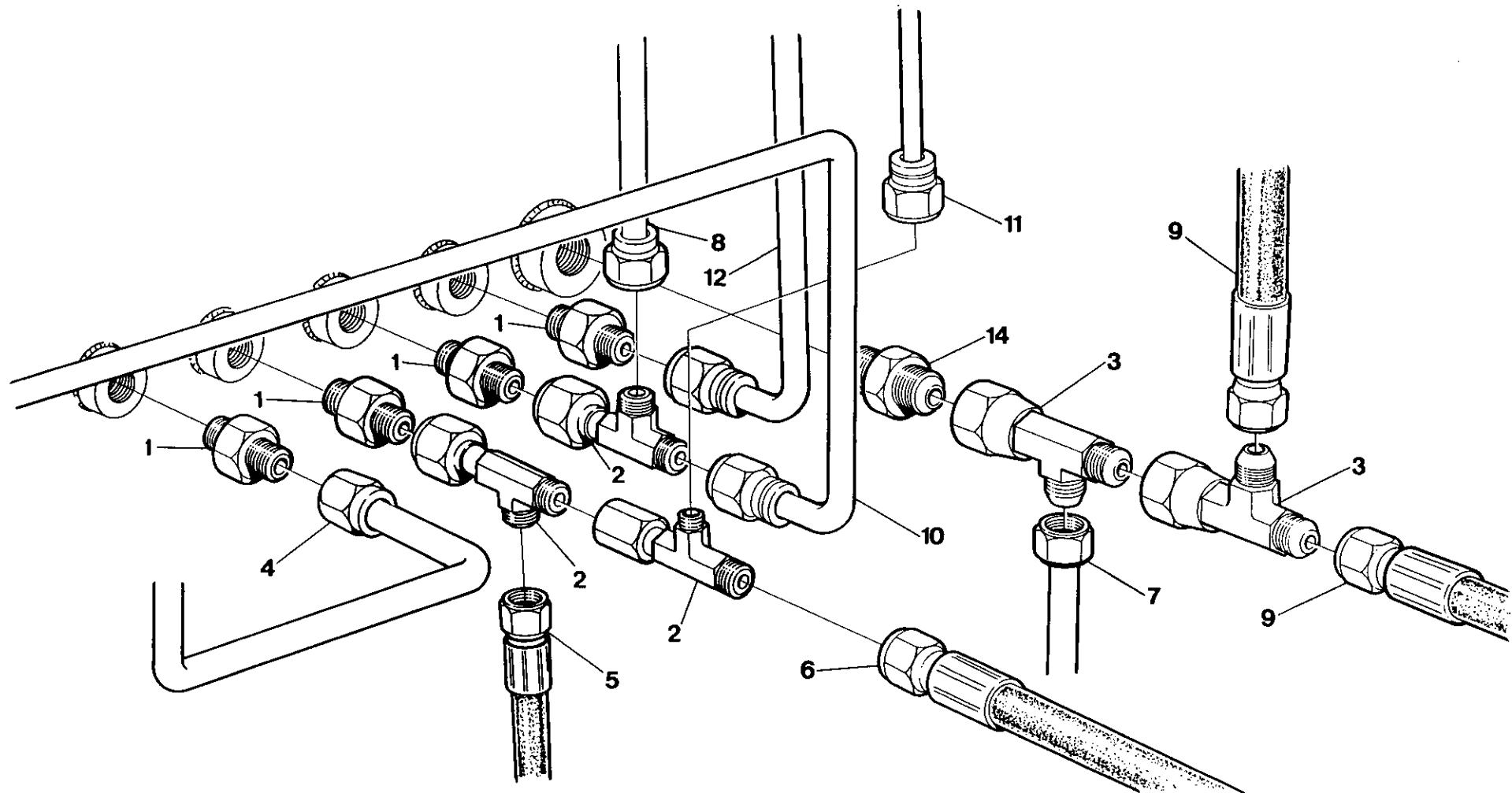
Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	92547652	1	Hose					
2	92478569	1	Adaptor					
3	92089556	1	Silencer					
4	92546480	1	Water Temp.Probe					



Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	92546472	1	Probe					
2	92478569	1	Connector					
3	92658004	1	Hose					
4	92089556	1	Silencer					



Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	92657303	1	Indicator					
2	92354450	1	Elbow					
3	92005701	1	Connector					
4	92354729	1	Tee					
5	92067933	1	Elbow					
6	92258110	1	Socket					
7	92490358	0.5m	Tube					
8	92354364	1	Reducing Bush					
9	92547777	1	Valve					
10	92395458	6	Elbow					
11	92547652	2	Hose					
12	92479674	1	Connector					
13	92100924	1	Hose					



Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	92479674	4	Connector					
2	92100957	3	Tee					
3	35283084	2	Tee					
4	92681477	1	Tube					
5	92520394	1	Hose					
6	92547637	1	Hose					
7	92698307	1	Tube					
8	92698331	1	Tube					
9	92547652	2	Hose					
10	92679562	1	Tube					
11	92681394	1	Tube					
12	92679562	1	Tube					

REGULATION

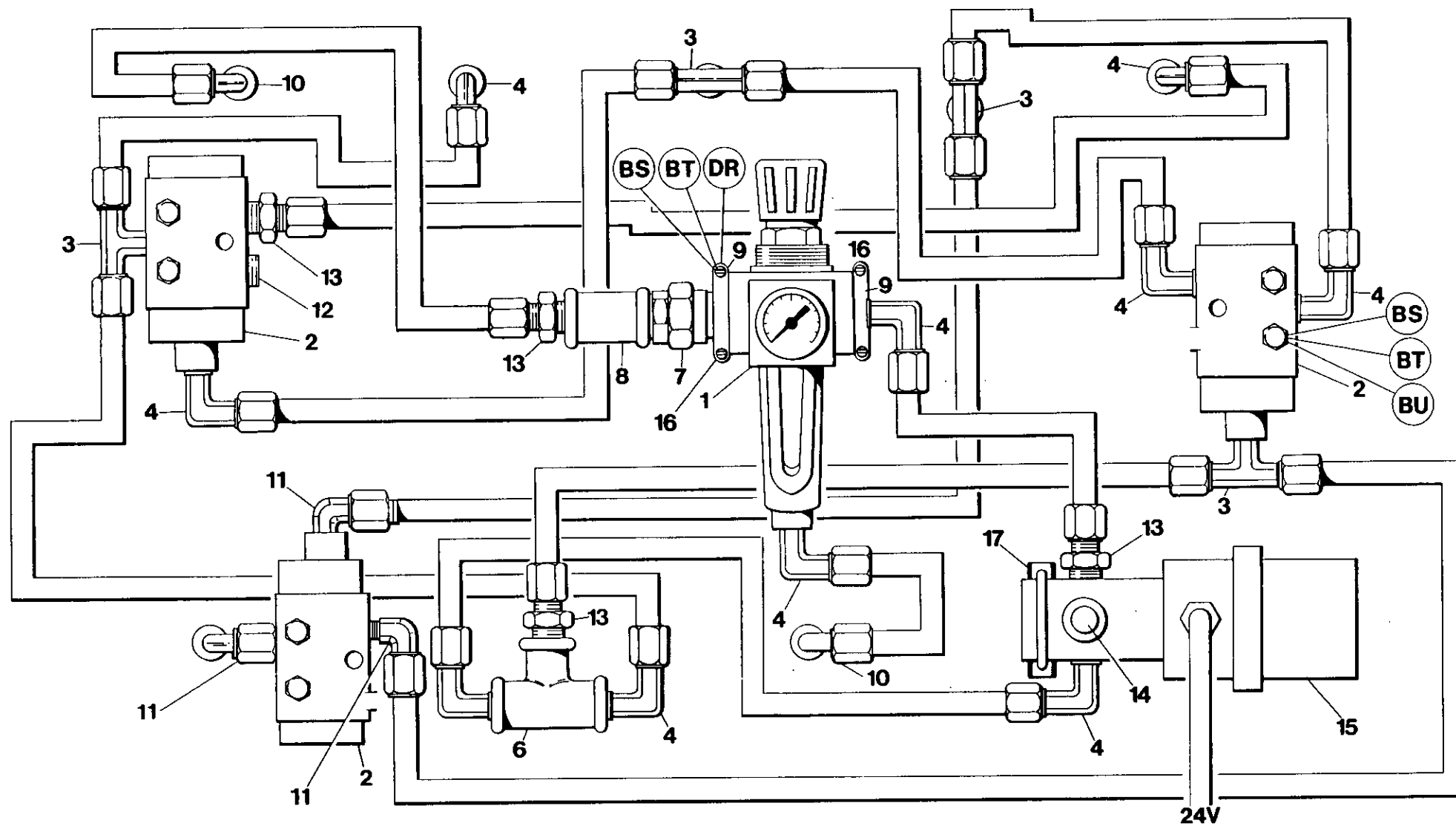
REGULATION

REGELUNG

REGOLAZIONE

REGULACION

جهاز التنظيم :

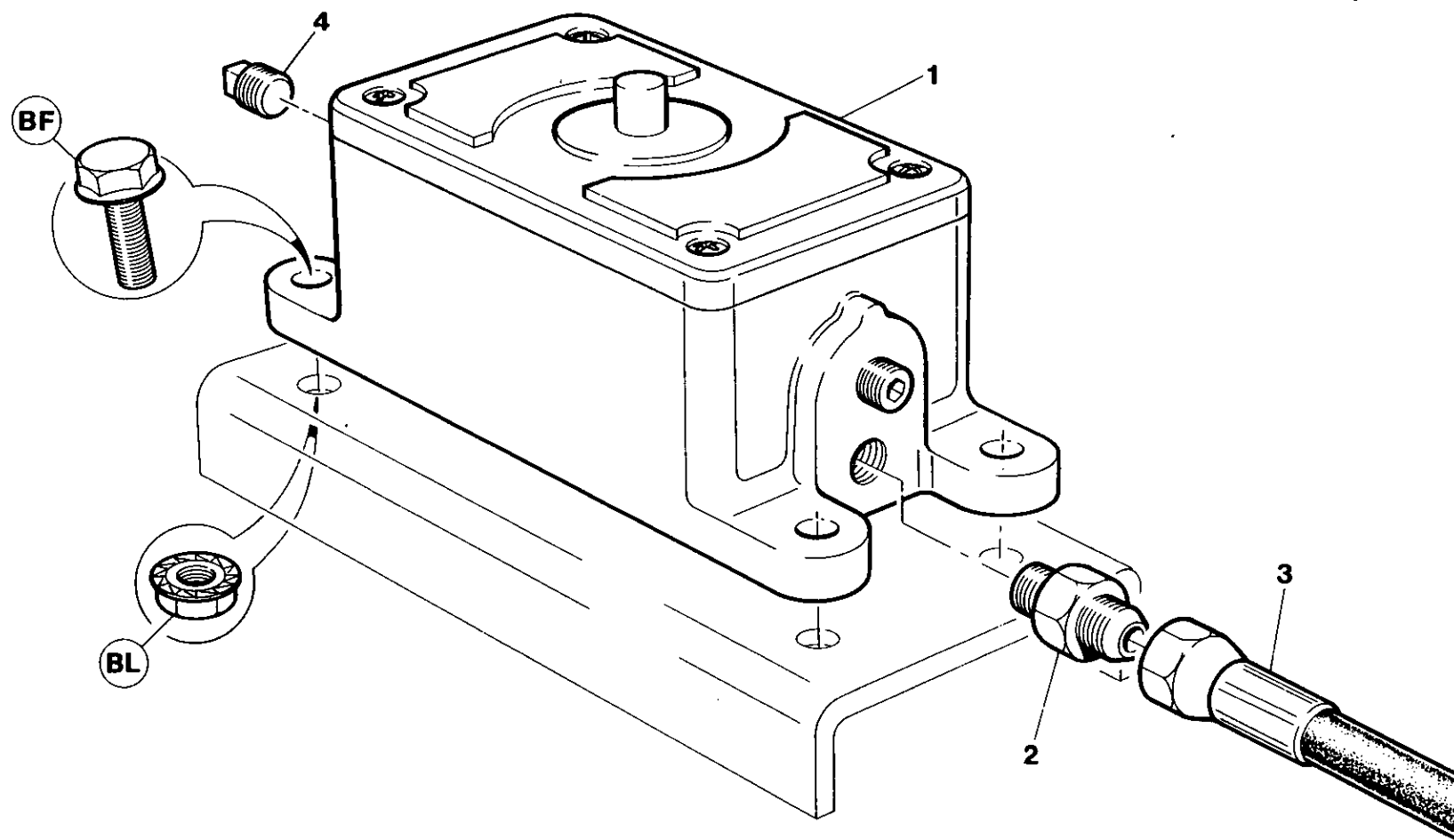


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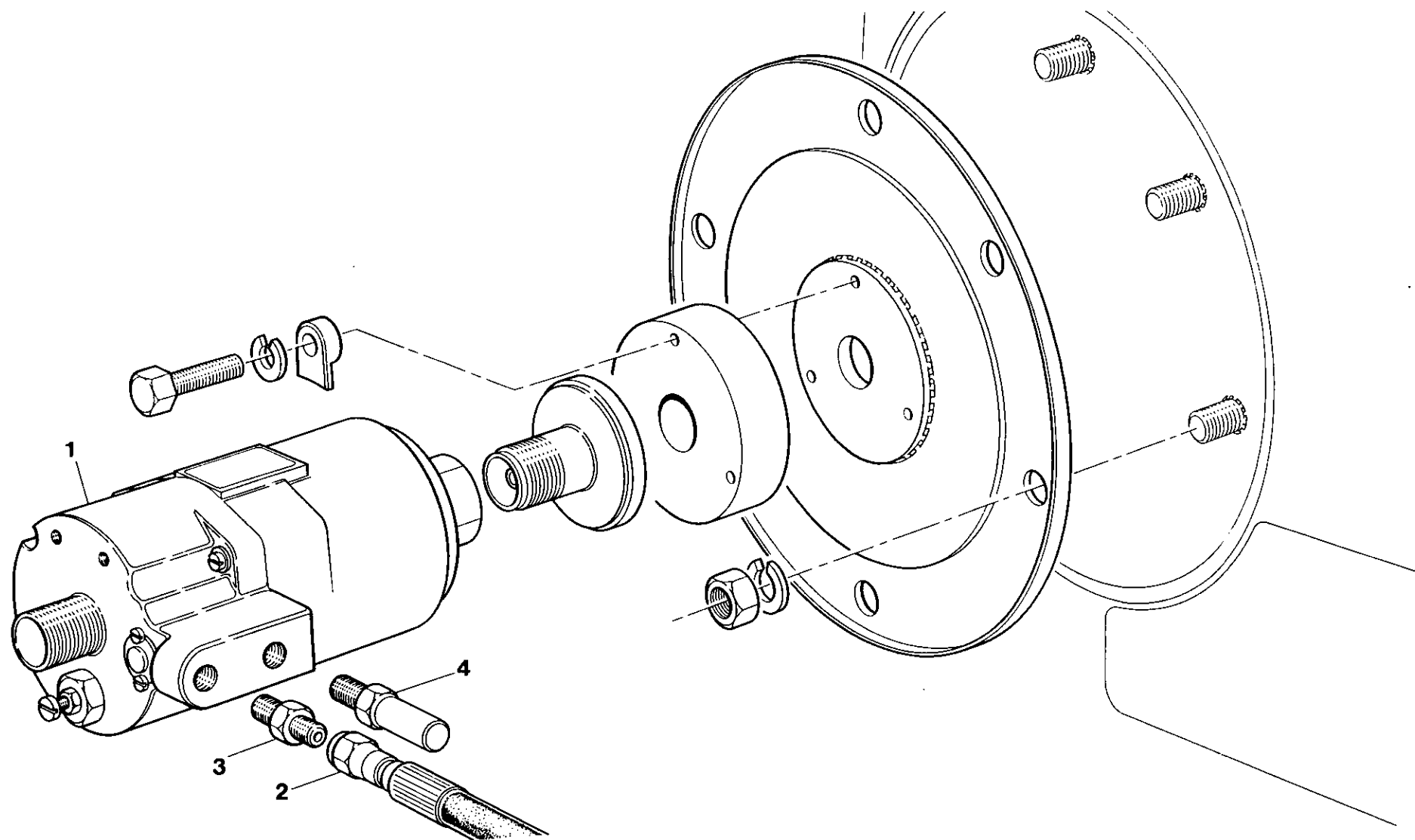
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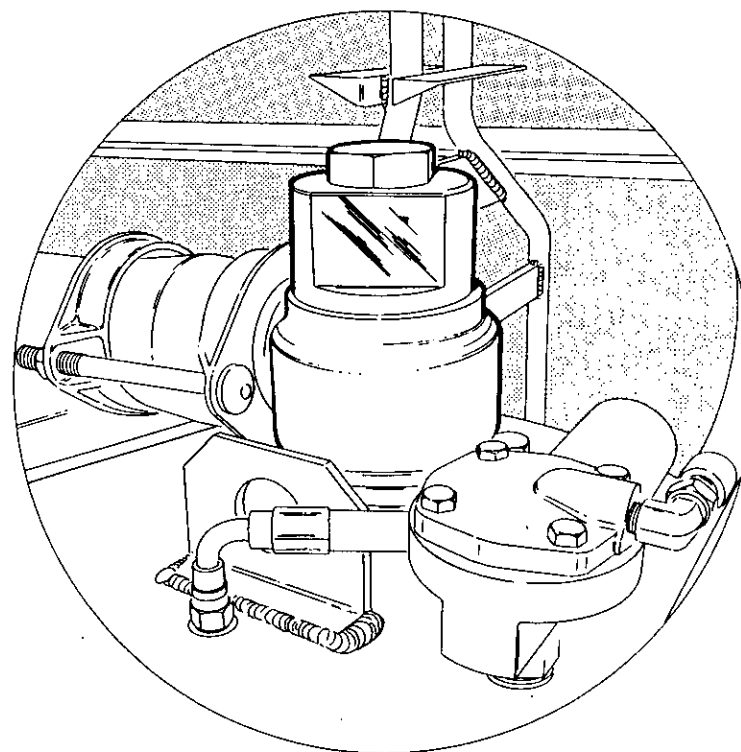
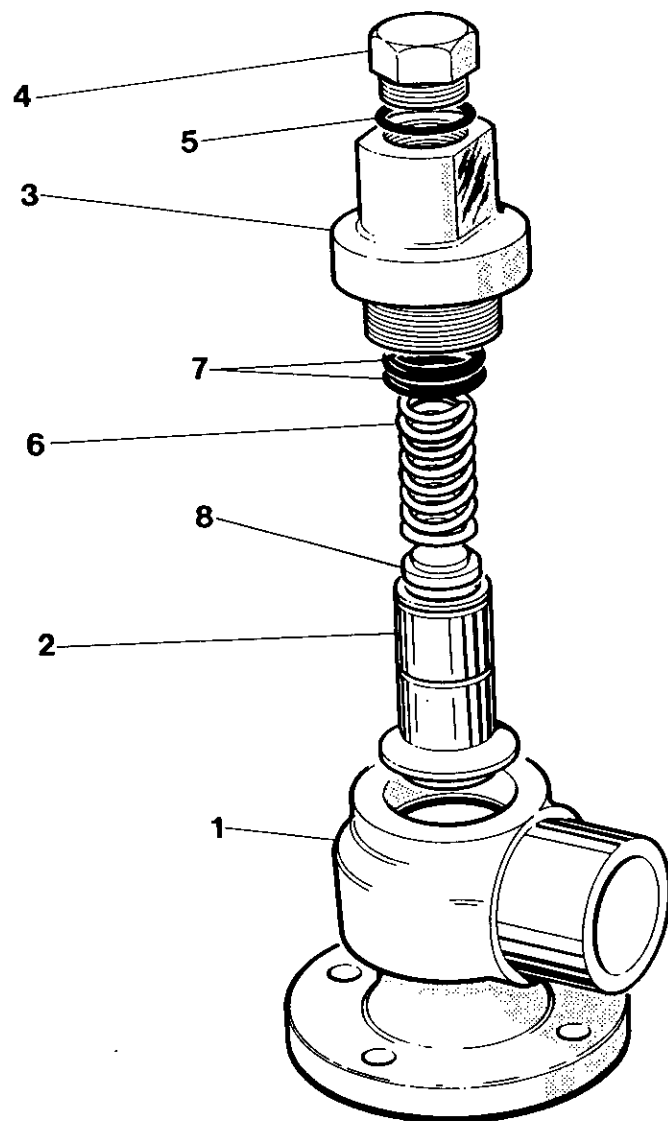
Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	92547769	1	Filter/Regulator					
2	92547736	3	Pilot Valve					
3	92029644	4	Tee					
4	92067958	9	Elbow					
5	92478569	1	Connector					
6	92258714	1	Tee					
7	92547777	1	Check Valve					
8	92258110	1	Socket					
9	92661768	2	Bracket					
10	92067933	2	Elbow					
11	92395433	3	Elbow					
12	92354653	1	Plug					
13	92029651	3	Connector					
14	92549278	1	Silencer					
15	92677475	1	Yellow Alert Harness 24v					
15	92662329	1	Yellow Alert Harness 110v					
16	92661776	2	Wall Mount Kit					
17		1	Clamp					



Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	92546761	1	Vibration Valve					
2	92478569	1	Connector					
3	92547652	1	Hose					
4	92354661	1	Plug					

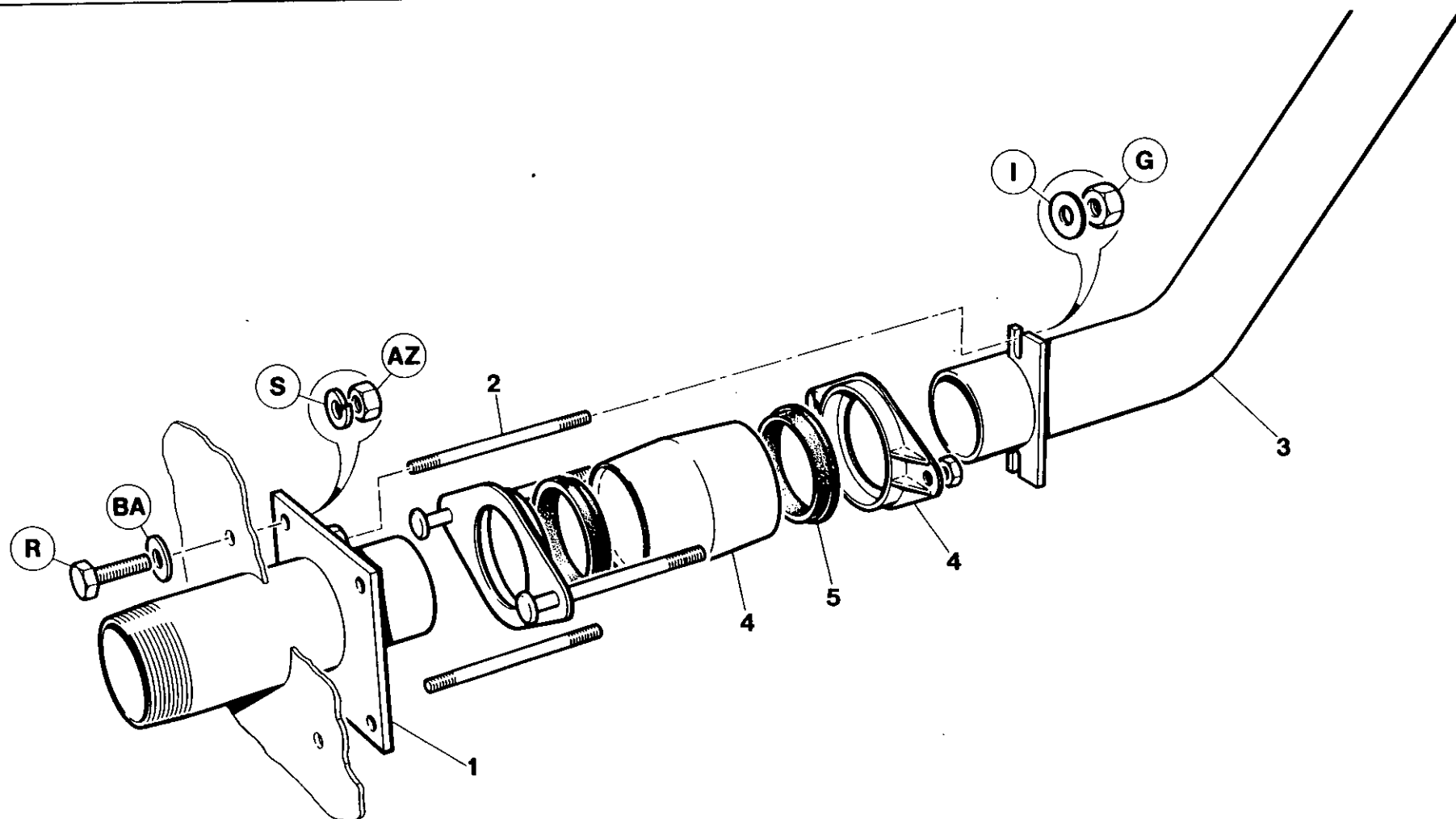


Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	92546753	1	Overspeed Valve					
2	92520428	1	Hose					
3	92478569	1	Connector					
4	92089556	1	Silencer					

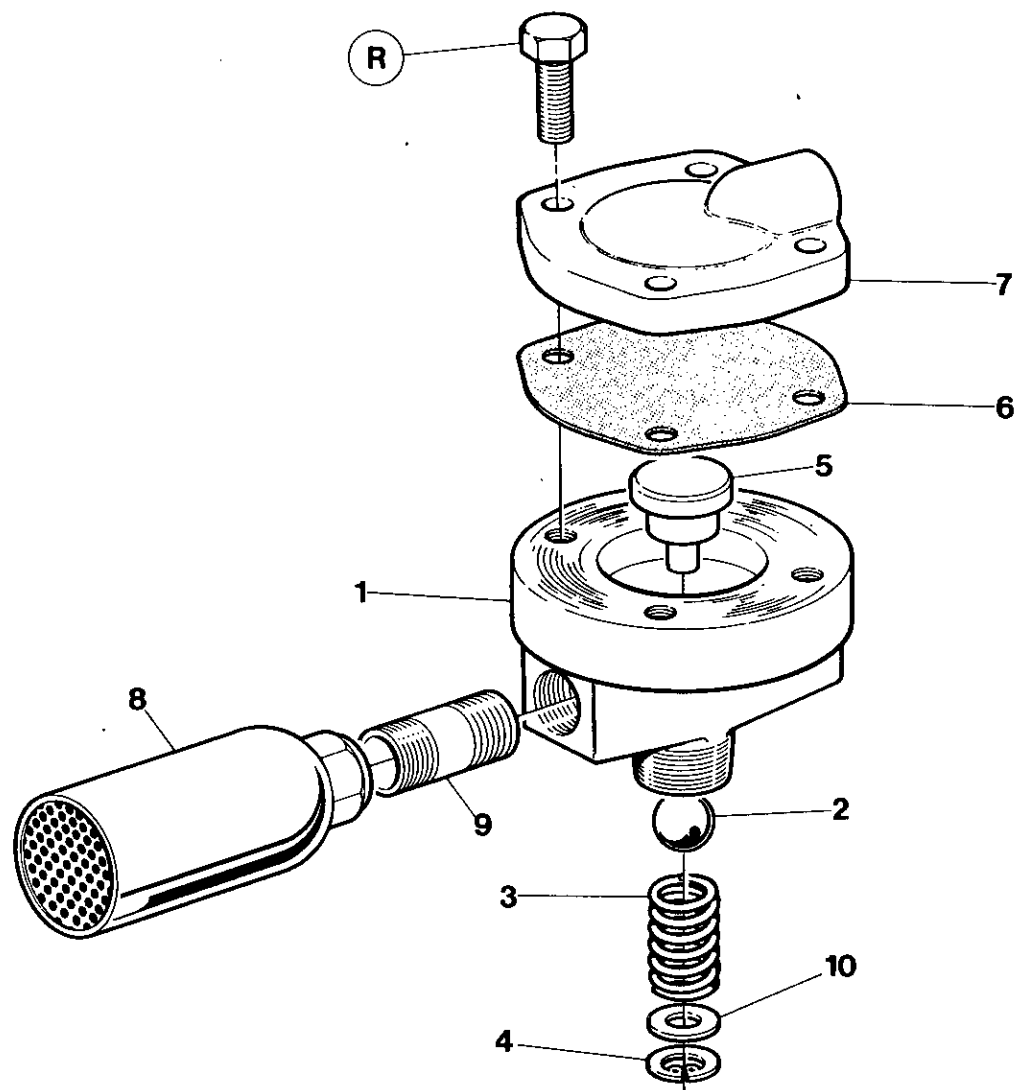


Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
(1-7)	92062041	1	Minimum Pressure Valve Assy					
1	92061936	1	Body					
2	92044098	1	Piston					
3	92061944	1	Housing					
4	35579630	1	Plug					
5	35279942	1	O-Ring					
6	35318161	1	Spring					
7	95823688	2	O-Ring					
8	92032648	1	Spacer					

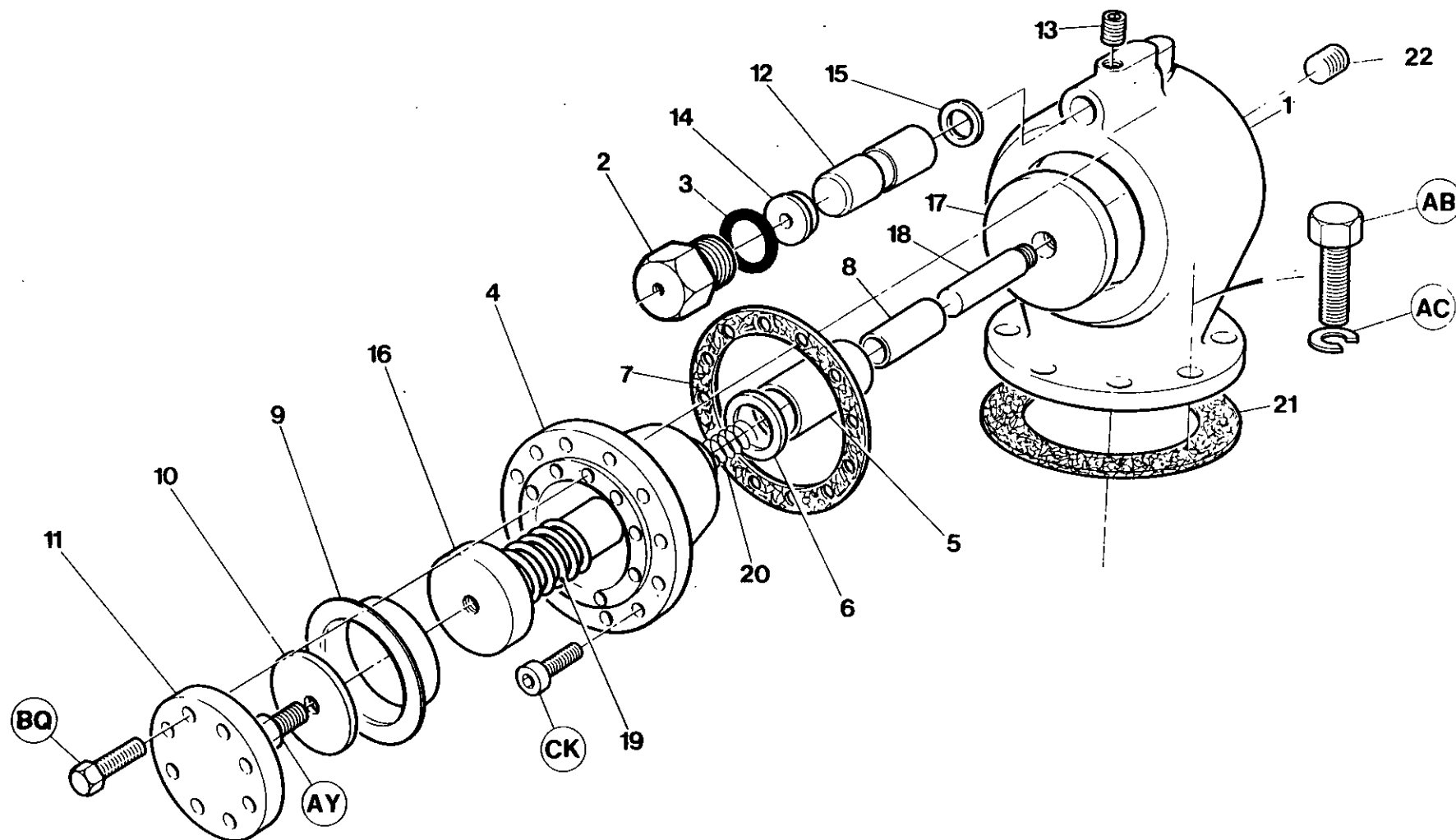
Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	35575471	1	Gasket					
2	92039056	1	Coupling					
3	92039049	2	Seal					
4	92048990	1	Bracket					
5	92700566	1	Pipe					
6	92546464	1	Valve					
7	92089556	1	Silencer					
8	92395458	1	Elbow					
9	92109875	1	Tee					
10	92658004	1	Hose					
11	92547637	1	Hose					



Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	92540772	1	Outlet					
2	92039239	2	Stud					
3	92700566	1	Pipe					
4	92039056	1	Coupling					
5	92039049	2	Seal					



Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
(1-7)	92035898	1	Auto Blowdown Valve					
1	92042951	1	Assy					
2	92251982	1	Body					
3	30865315	1	Ball					
4	92257641	1	Spring					
5	92257641	1	Retaining Ring					
6	35201565	1	Piston					
7	35192129	1	Diaphragm					
8	35192145	1	Cover					
9	92513183	1	Silencer					
10	92354547	1	Nipple					
	30345508	1	Washer					



Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
(1-20)	35072222	1	Unloader Valve Assy					
1	36722452	1	Body					
2	35328236	1	Adaptor					
3	95765806	2	O-Ring					
4	36722460	1	Housing					
5	35328228	1	Bush					
6	35328244	1	Seal					
7	35328251	1	Gasket					
8	35328269	1	Bush					
9	35592534	1	Diaphragm					
10	35327204	1	Washer					
11	35591189	1	Cover					
12	35328210	1	Valve					
13	95263190	1	Plug					
14	35331578	1	Grommet					
15	35331586	1	Grommet					
16	35591163	1	Piston					
17	35591171	1	Inlet Valve					
18	35332006	1	Valve Stem					
19	35332683	1	Spring					
20	35332691	1	Spring					
21	95214524	1	Gasket					
22	92257401	1	Plug					

REGULATION

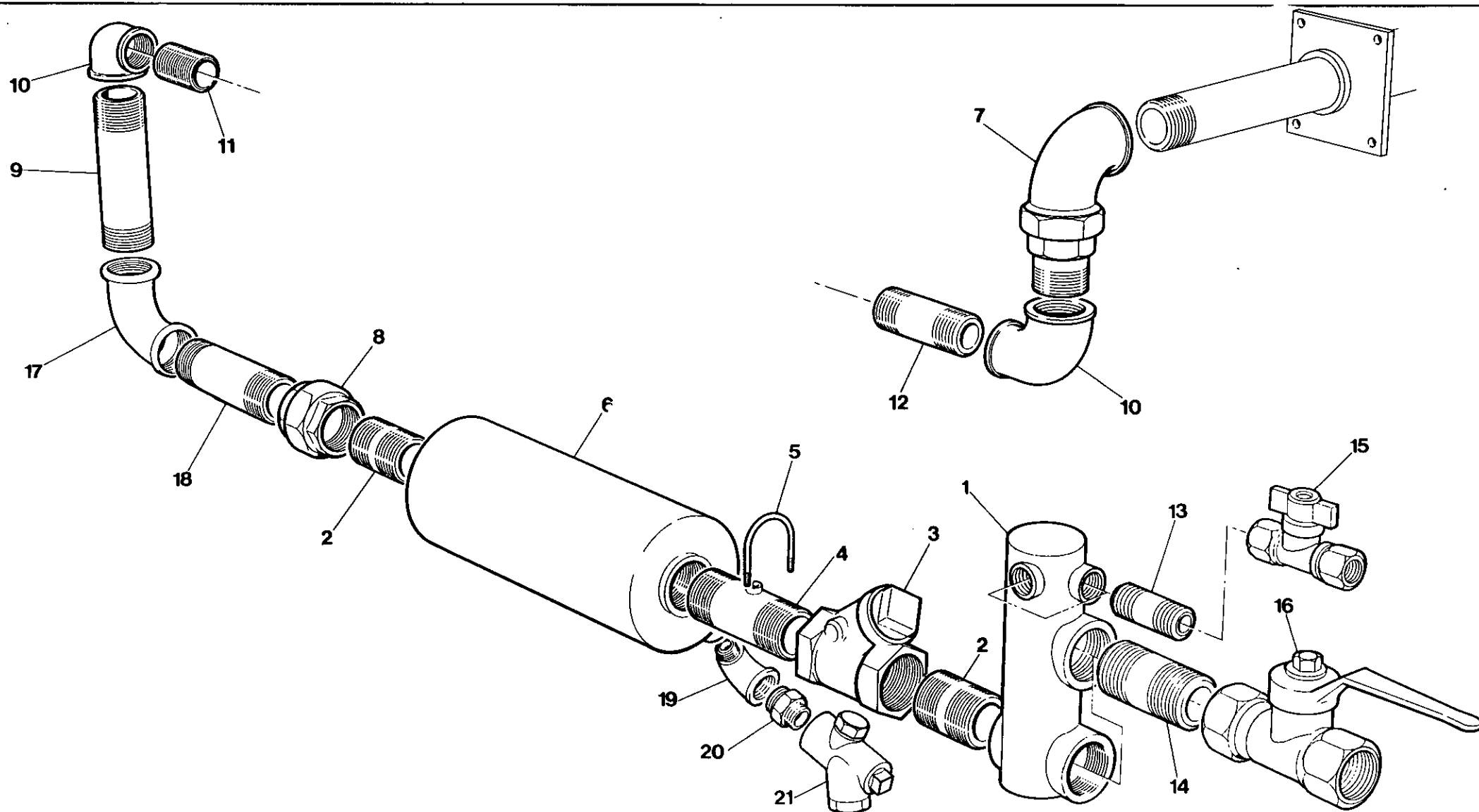
REGULATION

REGELUNG

REGOLAZIONE

REGULACION

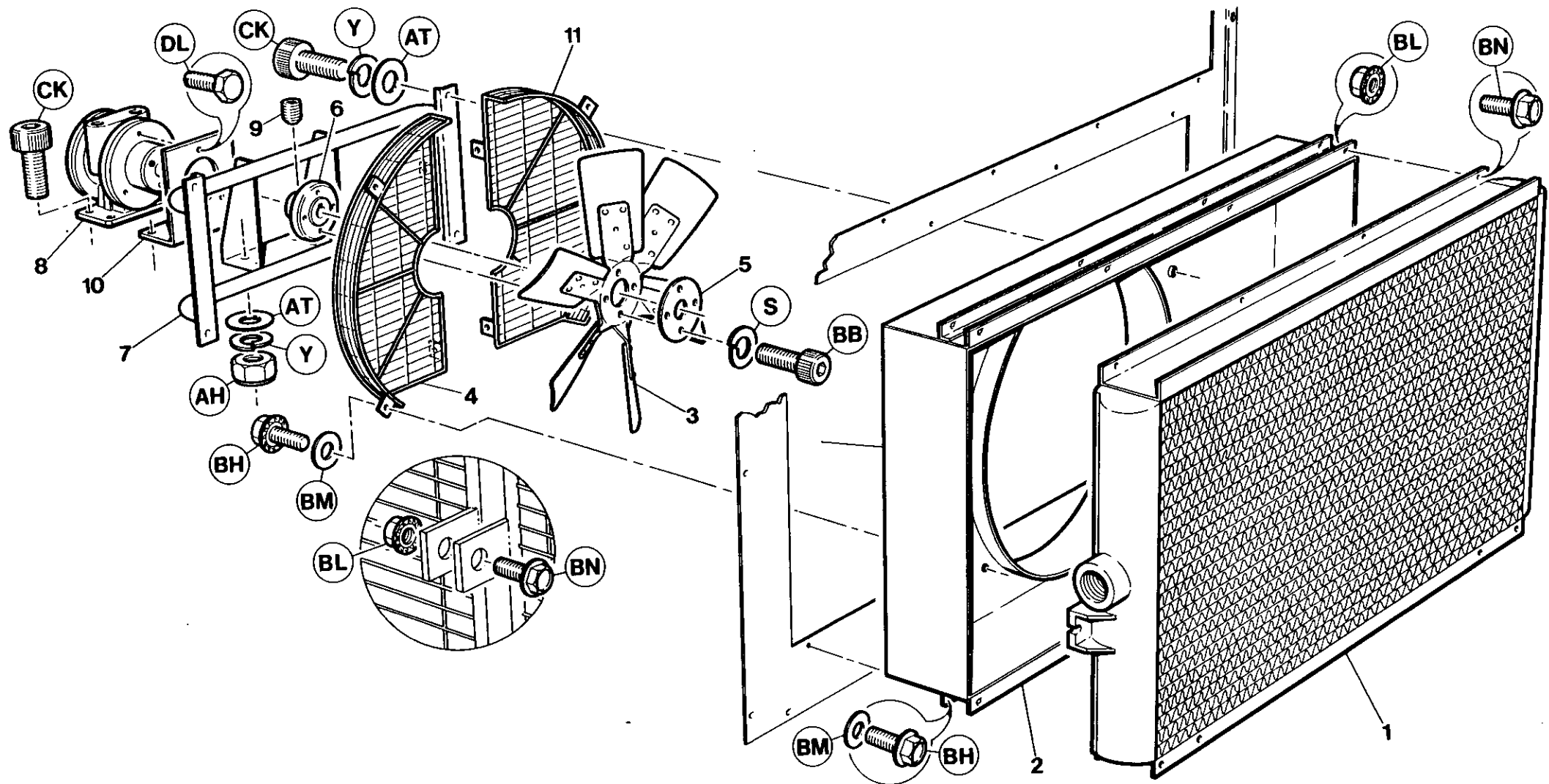
جهاز التنظيم :

**7.4.54**

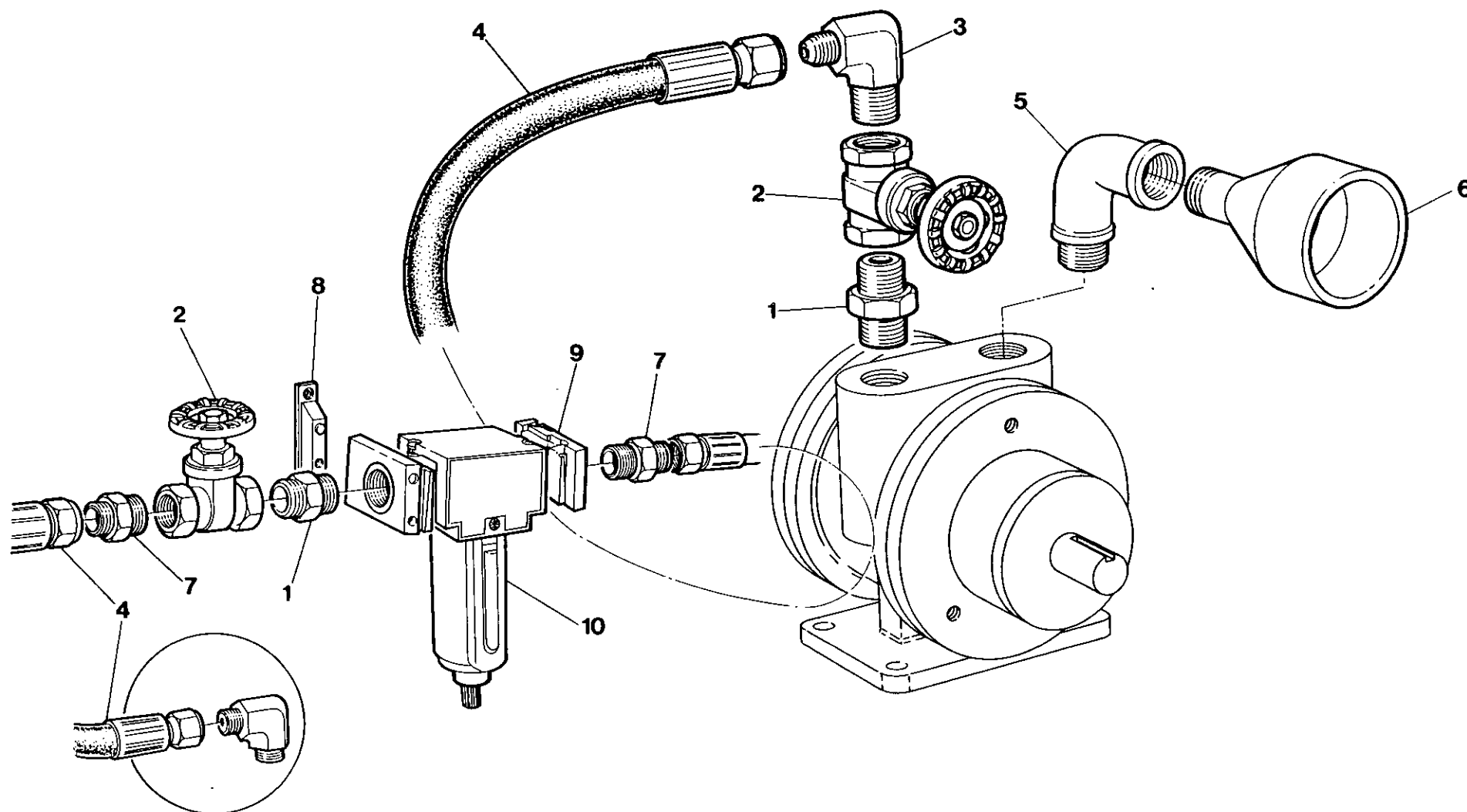
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INGERSOLL-RAND

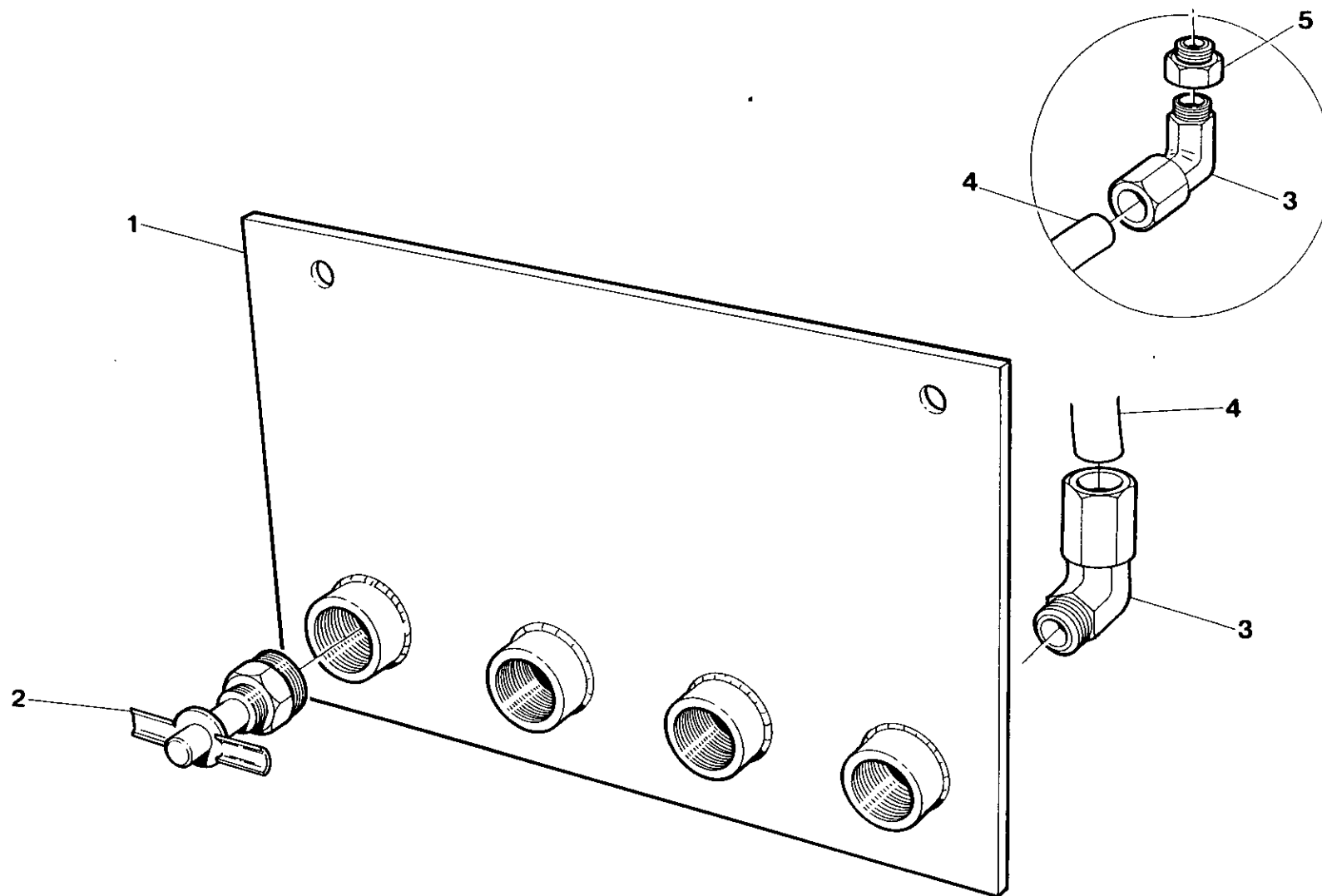
Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	92725506	1	Manifold					
2	92010446	2	Nipple					
3	92546290	1	Check Valve					
4	92544634	1	Nipple					
5	92658137	2	U Bolt					
6	92657477	1	Separator/Water Trap					
7	92660661	1	Elbow					
8	92365923	1	Union					
9		1	Pipe					
10	92292812	2	Elbow					
11	92665512	1	Nipple					
12	92686997	1	Nipple					
13	92255934	2	Nipple					
14	92255942	2	Nipple					
15	92294461	2	Valve					
16	92530047	2	Valve					
17	92008580	1	Elbow					
18	92367622	1	Nipple					
19	92341767	1	Elbow					
20	92754431	1	Nipple					
21	92754092	1	Autodrain					



Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم :
1	92539394	1	Aftercooler					
2	92666171	1	Shroud					
3	92101286	1	Fan					
4	92666189	1	Guard LH					
5	92123264	1	Retainer					
6	92714674	1	Hub					
7	92666163	1	Support					
8	01204015	1	Motor					
9	92117761	2	Grubscrew					
10	92714690	1	Bracket					
11	92762764	1	Guard R.H.					



Item	C.P.N.	Qty	COOLING SYSTEM	SYSTÈME DE REFROIDISSEMENT	KÜHLSYSTEM	SISTEMA DE RAFFREDDAMENTO	SISTEMA DE REFRIGERACION	جهاز التبريد :
1	92679125	2	Orifice					
2	92043116	2	Valve					
3	92478288	1	Elbow					
4	92658012	2	Hose					
5	92354513	1	Elbow					
6	03607504	1	Muffler					
7	92478270	2	Connector					
8	92754118	2	Wall Mounting Kit					
9	92754100	2	Port Block Kit					
10	92679133	1	Lubricator					

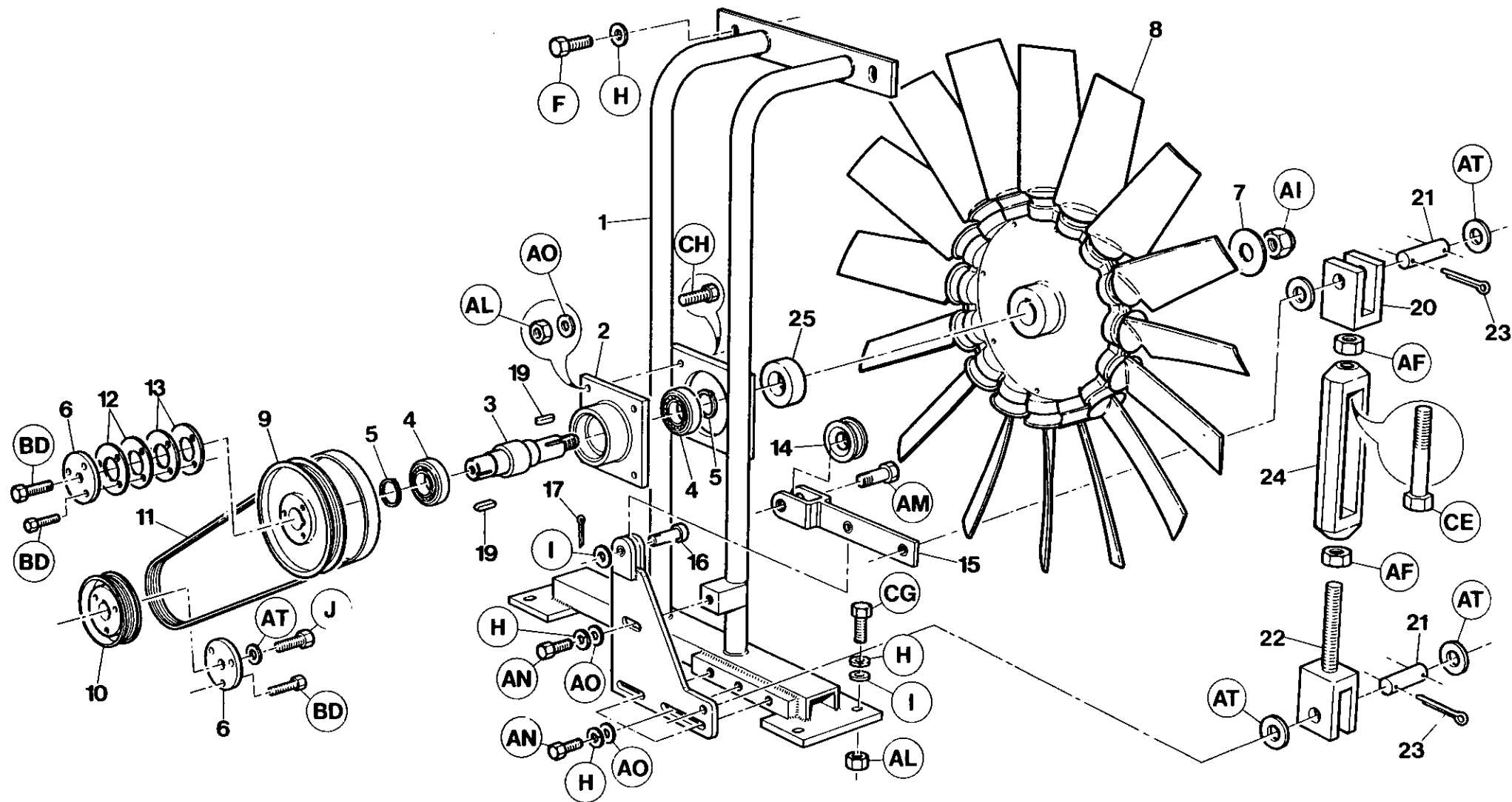


Item	C.P.N.	Qty	REGULATION	REGULATION	REGELUNG	REGOLAZIONE	REGULACION	جهاز التنظيم
1	92752260	1	Drains Manifold					
2	92258706	4	Cock					
3	92067958	8	Elbow					
4	92490358	4.5m	Nylon Tube					
5	92252725	3	Reducer					

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Item	C.P.N.	Qty	COOLING SYSTEM	SYSTEME DE REFROIDISSEMENT	KUHLSYSTEM	SISTEMA DE RAFFREDDAMENTO	SISTEMA DE REFRIGERACION	جهاز التبريد :
1	92546258	1	Support					
2	92065408	1	Housing					
3	92680370	1	Shaft					
4	92064559	2	Bearing					
5	35280353	2	Retaining Ring					
6	92680776	2	Retainer					
7	92409671	1	Plate					
8	92517754	1	Fan					
9	92680404	1	Pulley					
10	92680396	1	Pulley					
11	92546936	1	Belt					
12	92680768	2	Spacer					
13	92680743	2	Spacer					
14	92531490	1	Pulley					
15	92049899	1	Arm					
16	92049915	1	Pin					
17	92256759	1	Pin					
18	92049881	1	Support					
19	92168871	2	Key					
(20 24)	92038884	1	Turnbuckle Assy					
20	92038652	1	Clevis					
21	92038918	2	Pin					
22	92038660	1	Clevis					
23	92256759	4	Pin					
24	92038678	1	Turnbuckle					
25	92605342	1	Spacer					

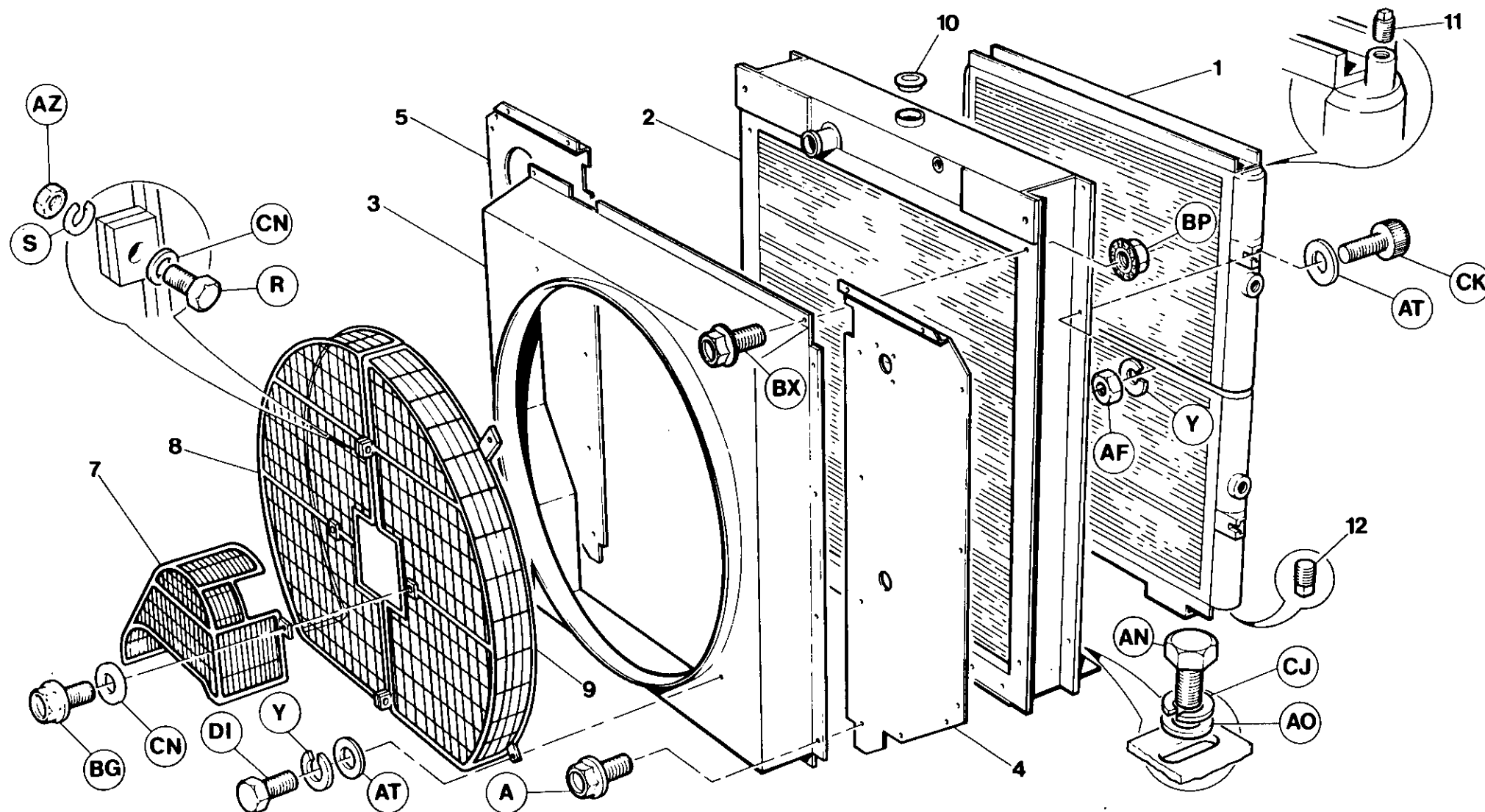
COOLING SYSTEM

SYSTÈME DE
REFROIDISSEMENT

KÜHLSYSTEM

SISTEMA DE
RAFFREDDAMENTOSISTEMA DE
REFRIGERACION

جهاز التبريد :



Item	C.P.N.	Qty	COOLING SYSTEM	SYSTÈME DE REFROIDISSEMENT	KÜHLSYSTEM	SISTEMA DE RAFFREDDAMENTO	SISTEMA DE REFRIGERACION	جهاز التبريد :
1	92510148	1	Oil Cooler					
2	92677392	1	Radiator					
3	92698349	1	Shroud					
4	92036656	1	Baffle					
5	92544394	1	Baffle					
6	92517762	2	Clamp					
7	92049014	1	Guard					
(8-9)	92049006	1	Guard Assy					
8	92034495	1	Guard					
9	92034503	1	Guard					
10	92041664	1	Cap					
11	92354661	1	Plug					
12	92257344	1	Plug					

COOLING SYSTEM

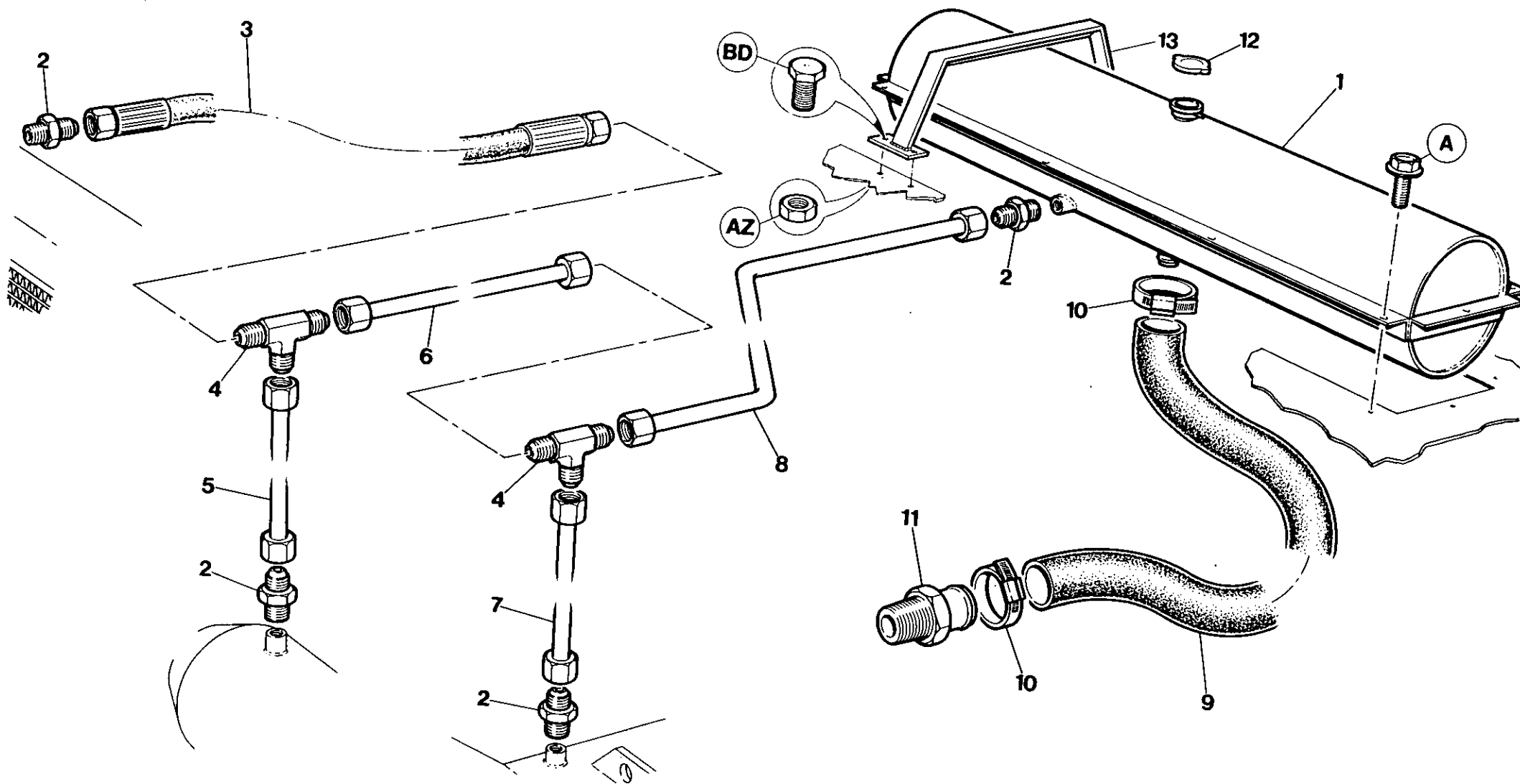
SYSTÈME DE
REFROIDISSEMENT

KÜHLSYSTEM

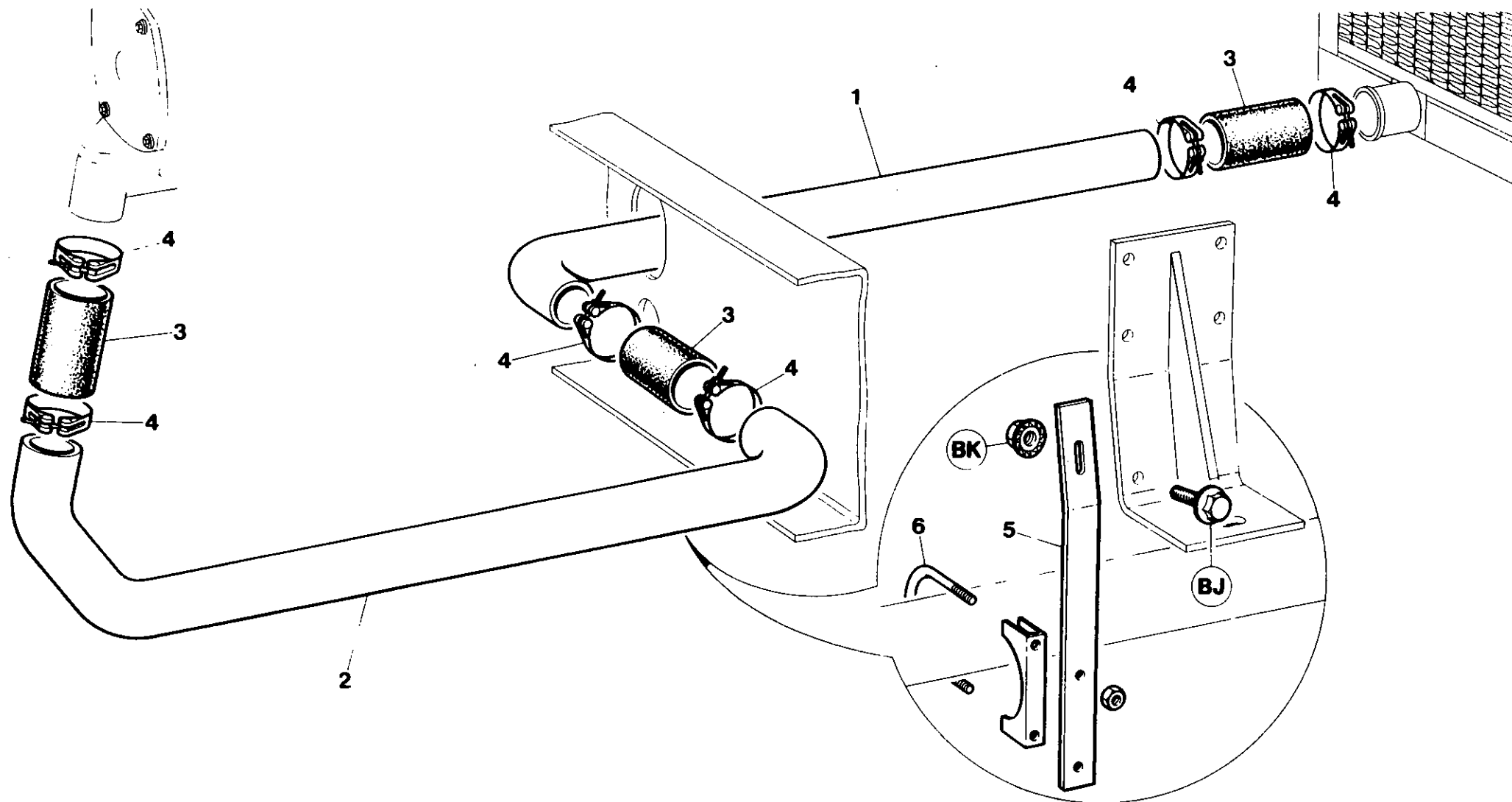
SISTEMA DE
RAFFREDDAMENTO

SISTEMA DE
REFRIGERACION

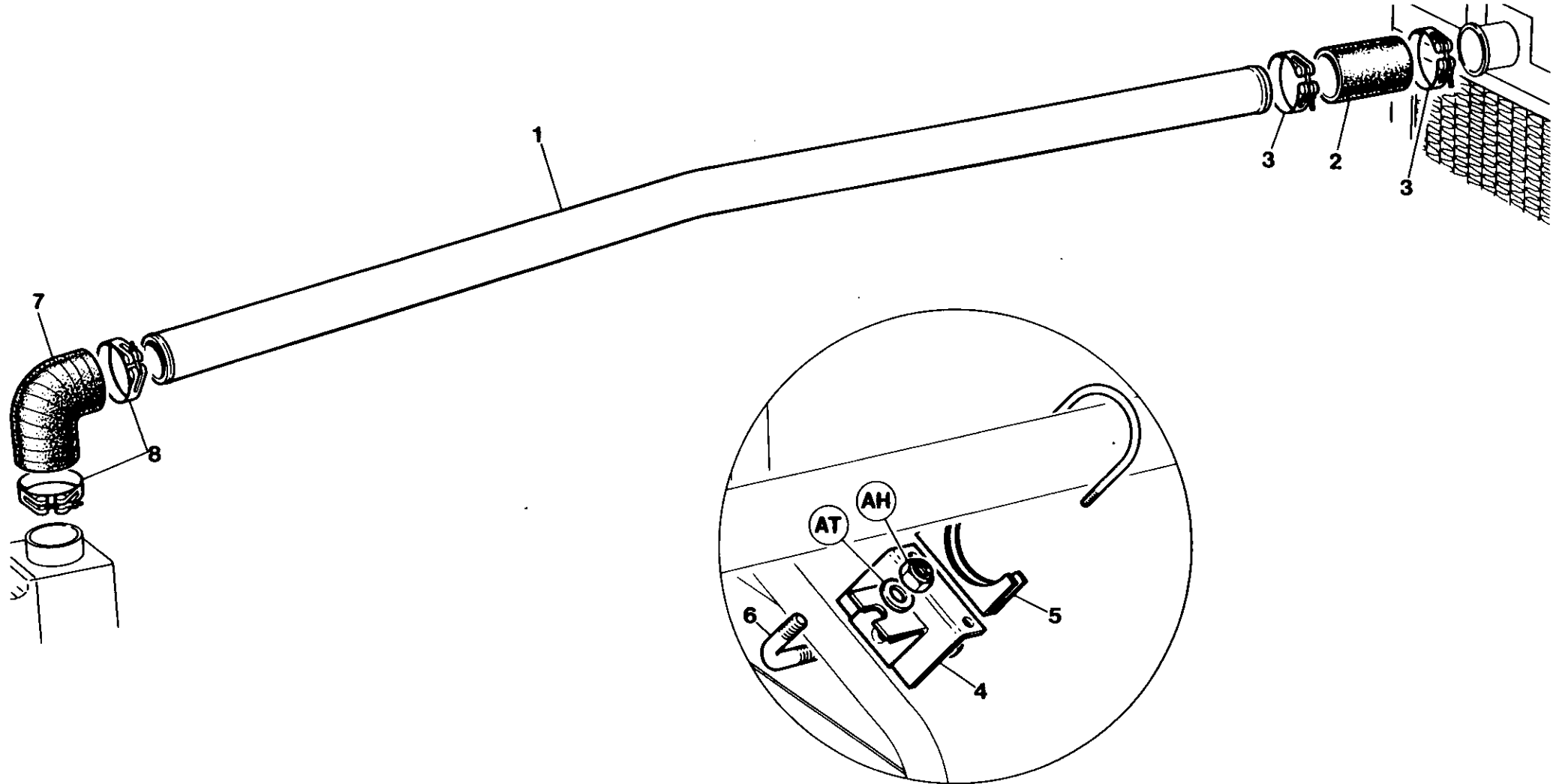
جهاز التبريد :



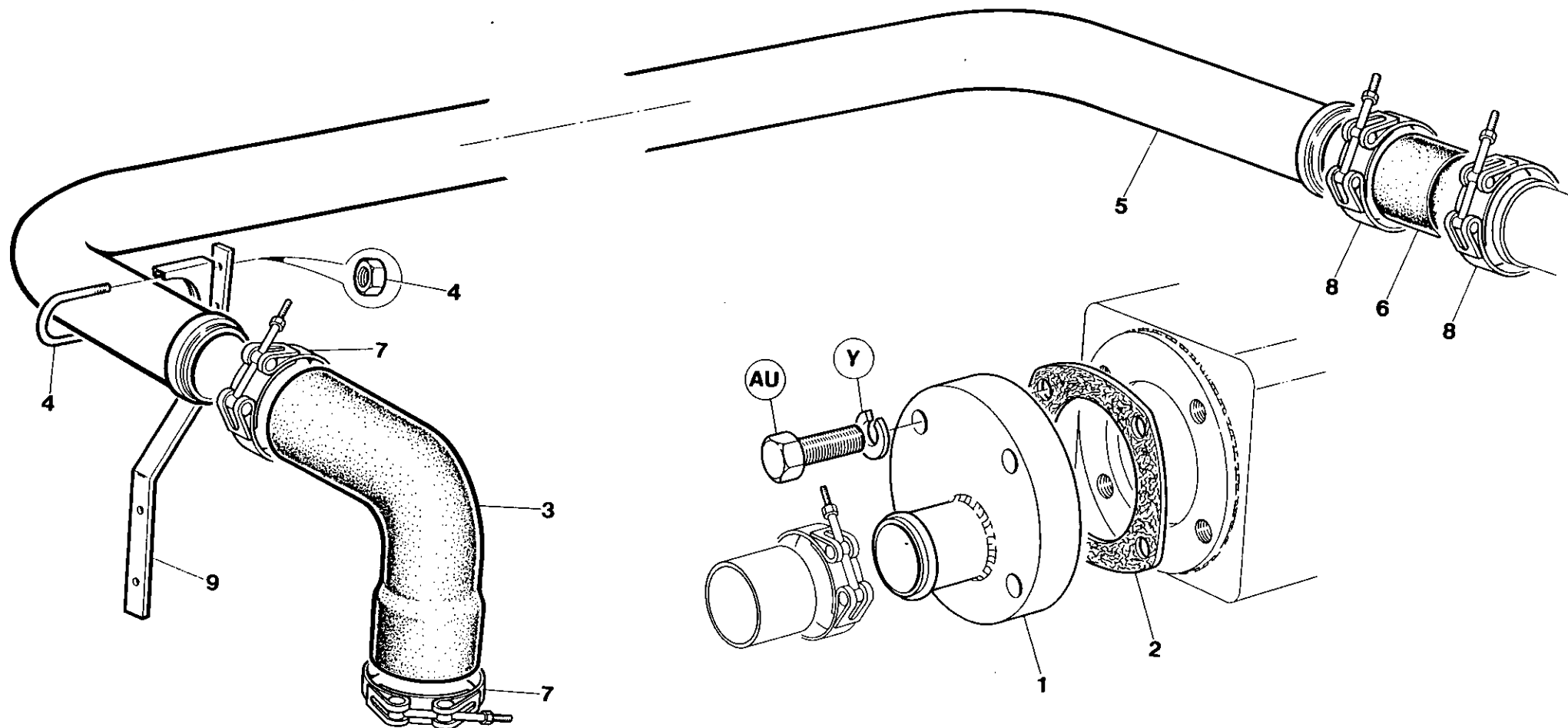
Item	C.P.N.	Qty	COOLING SYSTEM	SYSTÈME DE REFROIDISSEMENT	KÜHLSYSTEM	SISTEMA DE RAFFREDDAMENTO	SISTEMA DE REFRIGERACION	جهاز التبريد :
1	92668532	1	Header Tank					
2	92478387	5	Connector					
3	92766393	1	Hose					
4	35279868	2	Tee					
5	92713627	1	Pipe					
6	92698141	1	Pipe					
7	92698158	1	Pipe					
8	92698166	1	Pipe					
9	92417849	0.9 m	Hose					
10	92321702	2	Clip					
11	92698174	1	Adaptor					
12	92509942	1	Cap					
13	92752252	2	Guard					



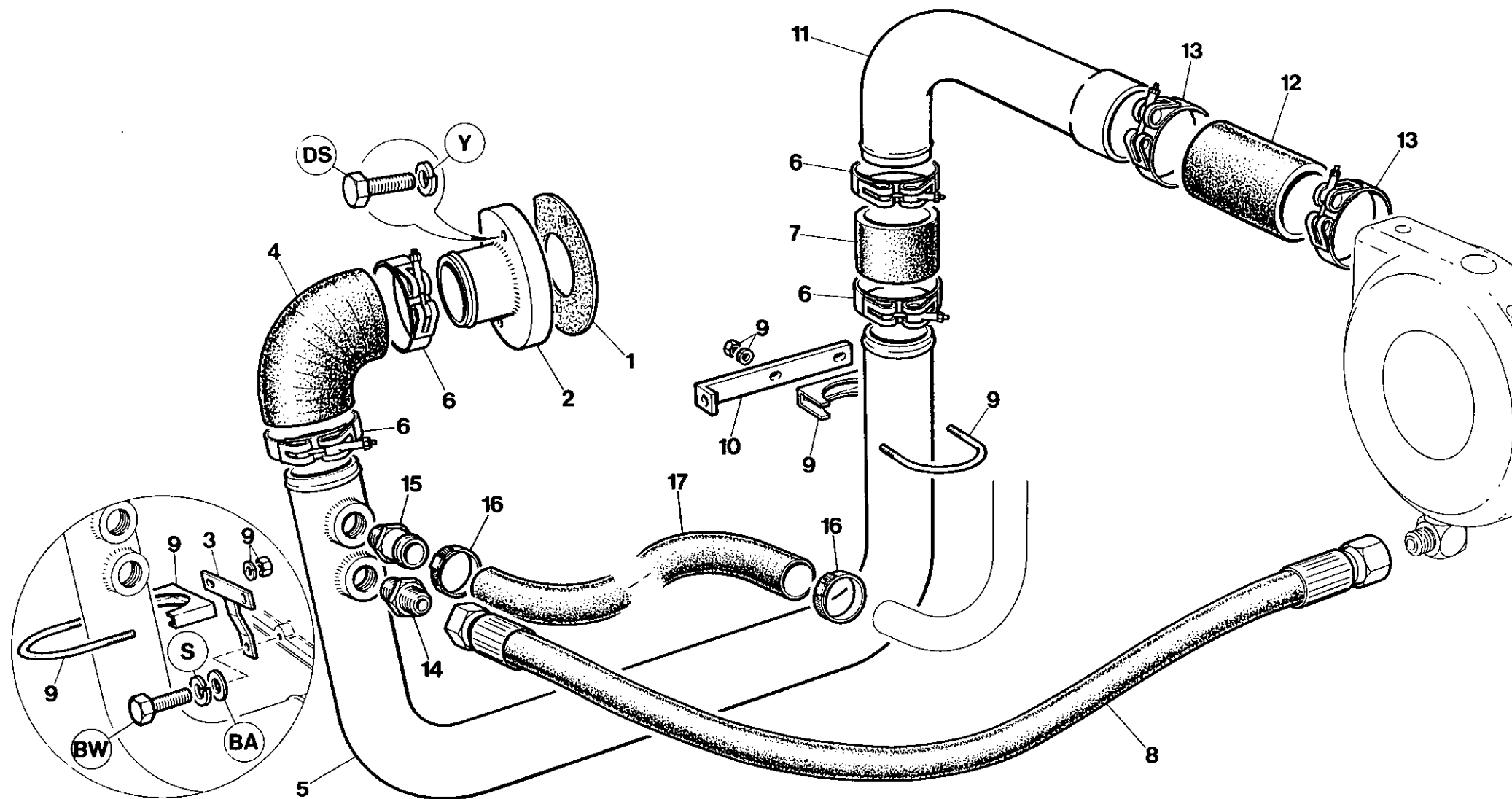
Item	C.P.N.	Qty	COOLING SYSTEM	SYSTÈME DE REFROIDISSEMENT	KÜHLSYSTEM	SISTEMA DE RAFFREDDAMENTO	SISTEMA DE REFRIGERACION	جهاز التبريد :
1	92517770	1	Pipe					
2	92517788	1	Pipe					
3	92668920	3	Hose					
4	35293059	6	Clamp					
5	92544626	1	Support					
6	92253079	1	Clamp					
7	92040751	2	Hose					



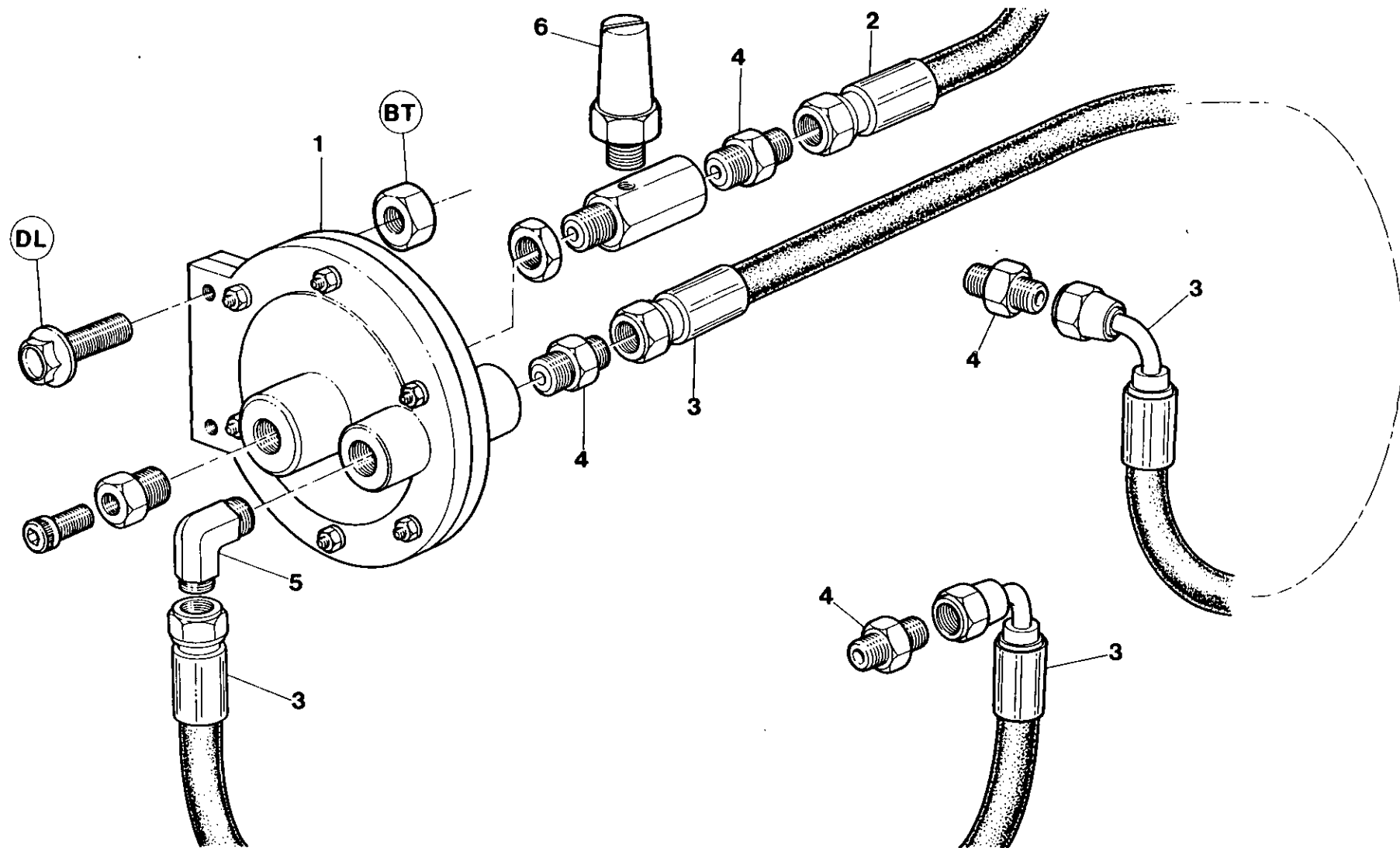
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1	92546340	1	Pipe					
2	92281013	1	Hose					
3	92042233	2	Clamp					
4	92540780	1	Bracket					
5	92253079	1	Clamp					
6	92055201	1	Stud					
7	92546688	1	Elbow					
8	35293059	2	Clamp					



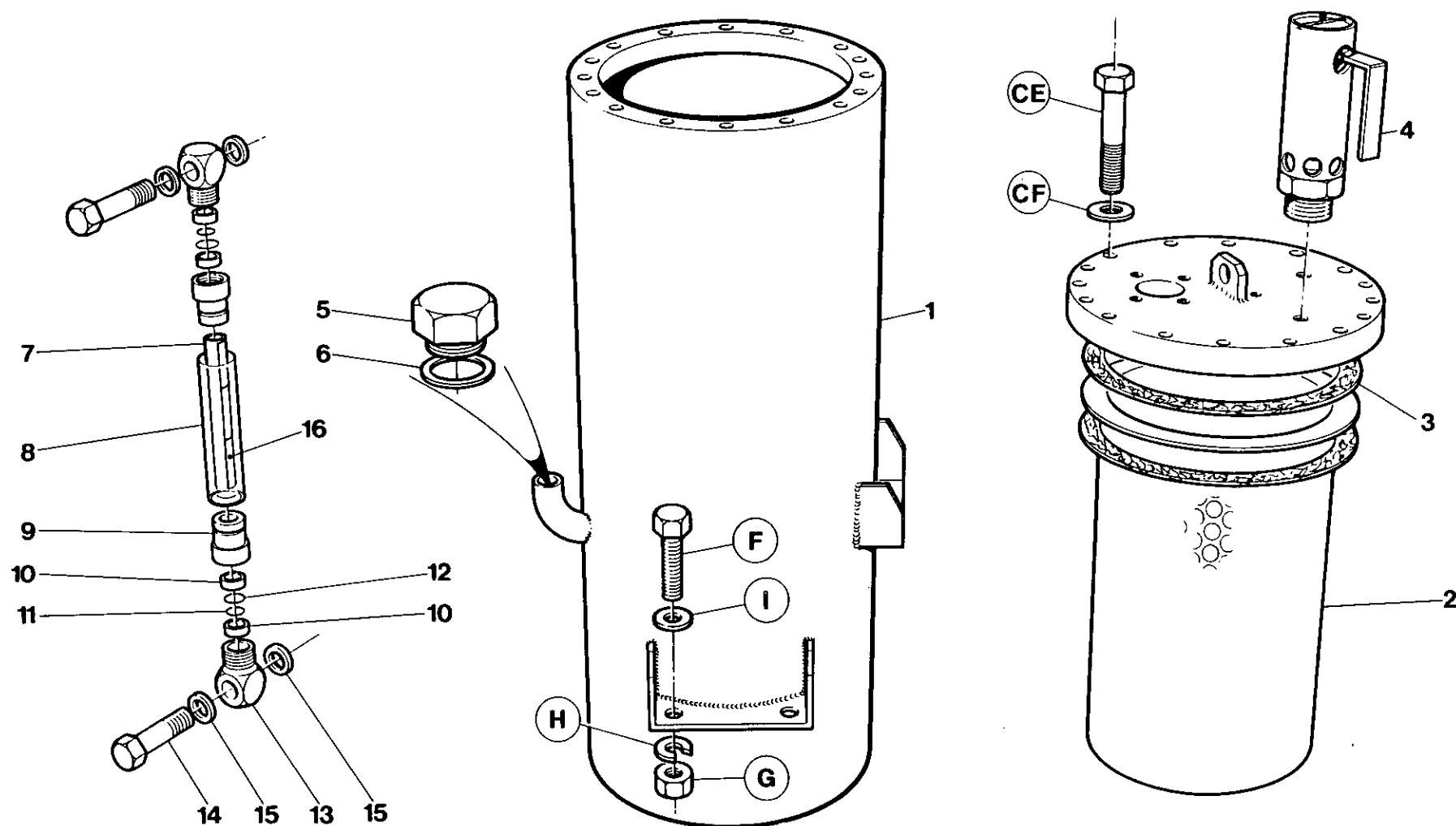
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1	92546506	1	Flange					
2	92546514	1	Gasket					
3	92546670	1	Elbow					
4	92253079	1	Clip					
5	92698224	1	Pipe					
6	92040757	1	Hose					
7	35295799	2	Clamp					
8	35293059	2	Clamp					
9	92754373	1	Bracket					



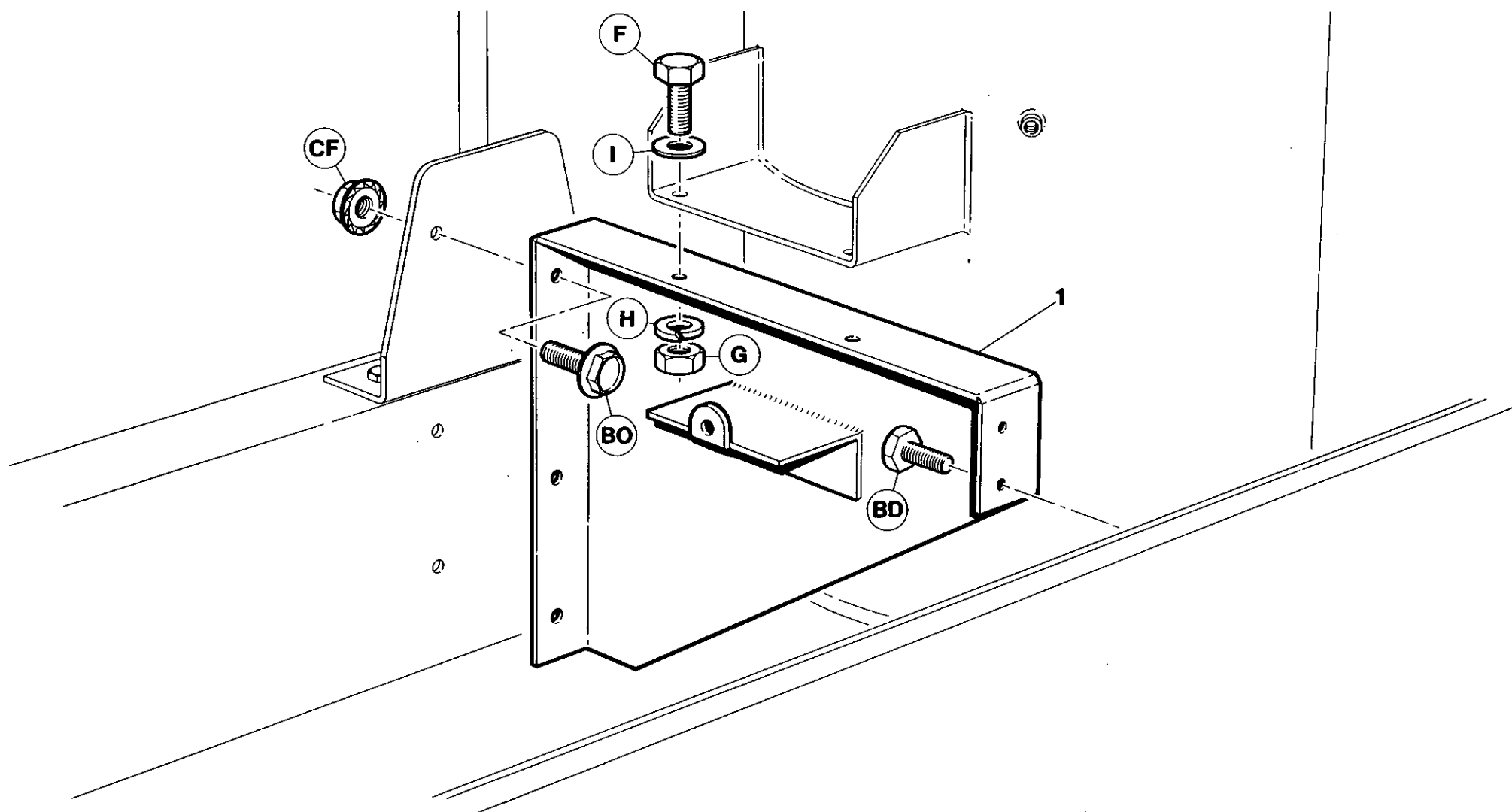
Item	C.P.N.	Qty	COOLING SYSTEM	SYSTÈME DE REFROIDISSEMENT	KÜHLSYSTEM	SISTEMA DE RAFFREDDAMENTO	SISTEMA DE REFRIGERACION	جهاز التبريد :
1	92546530	1	Gasket					
2	92546522	1	Flange					
3	92677293	1	Bracket					
4	92546688	1	Elbow					
5	92698216	1	Pipe					
6	35293059	4	Clamp					
7	92347459	1	Hose					
8	92658046	1	Hose					
9	92253079	2	Clip					
10	92546977	1	Bracket					
11	92546712	1	Pipe					
12	92725522	1	Hose					
13	35295799	2	Clamp					
14	92478304	1	Adaptor					
15	92698190	1	Adaptor					
16	92321702	2	Clamp					
17	92698182	1	Hose					



Item	C.P.N.	Qty	COOLING SYSTEM	SYSTÈME DE REFROIDISSEMENT	KÜHLSYSTEM	SISTEMA DE RAFFREDDAMENTO	SISTEMA DE REFRIGERACION	جهاز التبريد :
1	92657410	1	Water Loss Valve					
2	92547652	1	Hose					
3	92100924	2	Hose					
4	92478569	4	Connector					
5	92395458	1	Elbow					
6	92089556	1	Silencer					

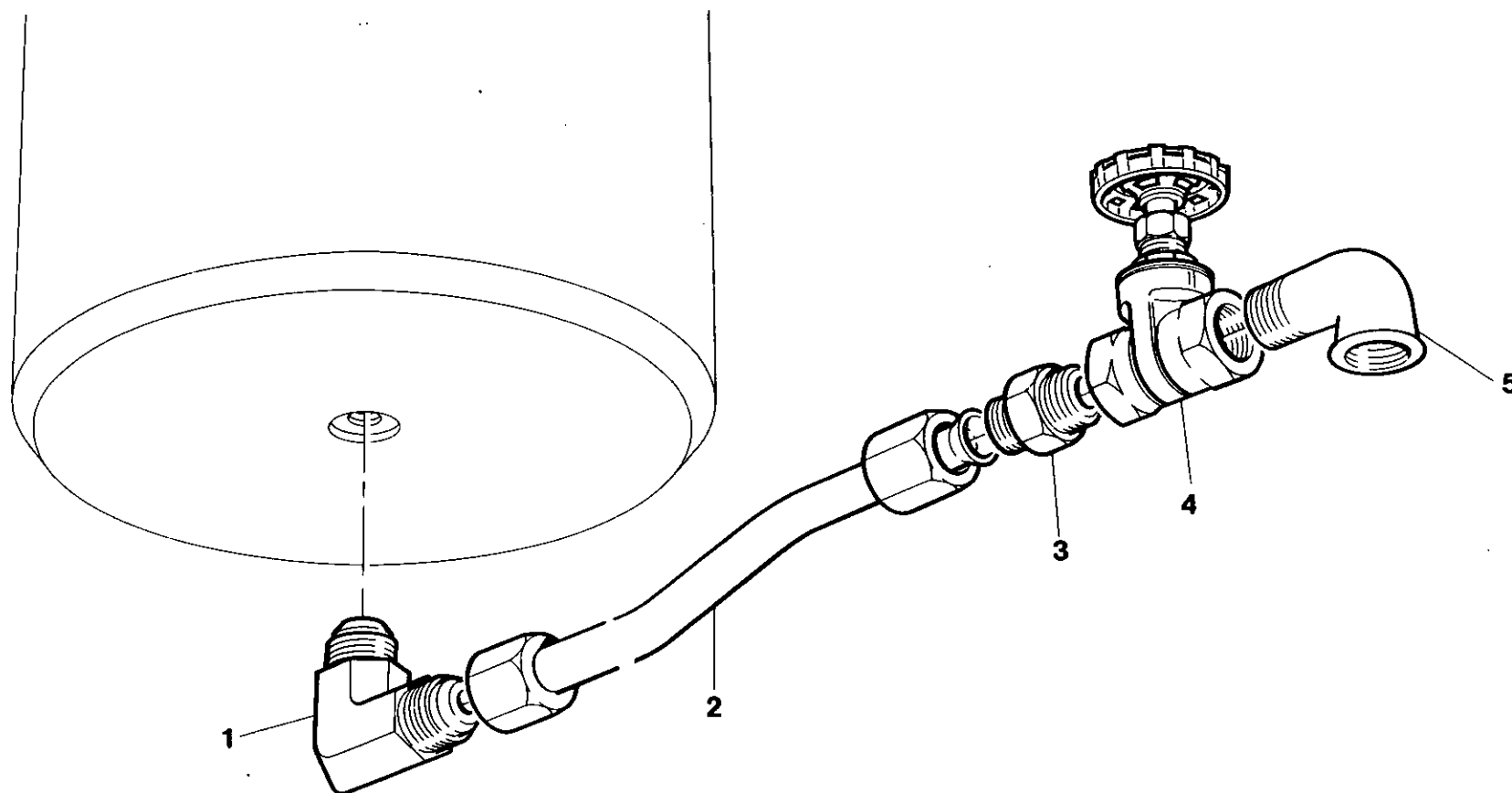


Item	C.P.N.	Qty	COOLING SYSTEM	SYSTÈME DE REFROIDISSEMENT	KÜHLSYSTEM	SISTEMA DE RAFFREDDAMENTO	SISTEMA DE REFRIGERACION	جهاز التبريد :
1	92709682	1	Separator Tank					
2	92725514	1	Element					
3	92756592	1	Gasket					
4	92049188	1	Valve					
5	35579630	1	Plug					
6	35279942	1	O Ring					
(7-16)	92095363	1	Gauge Assy					
7	92095371	1	Tube					
8	92095389	1	Tube					
9	92095397	2	Nut					
10	92095405	4	Ferrule					
11	92095413	2	O-Ring					
12	92095421	2	O-Ring					
13	92095439	2	Collar					
14	92095447	2	Nipple					
15	92293661	4	Seal					
16	92094994	1	Indicator					

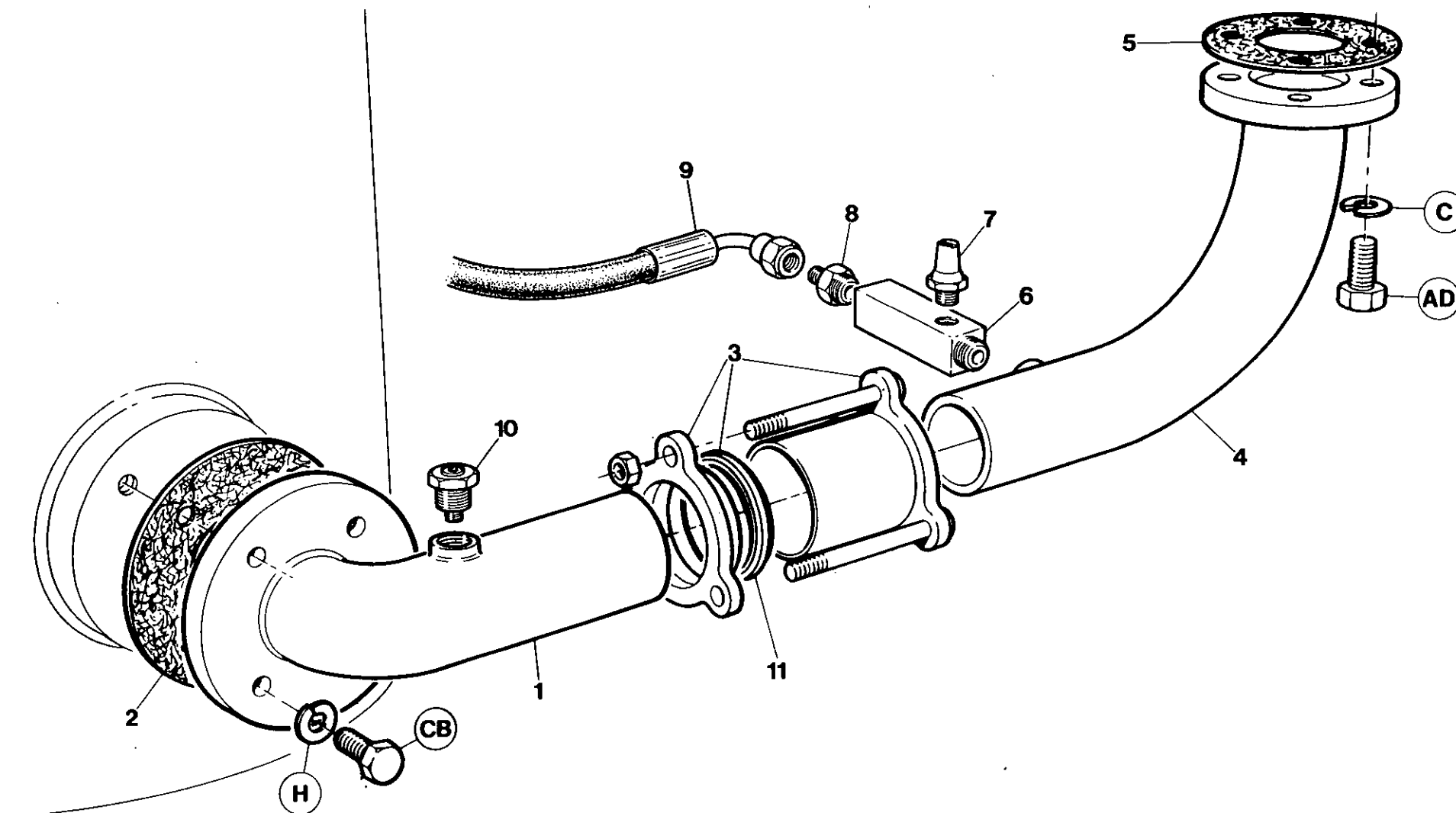


Item	C.P.N.	Qty	COOLING SYSTEM	SYSTÈME DE REFROIDISSEMENT	KÜHLSYSTEM	SISTEMA DE RAFFREDDAMENTO	SISTEMA DE REFRIGERACION	جهاز التبريد :
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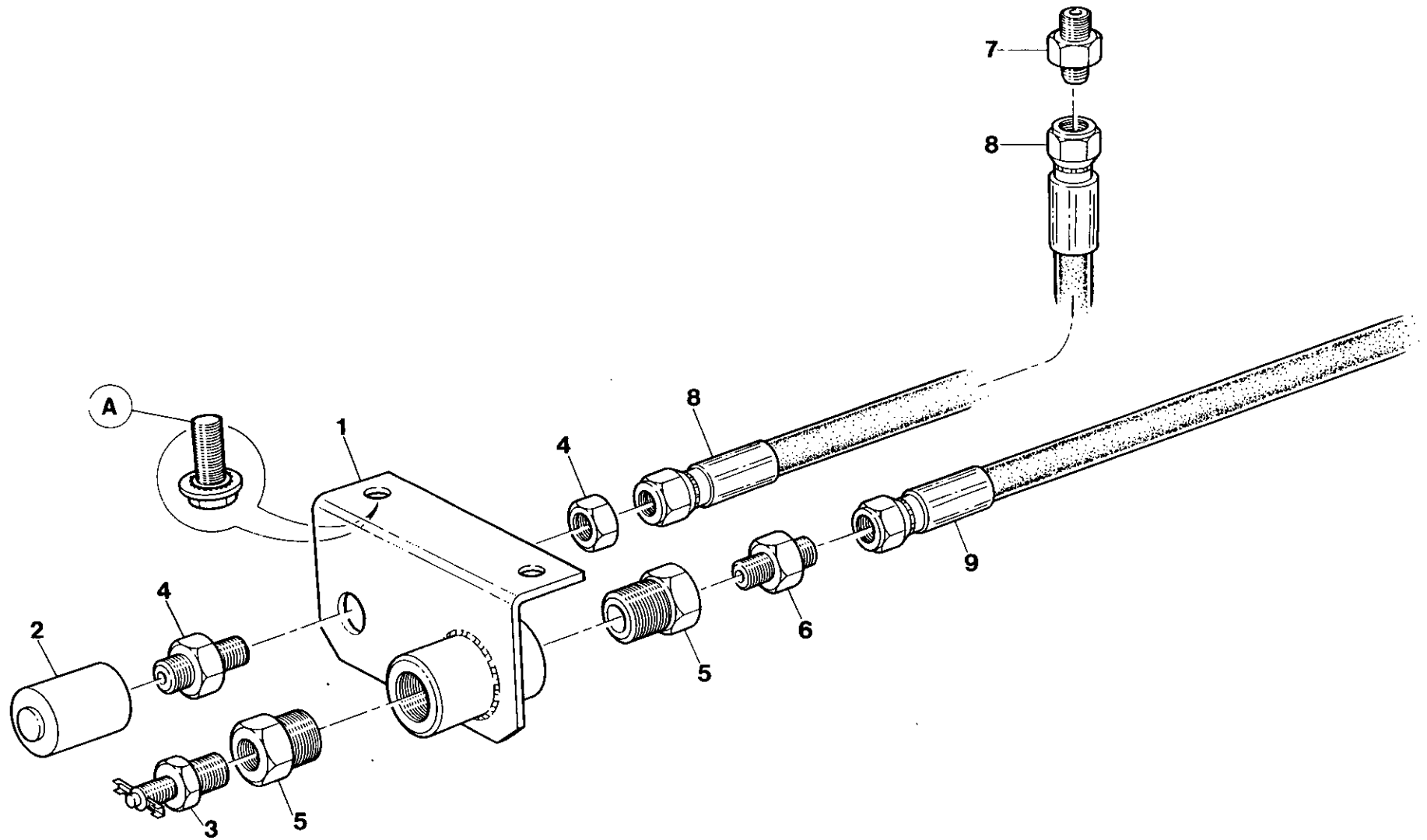
1	92066299	1	Bracket					
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Item	C.P.N.	Qty	COOLING SYSTEM	SYSTÈME DE REFROIDISSEMENT	KÜHLSYSTEM	SISTEMA DE RAFFREDDAMENTO	SISTEMA DE REFRIGERACION	جهاز التبريد :
1	92477207	1	Elbow					
2	92043041	1	Tube					
3	92419563	1	Connector					
4	92043116	1	Valve					
5	92354513	1	Elbow					



Item	C.P.N.	Qty	COOLING SYSTEM	SYSTÈME DE REFROIDISSEMENT	KÜHLSYSTEM	SISTEMA DE RAFFREDDAMENTO	SISTEMA DE REFRIGERACION	جهاز التبريد :
1	92666031	1	Pipe					
2	92058544	1	Gasket					
3	35214683	1	Coupling					
4	92721042	1	Pipe					
5	35575570	1	Gasket					
6	92546464	1	Valve					
7	92089556	1	Silencer					
8	92478569	1	Adaptor					
9	92658004	1	Hose					
10	92661743	1	Adaptor - Dry Bulb					
11	95140653	2	Gasket					



Item	C.P.N.	Qty	COOLING SYSTEM	SYSTÈME DE REFROIDISSEMENT	KÜHLSYSTEM	SISTEMA DE RAFFREDDAMENTO	SISTEMA DE REFRIGERACION	جهاز التبريد :
1	92544287	1	Bracket					
2	35321389	1	Cap					
3	92258706	1	Drain Cock					
4	92544246	1	Connector					
5	92354380	2	Reducing Bush					
6	92478387	1	Connector					
7	92492800	1	Connector					
8	92520386	1	Hose					
9	92049097	1	Hose					

COOLING SYSTEM

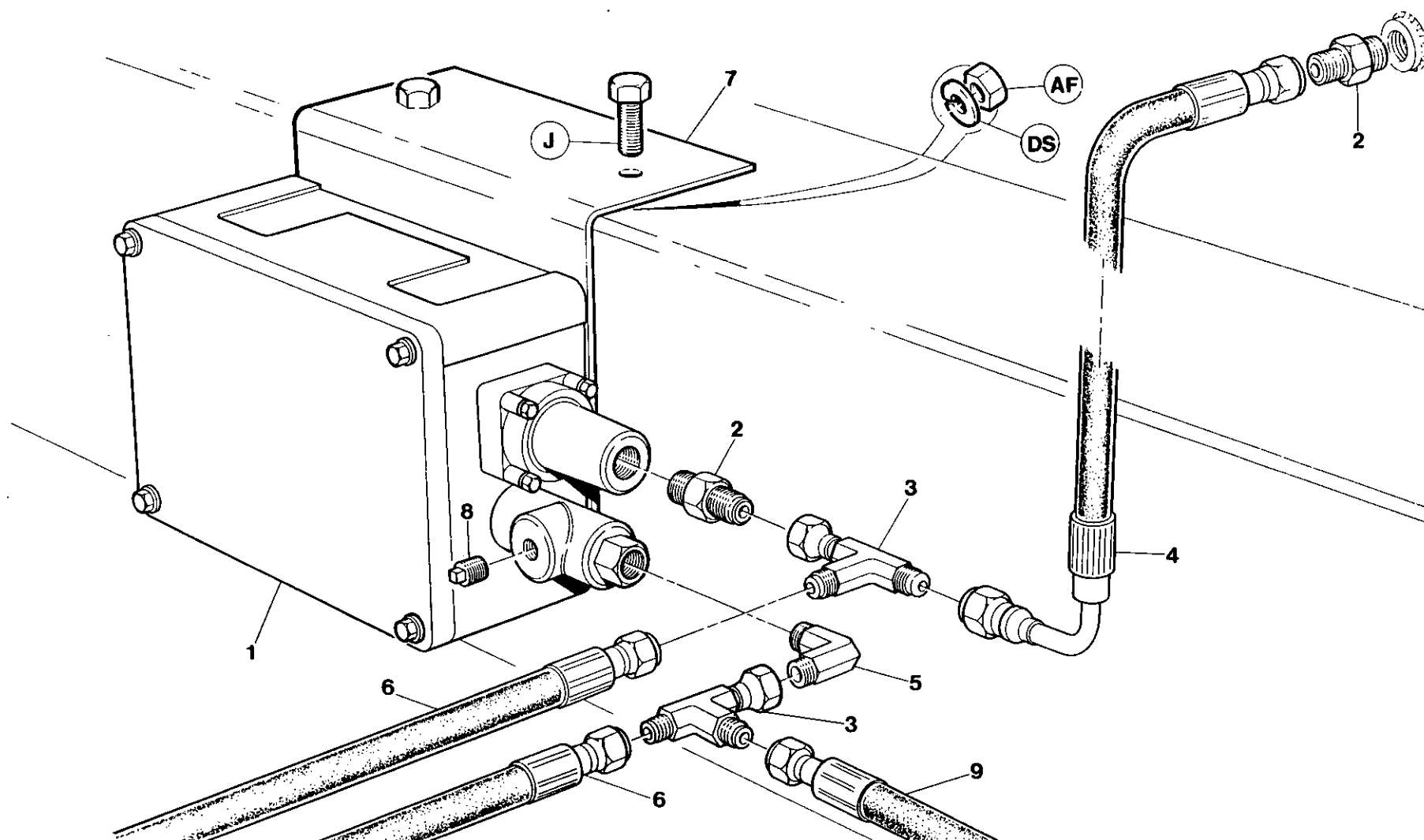
SYSTÈME DE
REFROIDISSEMENT

KÜHLSYSTEM

SISTEMA DE
RAFFREDDAMENTO

SISTEMA DE
REFRIGERACION

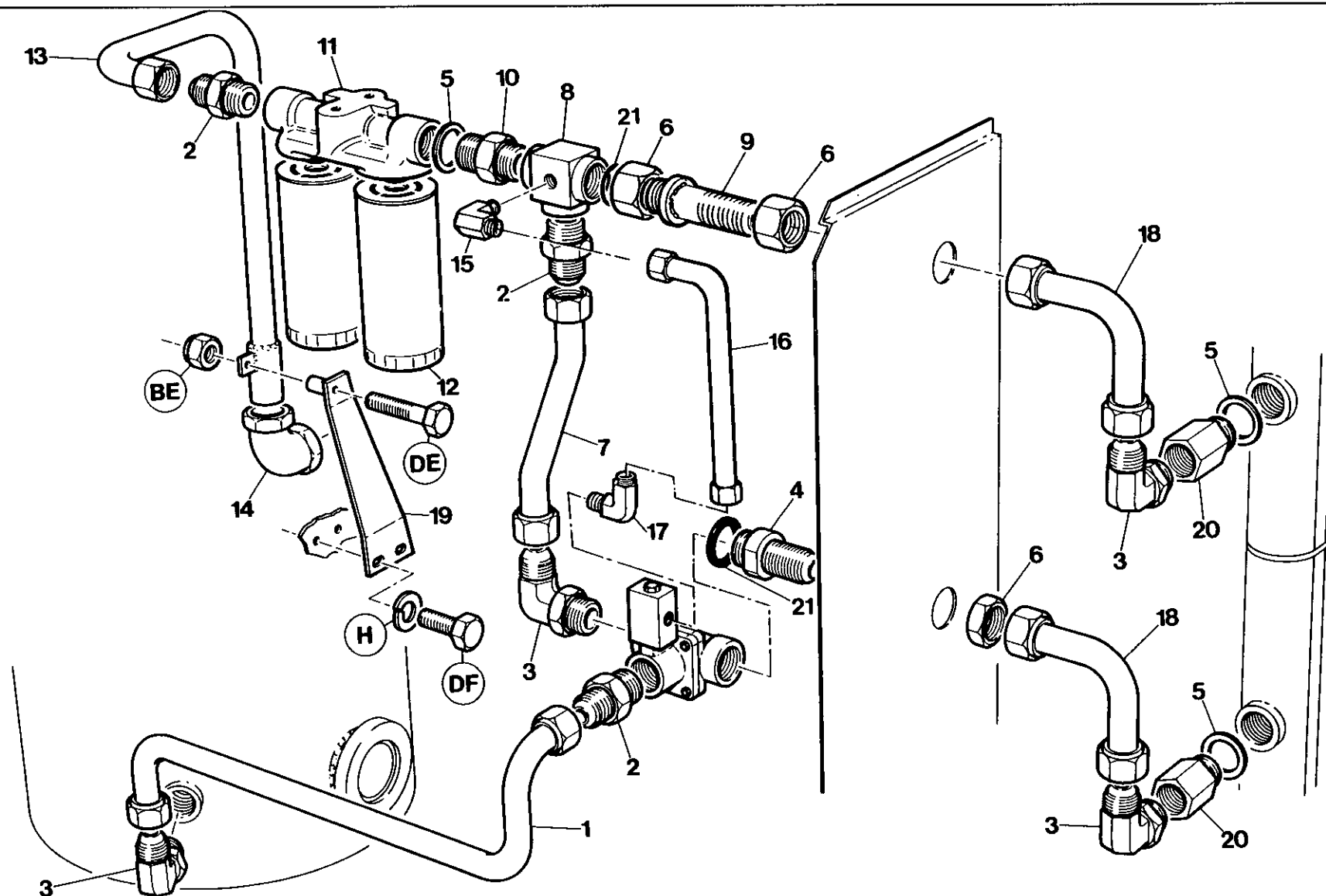
جهاز التبريد



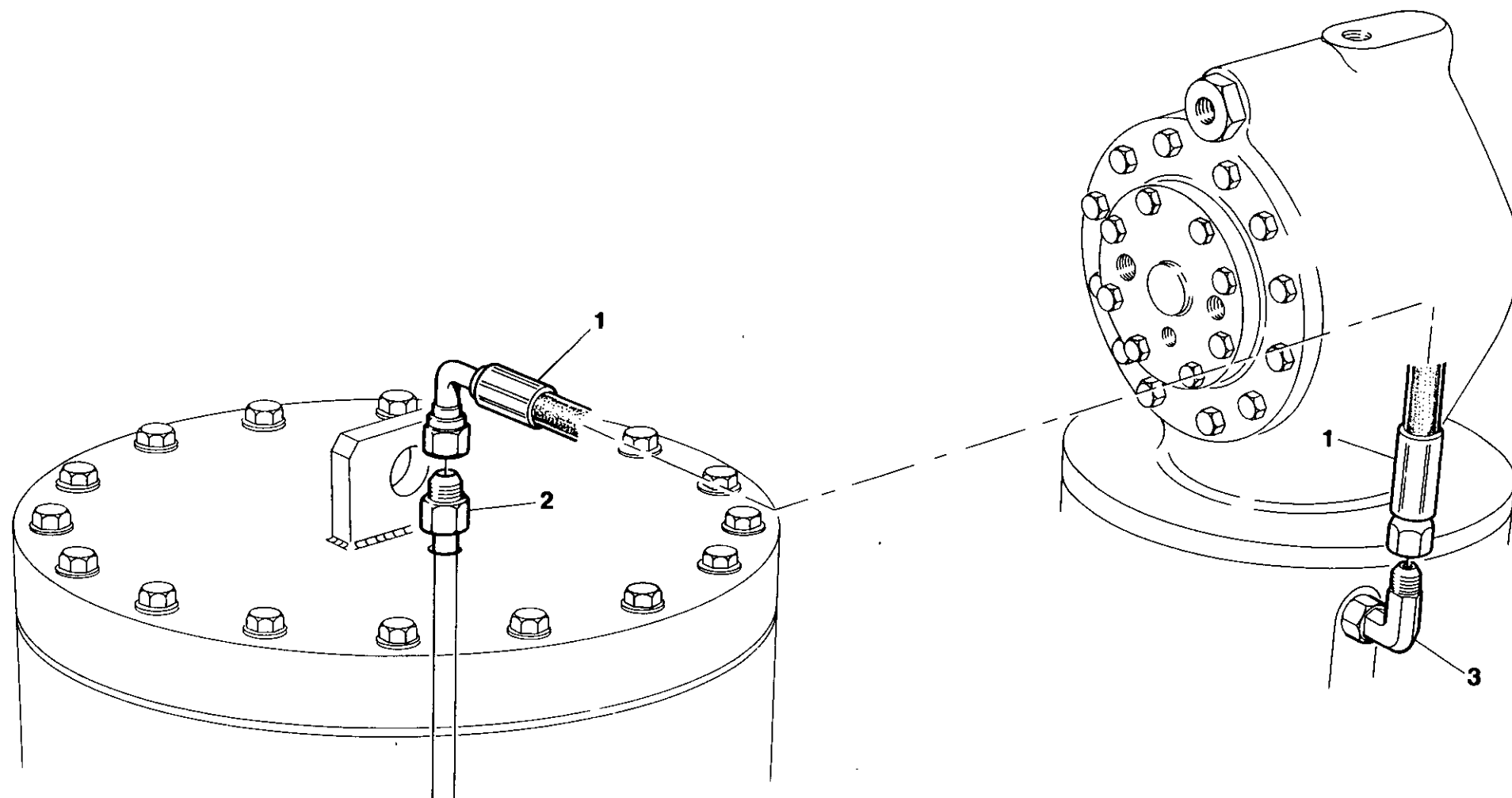
7.5.26

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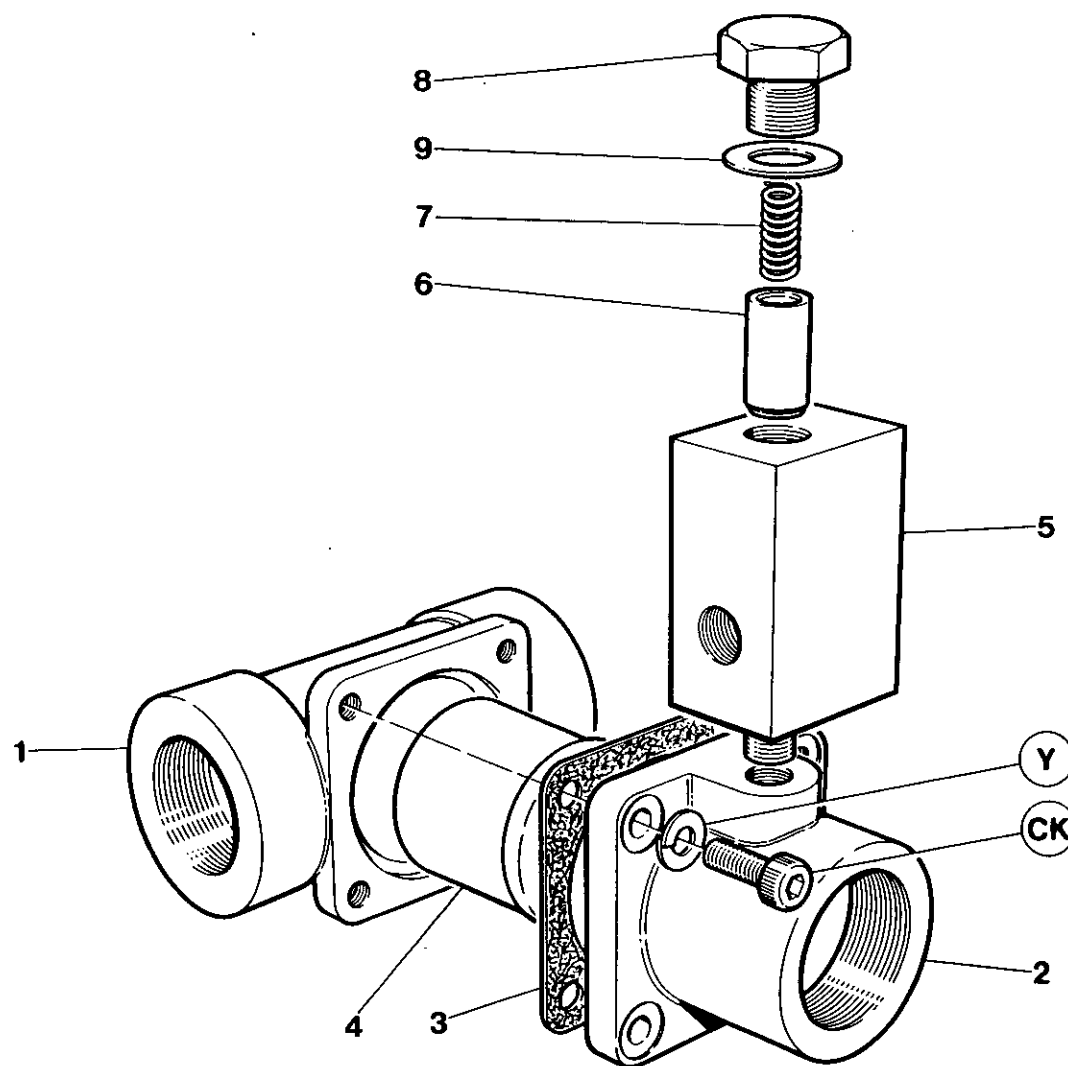
Item	C.P.N.	Qty	COOLING SYSTEM	SYSTÈME DE REFROIDISSEMENT	KÜHLSYSTEM	SISTEMA DE RAFFREDDAMENTO	SISTEMA DE REFRIGERACION	جهاز التبريد :
1	92657444	1	Oil Pressure Valve					
2	92478569	2	Adaptor					
3	92100957	2	Tee					
4	92100924	1	Hose					
5	92395458	1	Elbow					
6	92547645	2	Hose					
7	92658152	1	Bracket					
8	92354661	1	Plug					
9	92520428	1	Hose					



Item	C.P.N.	Qty	COOLING SYSTEM	SYSTÈME DE REFROIDISSEMENT	KÜHLSYSTEM	SISTEMA DE RAFFREDDAMENTO	SISTEMA DE REFRIGERACION	جهاز التبريد :
1	92708197	1	Tube					
2	92087840	3	Adaptor					
3	92087832	4	Adaptor					
4	92708163	1	Adaptor					
5	92032036	3	Washer					
6	92058494	3	Locknut					
7	92708171	1	Tube					
8	92708122	1	Tee					
9	92725498	1	Adaptor					
10	92251735	1	Adaptor					
(11-12)	92071166	1	Oil Filter Assy					
11	92071174	1	Head					
12	92071182	2	Element					
13	92680230	1	Tube					
14	92719673	1	Coupling					
15	92522770	1	Elbow					
16	92725639	1	Tube					
17	92058064	1	Elbow					
18	92753615	2	Tube					
19	92708635	1	Plate					
20	92512953	2	Adaptor					
21	92281195	2	Seal					



Item	C.P.N.	Qty	COOLING SYSTEM	SYSTÈME DE REFROIDISSEMENT	KÜHLSYSTEM	SISTEMA DE RAFFREDDAMENTO	SISTEMA DE REFRIGERACION	جهاز التبريد :
1	92079474	1	Hose					
2	92725746	1	Tube					
3	92080811	1	Orifice Elbow					



Item	C.P.N.	Qty	COOLING SYSTEM	SYSTÈME DE REFROIDISSEMENT	KÜHLSYSTEM	SISTEMA DE RAFFREDDAMENTO	SISTEMA DE REFRIGERACION	جهاز التبريد :
1-4	92752203	1	Temp. Bypass Valve Assy					
1	92707512	1	Body Temp Bypass Valve					
2	92707520	1	Cover					
3	92707538	1	Gasket					
4	35288117	1	Thermostat					
5	92708155	1	Body Pressure Bypass Valve					
5-9	92707678	1	Valve Assembly					
6	35163054	1	Bypass Valve					
7	30672430	1	Spring					
8	35214543	1	Nut					
9	30549919	1	Gasket					

COOLING SYSTEM

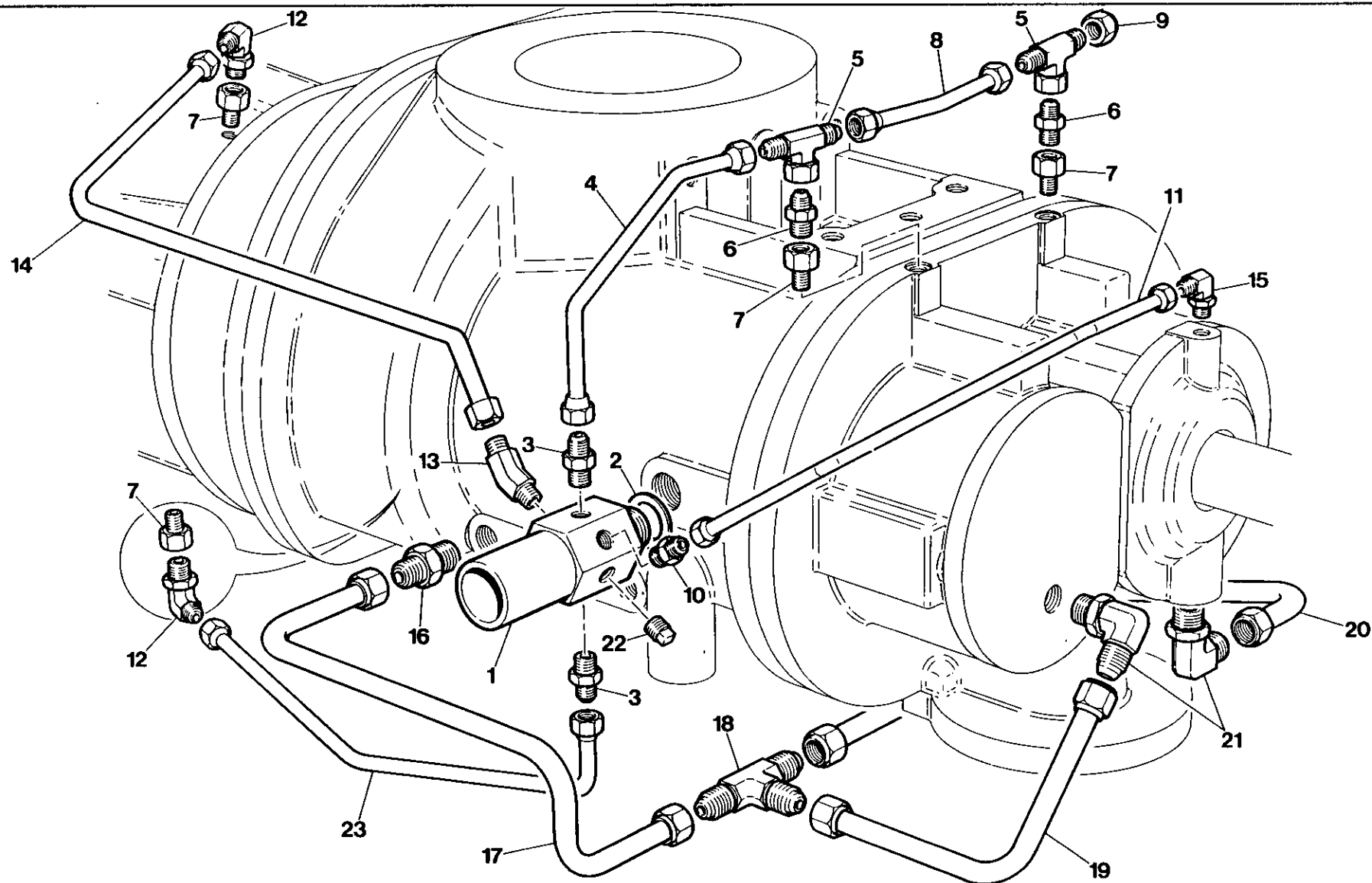
SYSTÈME DE
REFROIDISSEMENT

KÜHLSYSTEM

SISTEMA DE
RAFFREDDAMENTO

SISTEMA DE
REFRIGERACION

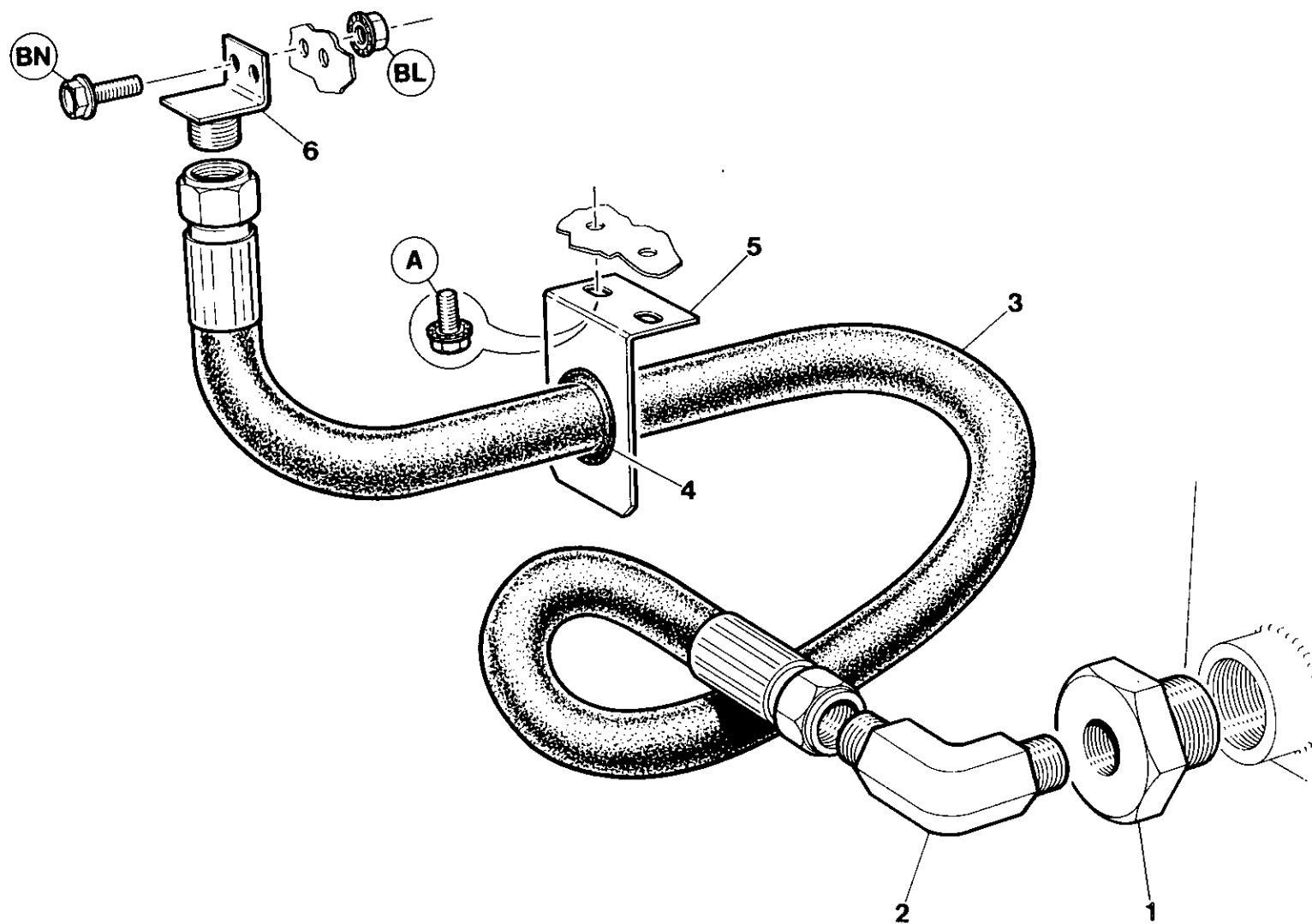
جهاز التبريد :



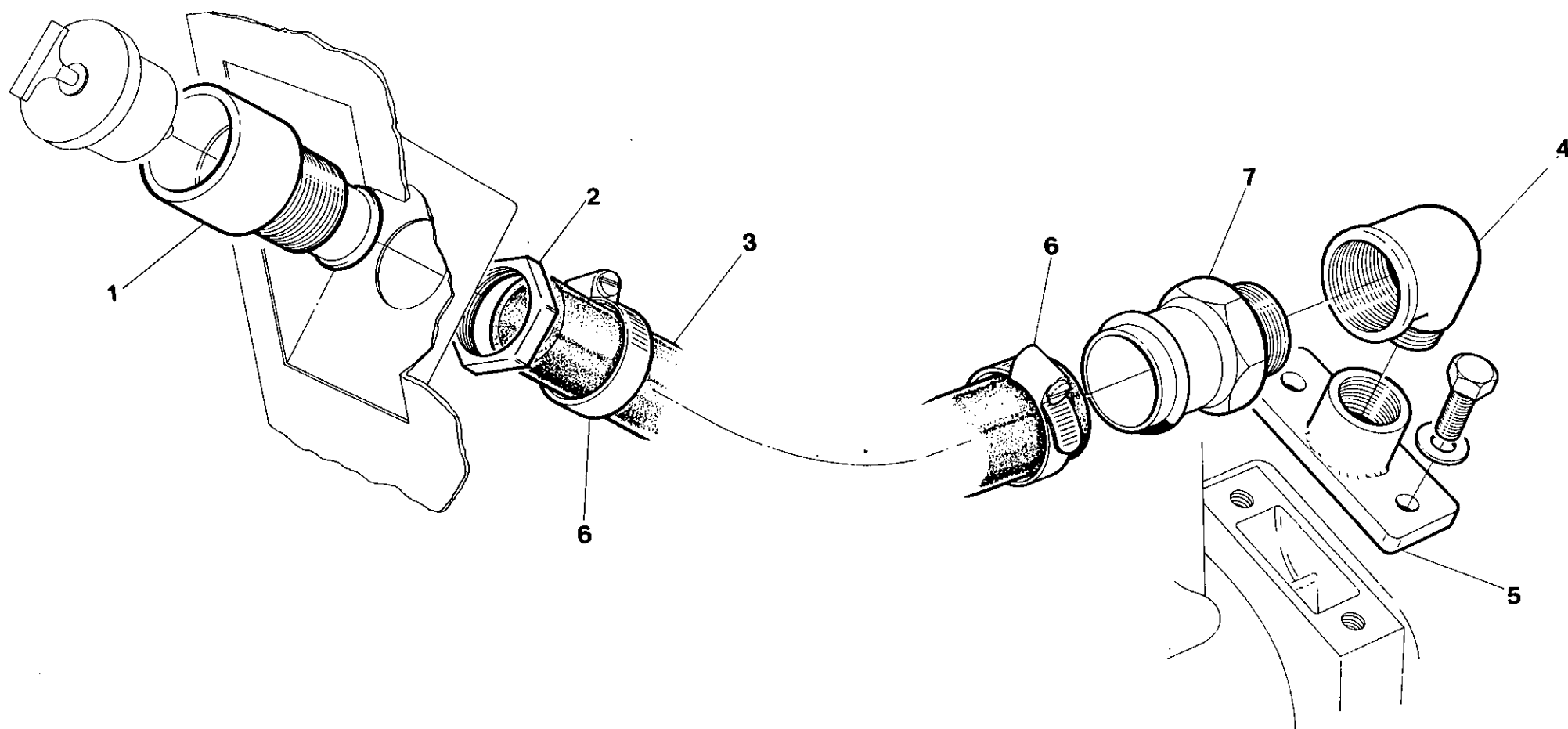
7.5.34

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Item	C.P.N.	Qty	COOLING SYSTEM	SYSTÈME DE REFROIDISSEMENT	KÜHLSYSTEM	SISTEMA DE RAFFREDDAMENTO	SISTEMA DE REFRIGERACION	جهاز التبريد :
1	92680321	1	Manifold Adaptor					
2	92023175	1	Sealing Washer					
3	92478387	2	Connector					
4	92705276	1	Tube					
5	35283092	2	Tee					
6	35283076	2	Connector					
7	92420058	4	Reducer					
8	92705284	1	Tube					
9	35321389	1	Cap					
10	92478569	1	Connector					
11	92705292	1	Tube					
12	35279827	2	Elbow					
13	92478247	1	Elbow					
14	92705300	1	Tube					
15	35279876	1	Elbow					
16	92071380	1	Connector					
17	92057066	1	Tube					
18	92083245	1	Tee					
19	92083260	1	Tube					
20	92083252	1	Tube					
21	35279801	2	Elbow					
22	92534661	2	Plug					
23	92705318	1	Tube					



Item	C.P.N.	Qty	COOLING SYSTEM	SYSTÈME DE REFROIDISSEMENT	KÜHLSYSTEM	SISTEMA DE RAFFREDDAMENTO	SISTEMA DE REFRIGERACION	جهاز التبريد :
1	92517747	1	Adaptor					
2	92395557	1	Elbow					
3	92721349	1	Hose					
4	92254887	1	Grommet					
5	92721350	1	Bracket					
6	92698794	1	Bracket					



Item	C.P.N.	Qty	COOLING SYSTEM	SYSTÈME DE REFROIDISSEMENT	KÜHLSYSTEM	SISTEMA DE RAFFREDDAMENTO	SISTEMA DE REFRIGERACION	جهاز التبريد :
1	92698208	1	Socket					
2	92677467	1	Locknut					
3	92698182	1	Hose					
4	92253905	1	Elbow					
5	92677400	1	Adaptor					
6	92321702	2	Clip					
7	92698190	1	Adaptor					

CONTROL AND
MONITORING
SYSTEM

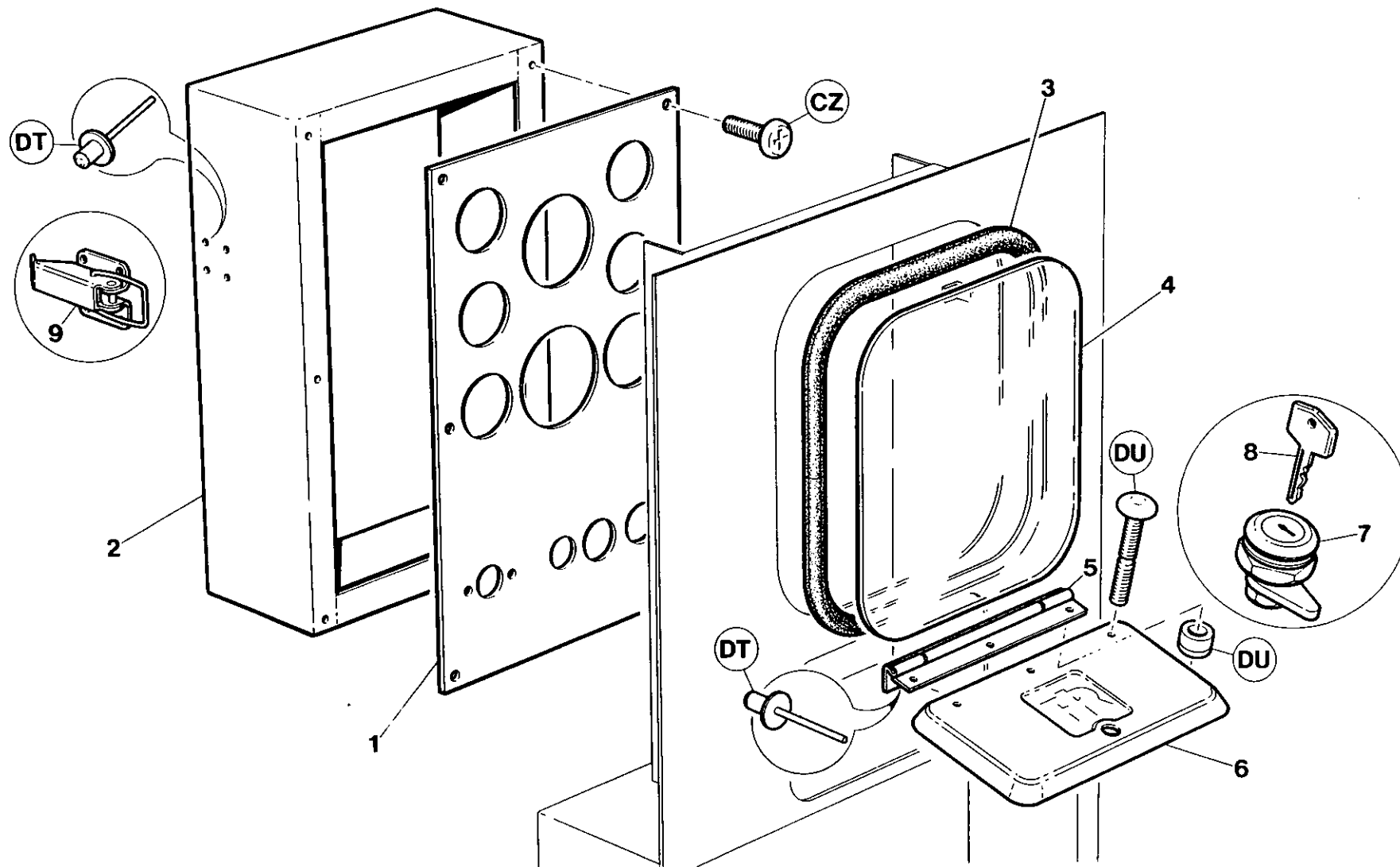
COMMANDES ET
SYSTÈME DE
CONTRÔLE

KONTROLL- UND
ÜBERWACHUNGS-
SYSTEM

SISTEMA DI
COMANDO
E CONTROLLO

SISTEMA DE
CONTROL
Y SUPERVISION

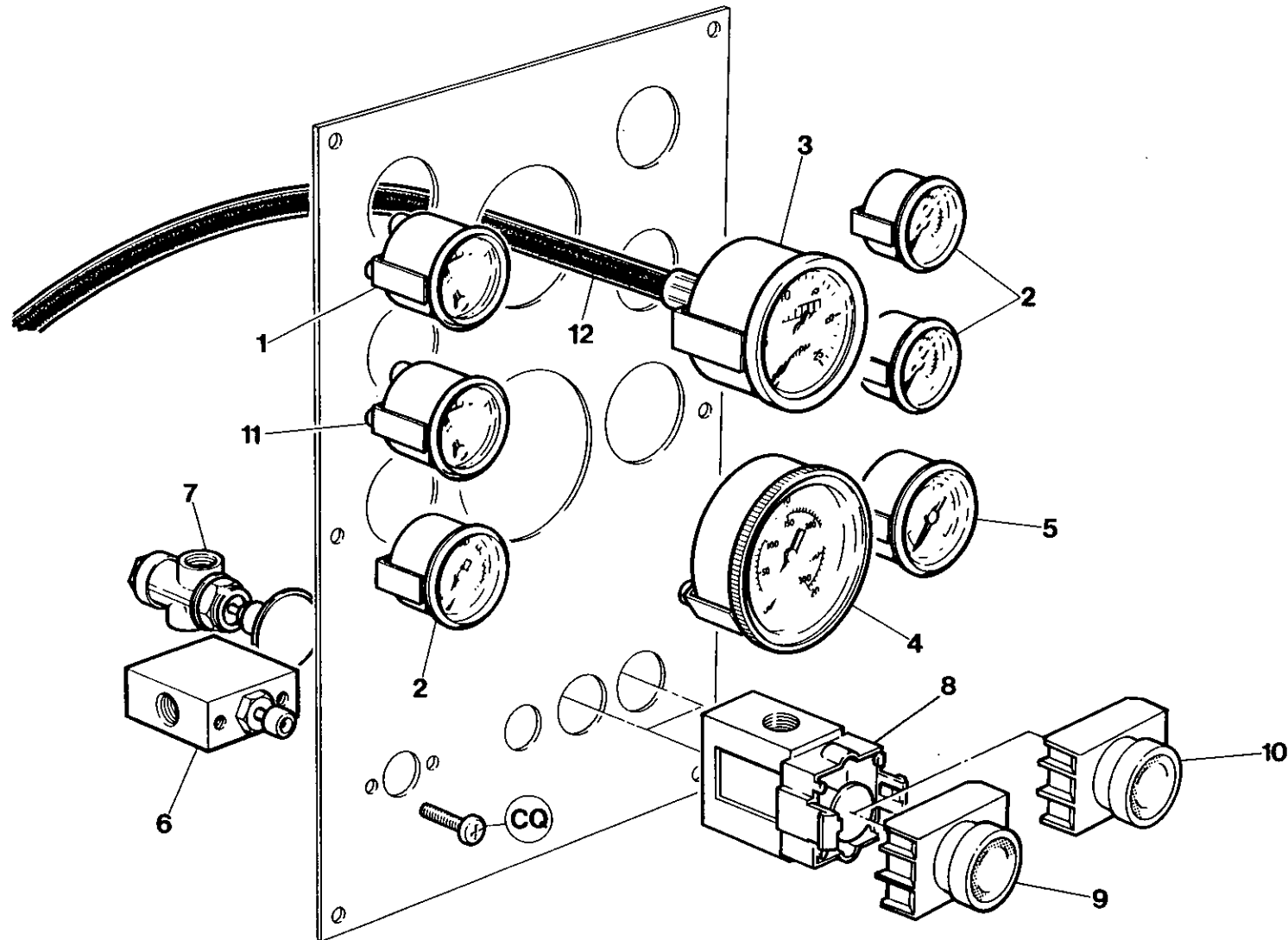
جهاز التحكم
والمرآة :



7.6.0

INGERSOLL-RAND

Item	C.P.N.	Qty	CONTROL AND MONITORING SYSTEM	COMMANDES ET SYSTÈME DE CONTRÔLE	KONTROLL- UND ÜBERWACHUNGS- SYSTEM	SISTEMA DI COMANDO E CONTROLLO	SISTEMA DE CONTROL Y SUPERVISION	جهاز التحكم والمراقبة :
1	92698265	1	Facia					
2	92540756	1	Enclosure					
3	35251800	2m	Seal					
4	92061811	1	Window					
5	92119882	1	Hinge					
6	92119924	1	Door					
7	92119932	1	Lock					
8	92041987	1	Key					
9	92042696	2	Latch					



Item	C.P.N.	Qty	CONTROL AND MONITORING SYSTEM	COMMANDES ET SYSTÈME DE CONTRÔLE	KONTROLL- UND ÜBERWACHUNGS- SYSTEM	SISTEMA DI COMANDO E CONTROLLO	SISTEMA DE CONTROL Y SUPERVISION	جهاز التحكم والمرآة :
1	92721448	1	Temperature Gauge					
2	92124692	3	Pressure Gauge					
3	92278787	1	Tachometer					
4	92698240	1	Pressure Gauge					
5	92698257	1	Temperature Gauge					
6	35583210	1	Valve					
7	03517232	1	Control Valve					
8	92681006	2	Valve					
9	92681022	1	Push Button (Green)					
10	92686856	1	Push Button (Black)					
11	92721430	1	Temperature Gauge					
12	92504703	1	Cable					

CONTROL AND
MONITORING
SYSTEM

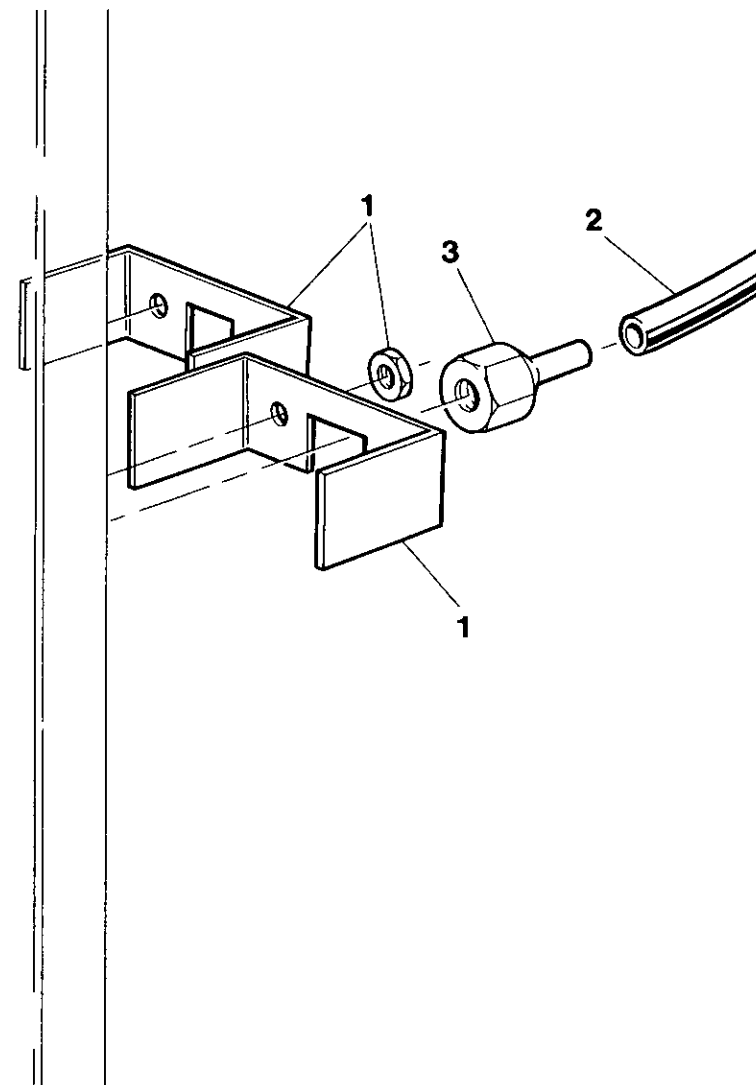
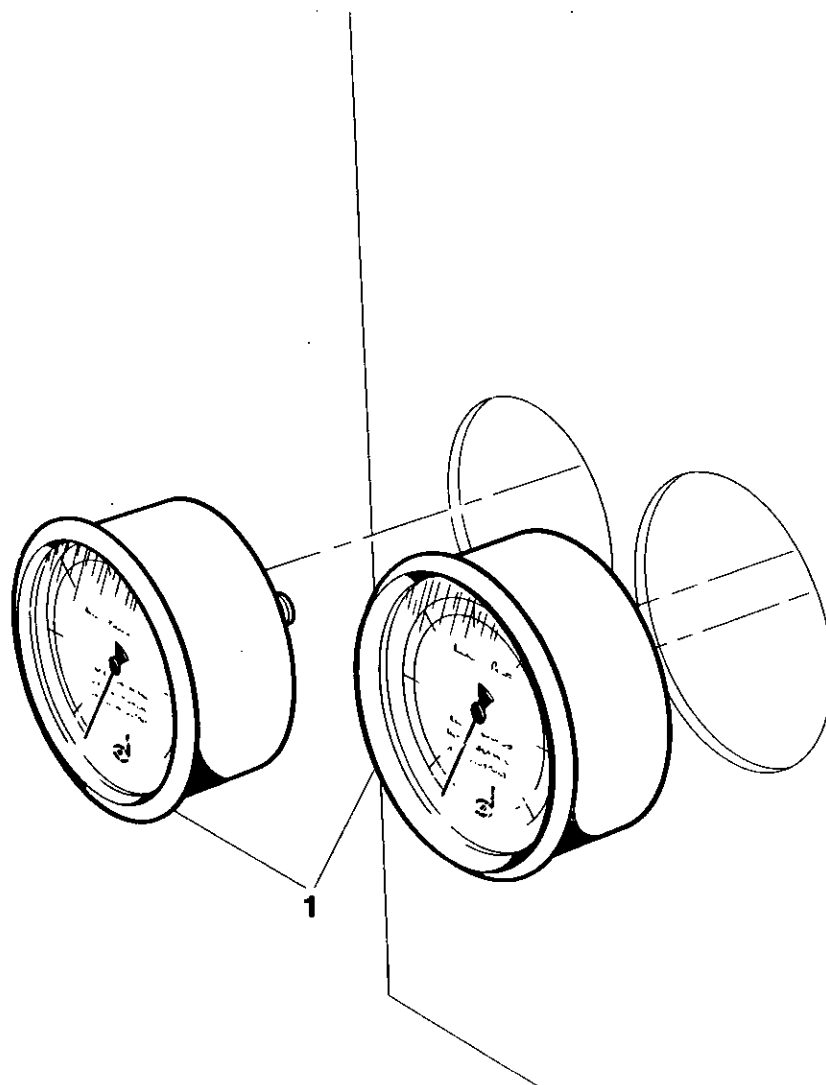
COMMANDES ET
SYSTÈME DE
CONTRÔLE

KONTROLL- UND
ÜBERWACHUNGS-
SYSTEM

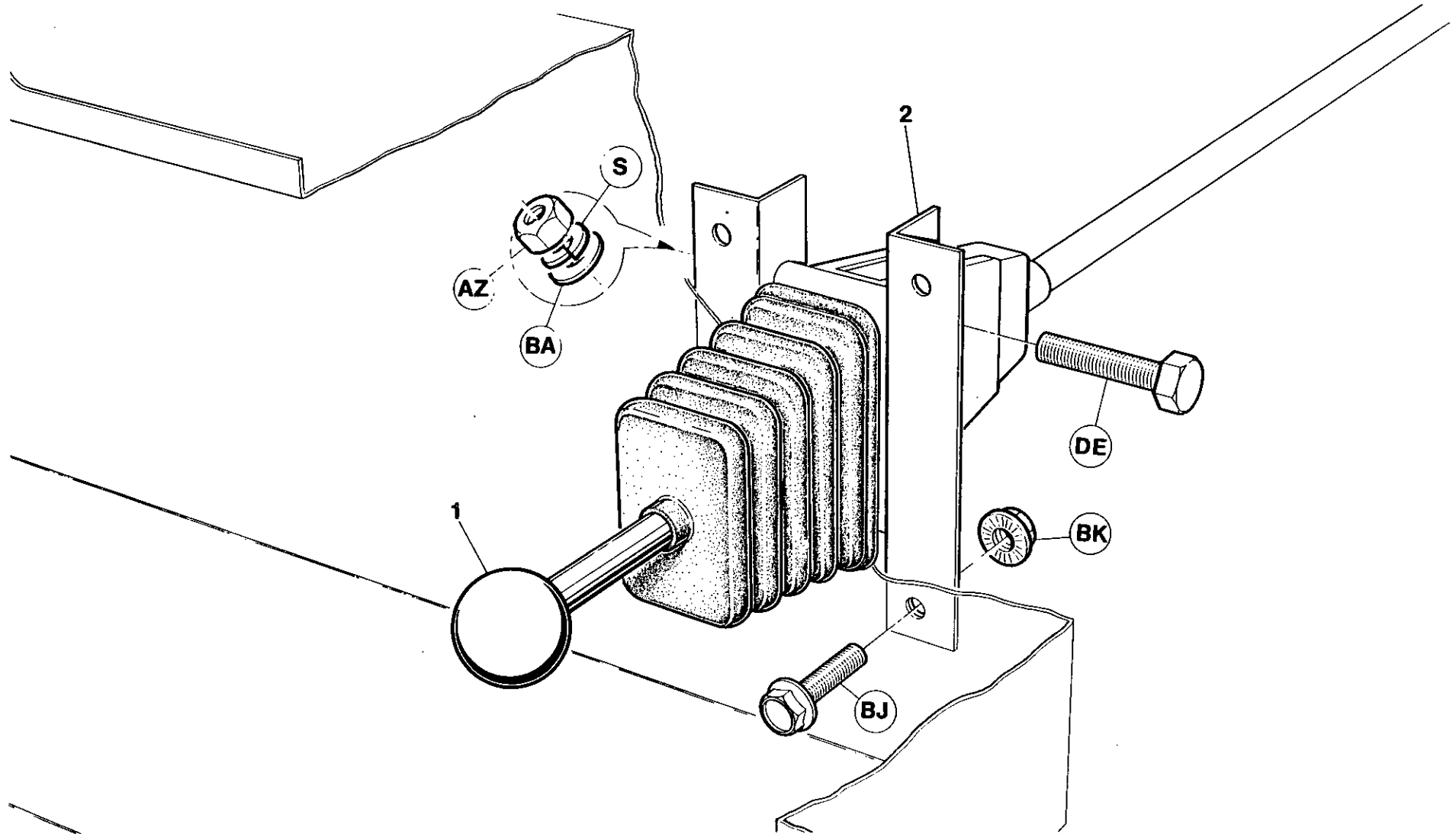
SISTEMA DI
COMANDO
E CONTROLLO

SISTEMA DE
CONTROL
Y SUPERVISION

جهاز التحكم
والمراقبة :



Item	C.P.N.	Qty	CONTROL AND MONITORING SYSTEM	COMMANDES ET SYSTÈME DE CONTRÔLE	KONTROLL- UND ÜBERWACHUNGS- SYSTEM	SISTEMA DI COMANDO E CONTROLLO	SISTEMA DE CONTROL Y SUPERVISION	جهاز التحكم والمراقبة :
1	92698273	2	Indicator-Filter					
2	92111335	3.5m	Tube					
3	92055235	2	Tailpiece					



Item	C.P.N.	Qty	CONTROL AND MONITORING SYSTEM	COMMANDES ET SYSTÈME DE CONTRÔLE	KONTROLL- UND ÜBERWACHUNGS- SYSTEM	SISTEMA DI COMANDO E CONTROLLO	SISTEMA DE CONTROL Y SUPERVISION	جهاز التحكم والمرافقة :
1	92546415	1	Cable & Lever Assy					
2	92657964	2	Bracket					

SUB ASSEMBLY

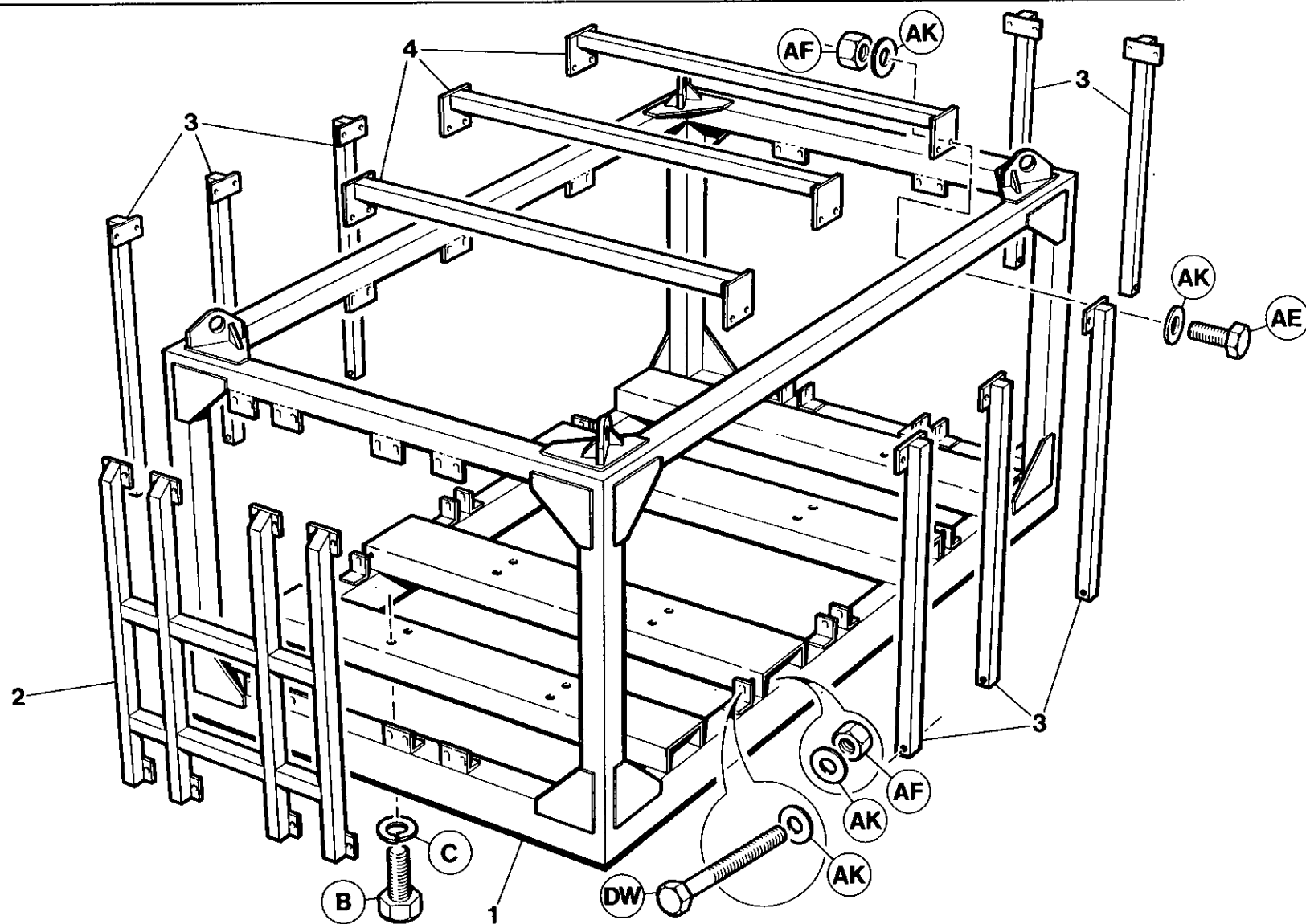
SOUS ENSEMBLE

SEKUNDÄRE
UNTERGRUPPEN

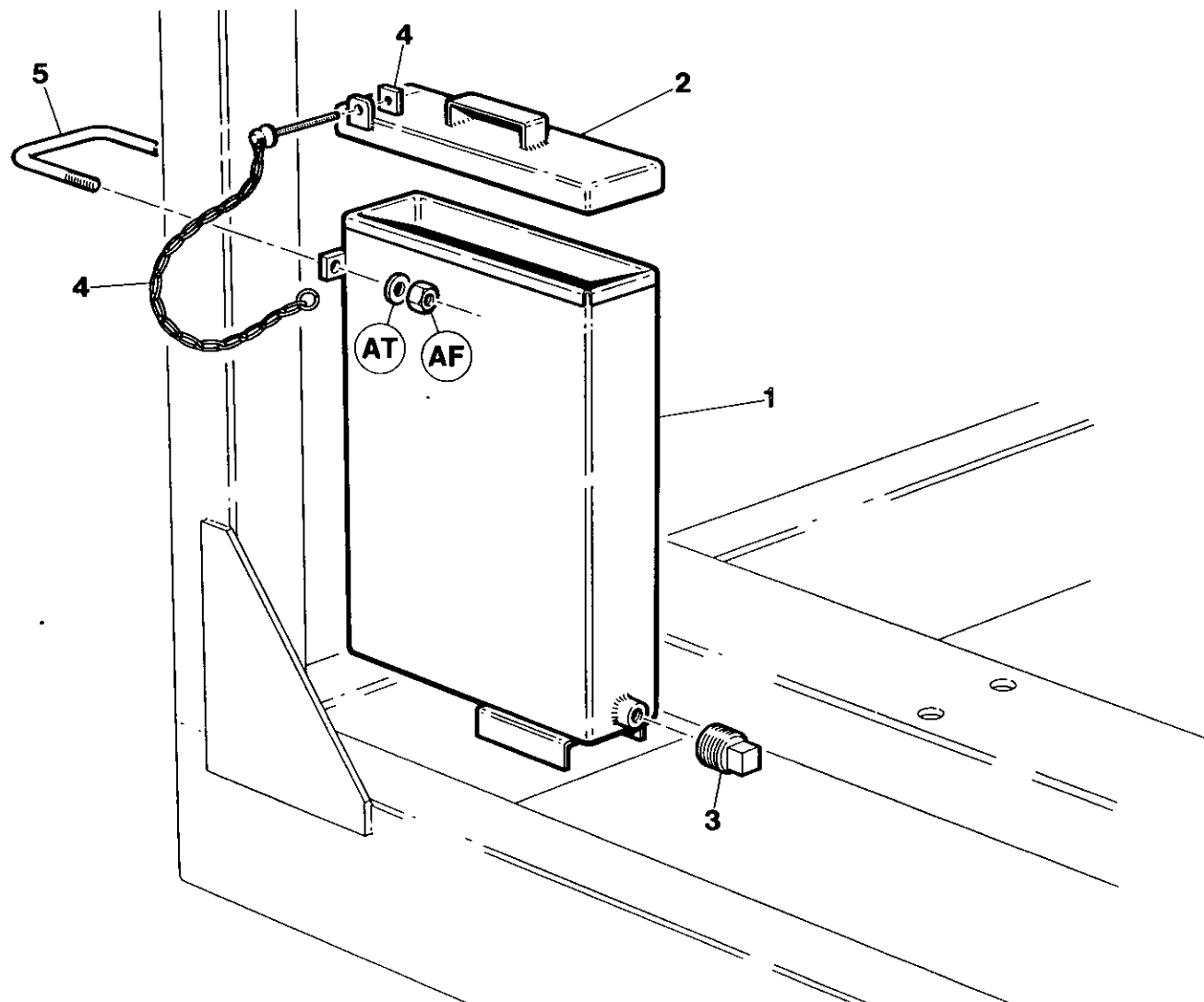
SOTTOGRUPPI

SUBCONJUNTOS

المجموعة الفرعية

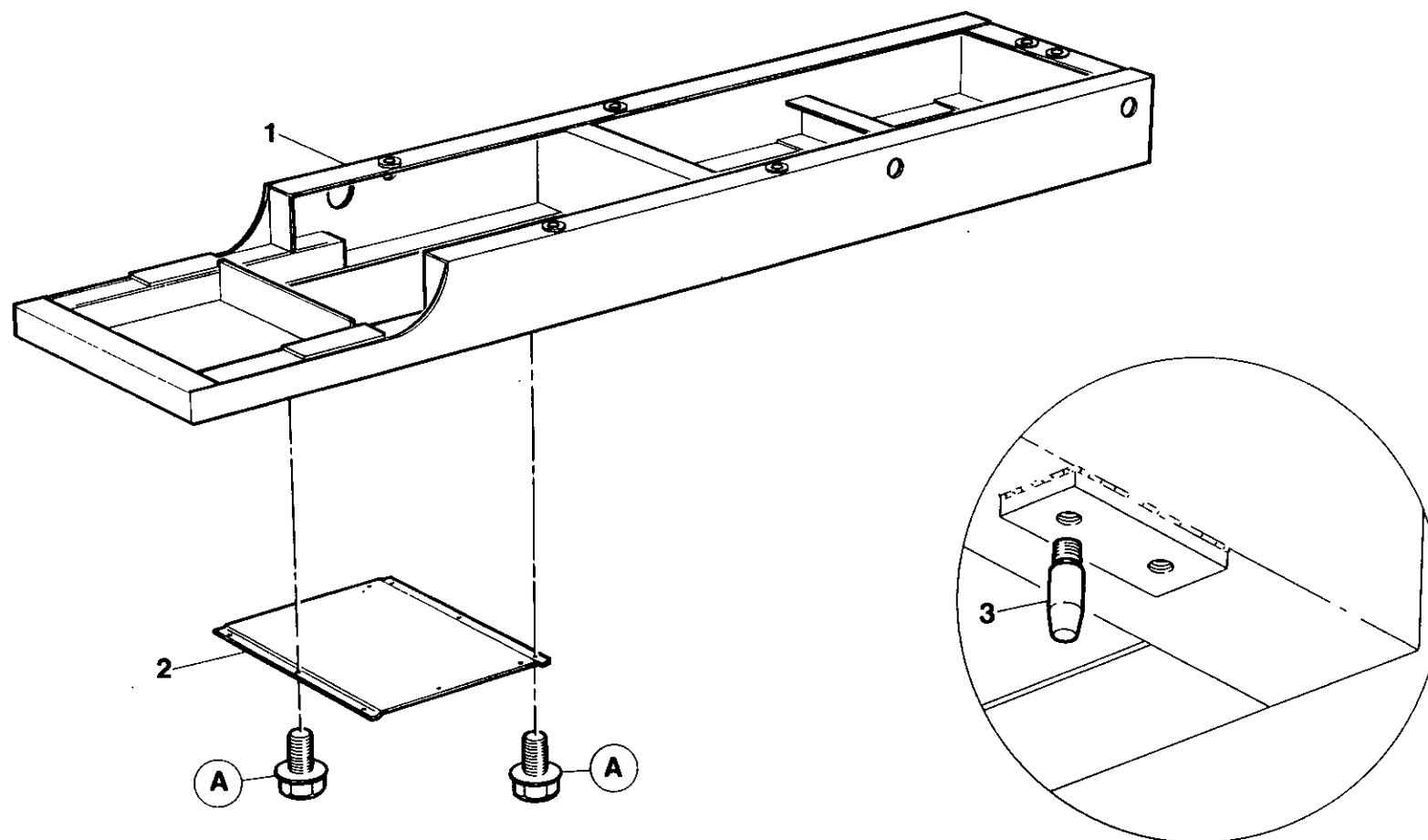
**7.7.0****INGERSOLL-RAND**

Item	C.P.N.	Qty	SUB ASSEMBLY	SOUS ENSEMBLE	SEKUNDÄRE UNTERGRUPPEN	SOTTOGRUPPI	SUBCONJUNTOS	المجموعة الفرعية :
1	92679059	1	Cradle					
2	92698737	1	Support, Front					
3	92698745	8	Support, Side & Rear					
4	92698752	3	Support, Top					



Item	C.P.N.	Qty	SUB ASSEMBLY	SOUS ENSEMBLE	SEKUNDÄRE UNTERGRUPPEN	SOTTOGRUPPI	SUBCONJUNTOS	المجموعة الفرعية :
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1	92657725	1	Tank					
2	92658293	1	Lid					
3	92257344	1	Plug					
4	92547827	1	Chain					
5	92549328	1	Clamp					



Item	C.P.N.	Qty	SUB ASSEMBLY	SOUS ENSEMBLE	SEKUNDÄRE UNTERGRUPPEN	SOTTOGRUPPI	SUBCONJUNTOS	المجموعة الفرعية :
1	92719814	1	Truck Frame					
2	92042639	1	Undertray					
3	92656966	4	Stud					

SUB ASSEMBLY

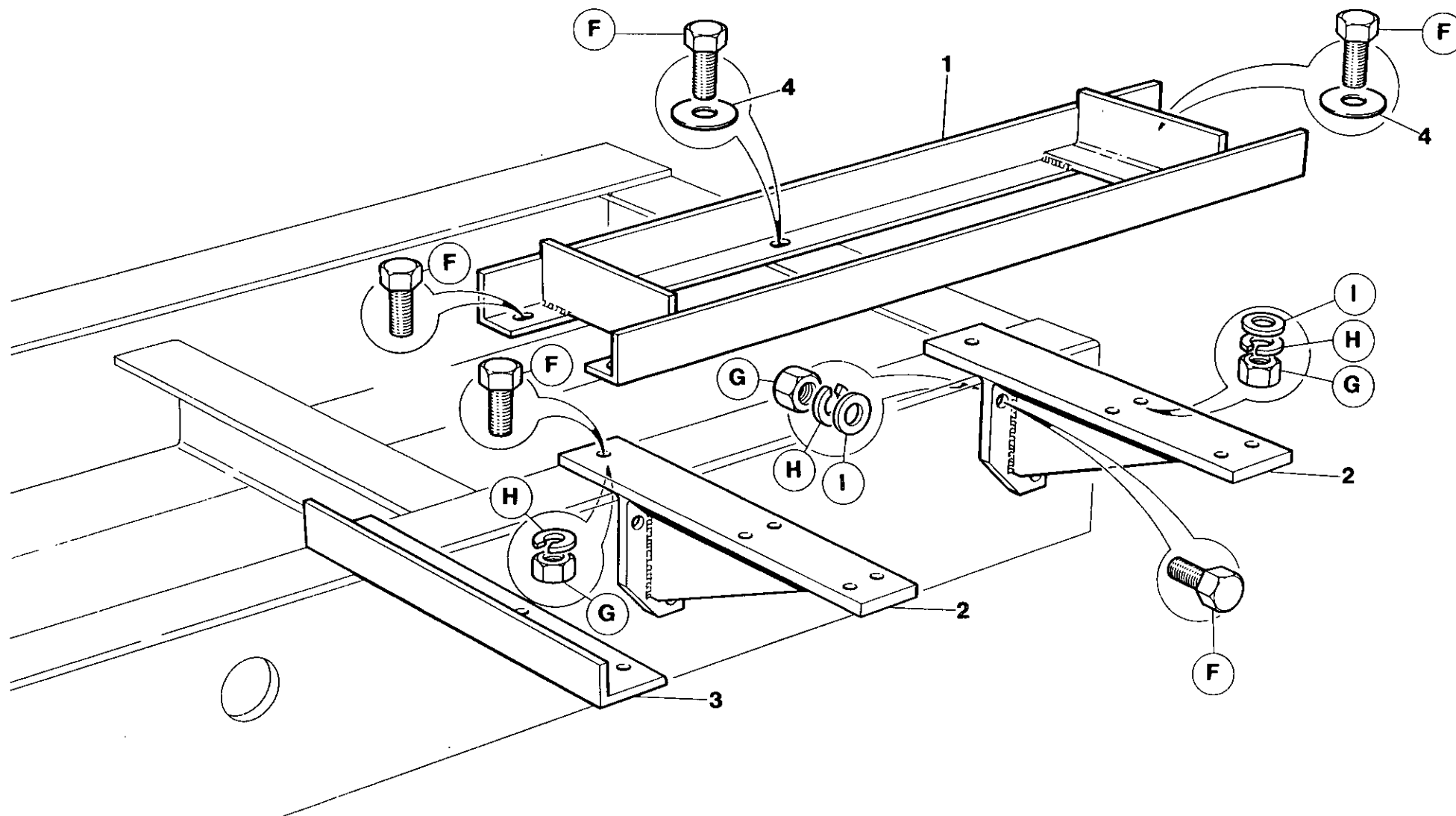
SOUS ENSEMBLE

SEKUNDÄRE
UNTERGRUPPEN

SOTTOGRUPPI

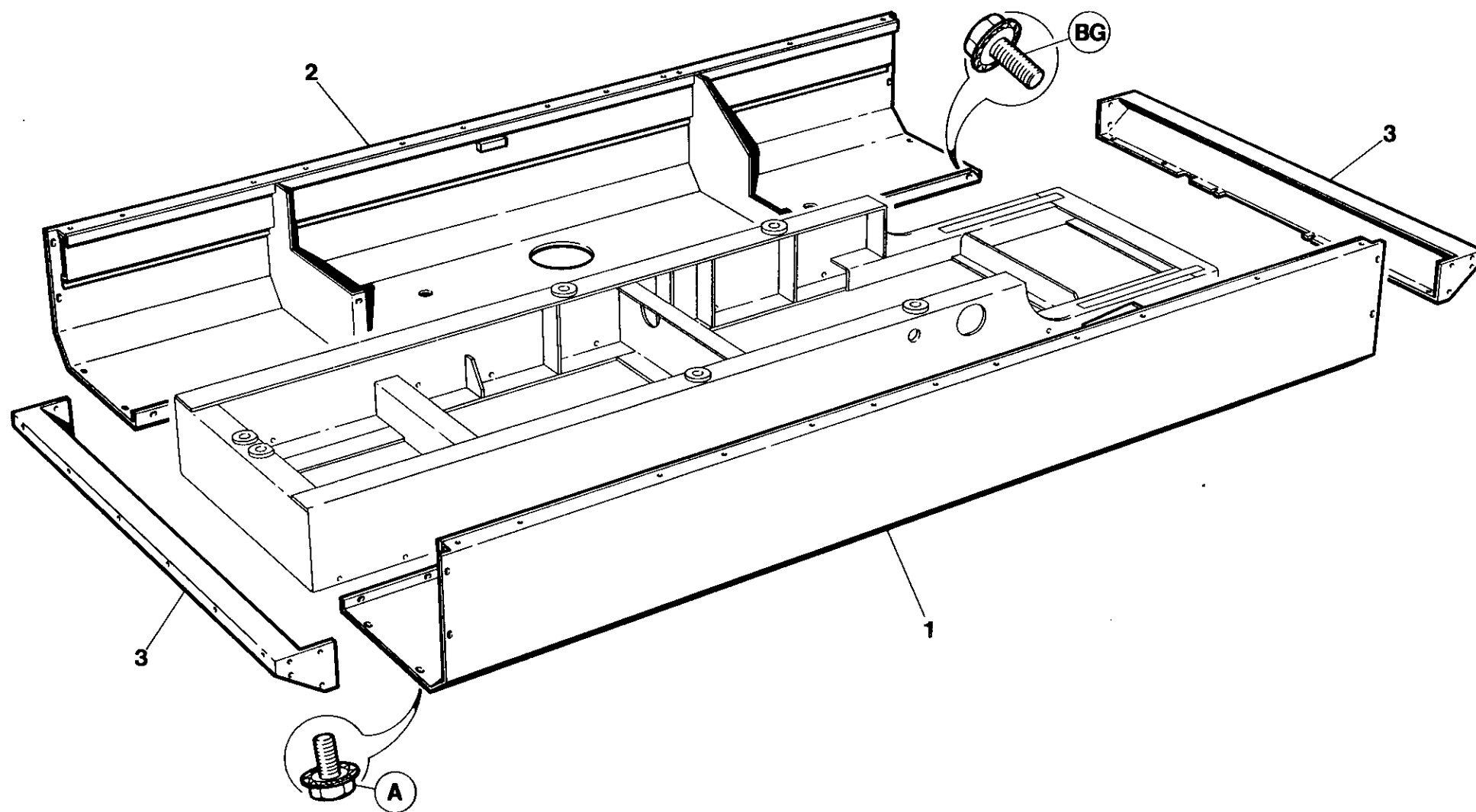
SUBCONJUNTOS

المجموعة الفرعية :

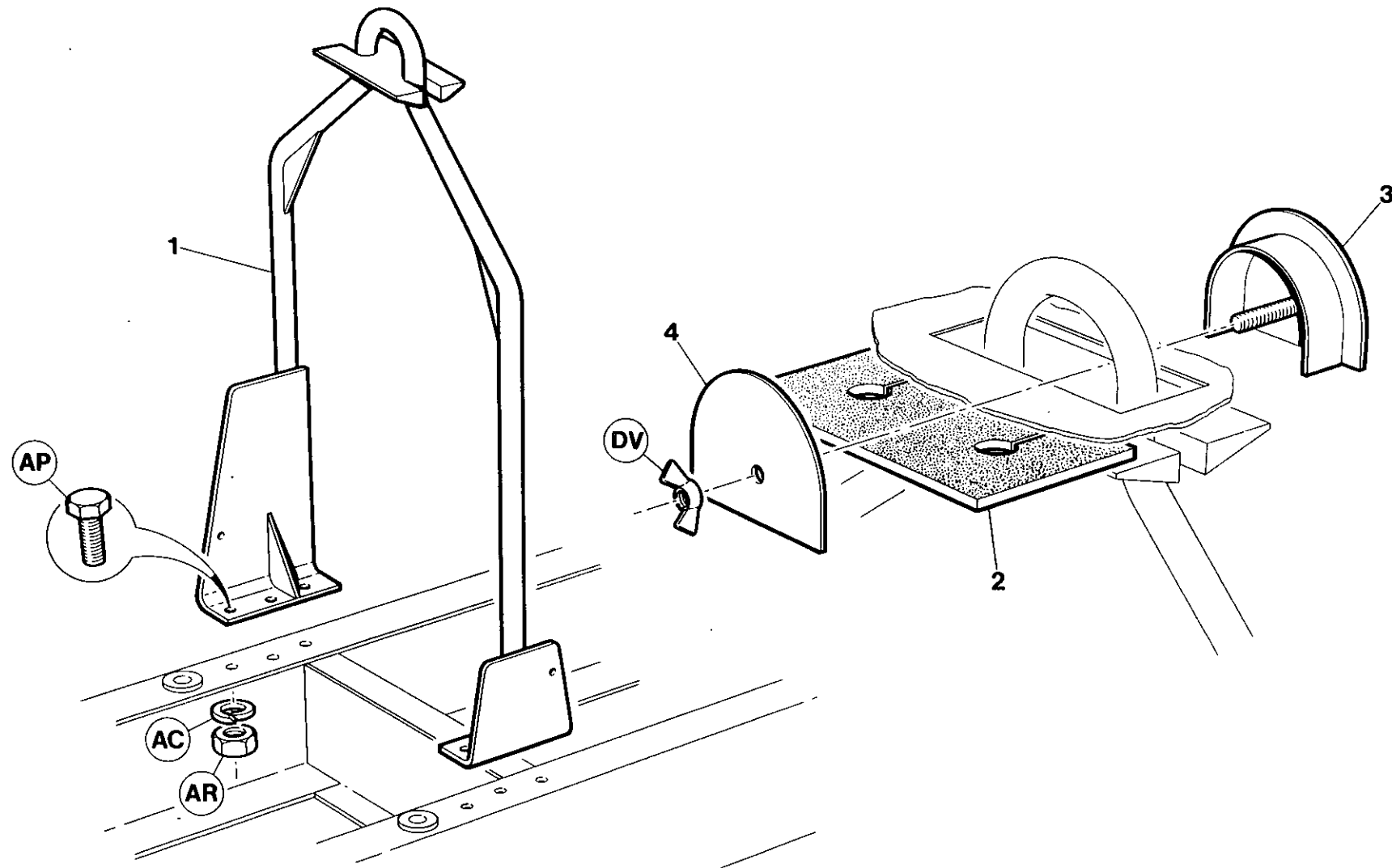
**7.7.6****INGERSOLL-RAND**

Item	C.P.N.	Qty	SUB ASSEMBLY	SOUS ENSEMBLE	SEKUNDÄRE UNTERGRUPPEN	SOTTOGRUPPI	SUBCONJUNTOS	المجموعة الفرعية :
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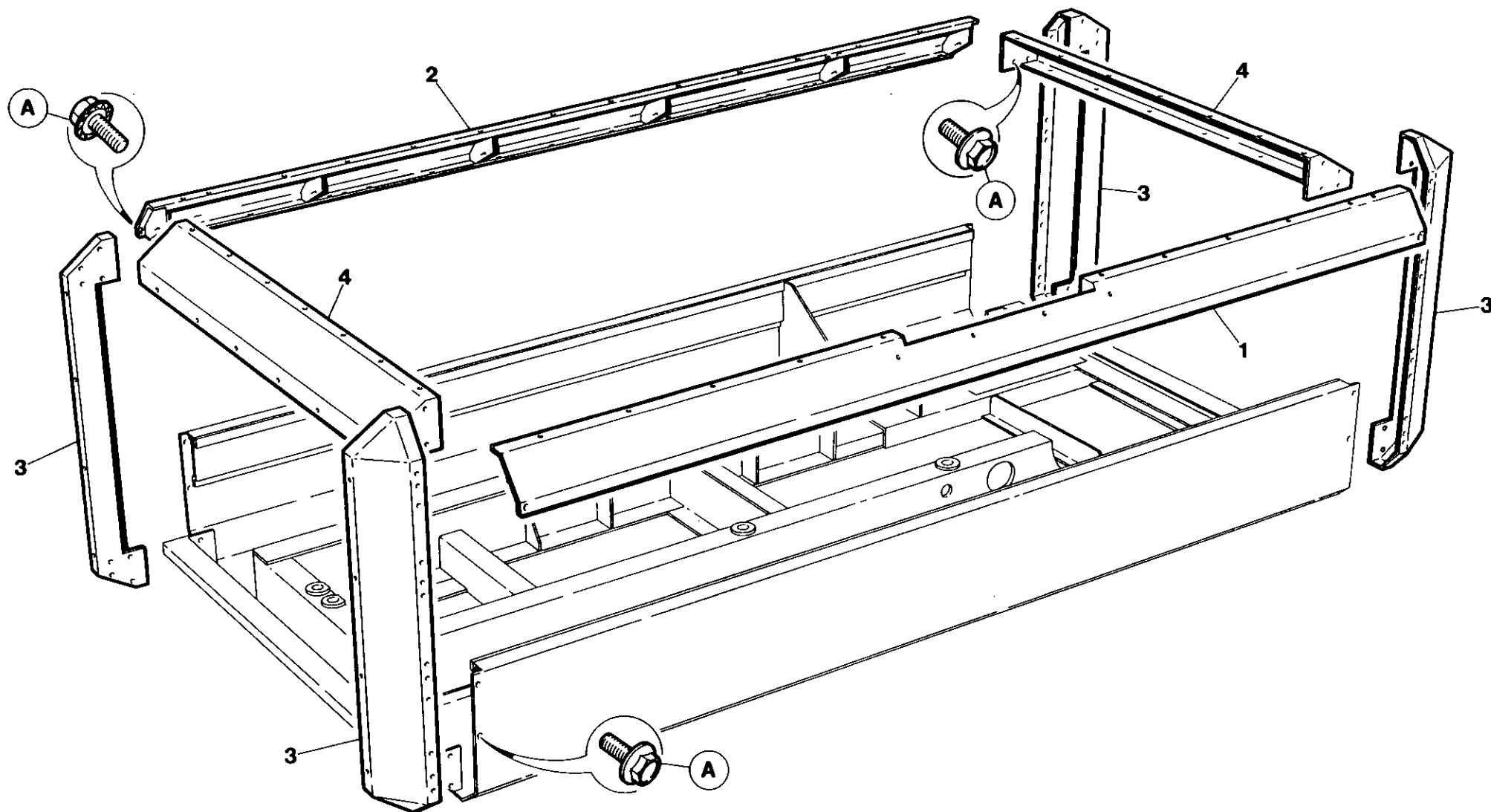
1	92546555	1	Frame					
2	92546910	2	Support					
3	92546902	1	Support					
4	92058429	1	Plate Load Spreader					



Item	C.P.N.	Qty	SUB ASSEMBLY	SOUS ENSEMBLE	SEKUNDÄRE UNTERGRUPPEN	SOTTOGRUPPI	SUBCONJUNTOS	المجموعة الفرعية :
1	92533405	1	Lower Side Panel L.H.					
2	92533413	1	Lower Side Panel R.H.					
3	92062009	2	End Cap Bottom					



Item	C.P.N.	Qty	SUB ASSEMBLY	SOUS ENSEMBLE	SEKUNDÄRE UNTERGRUPPEN	SOTTOGRUPPI	SUBCONJUNTOS	المجموعة الفرعية :
1	92536747	1	Lifting Bail					
2	92049105	1	Pad					
3	92549153	1	Cover					
4	92549161	1	Clamp Plate					



Item	C.P.N.	Qty	SUB ASSEMBLY	SOUS ENSEMBLE	SEKUNDÄRE UNTERGRUPPEN	SOTTOGRUPPI	SUBCONJUNTOS	المجموعة الفرعية :
1	92062066	1	Upper Side Panel L.H.					
2	92062058	1	Upper Side Panel R.H.					
3	92061993	4	Corner					
4	92061985	2	End Cap Top					

SUB ASSEMBLY

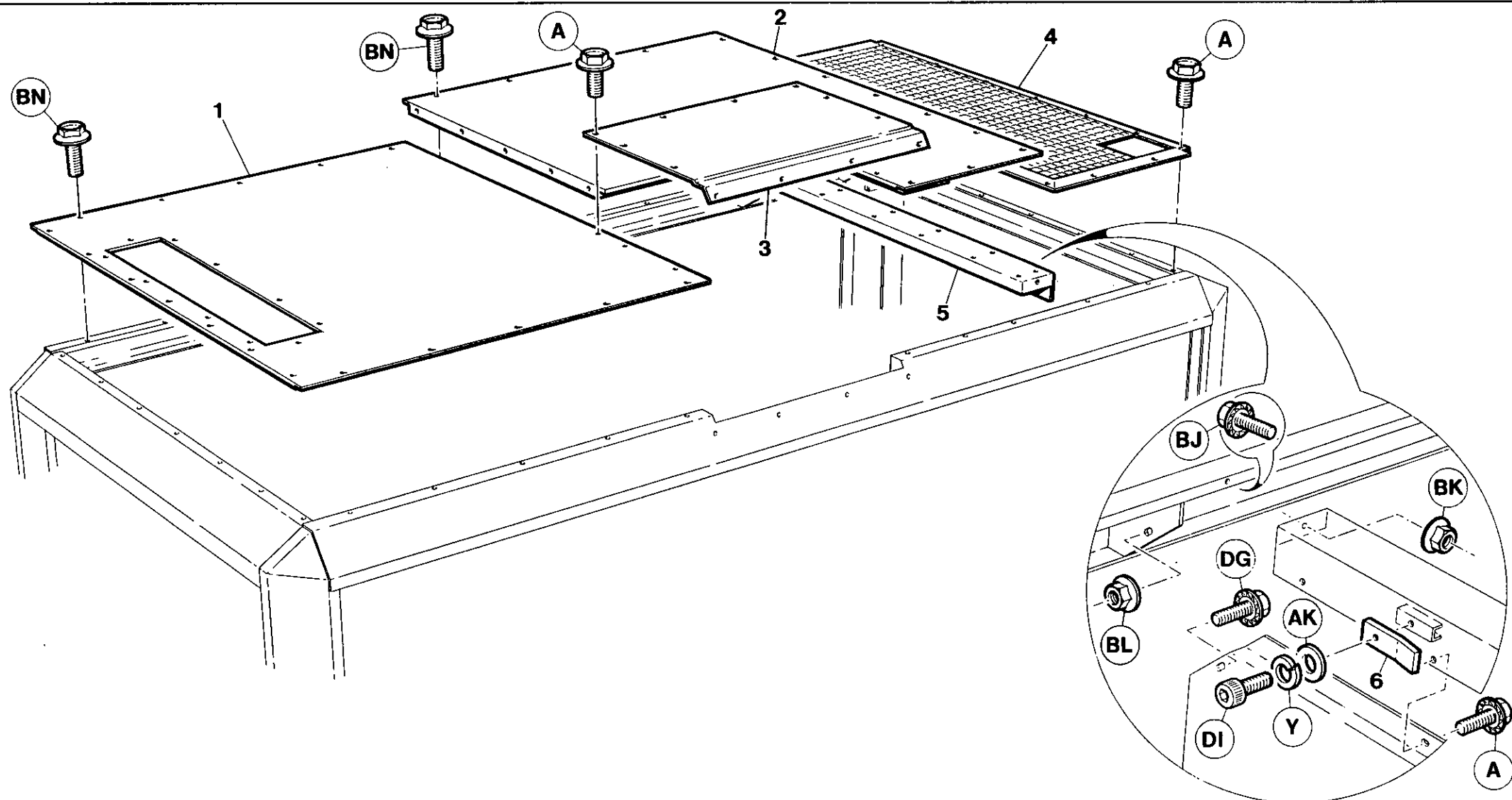
SOUS ENSEMBLE

SEKUNDÄRE
UNTERGRUPPEN

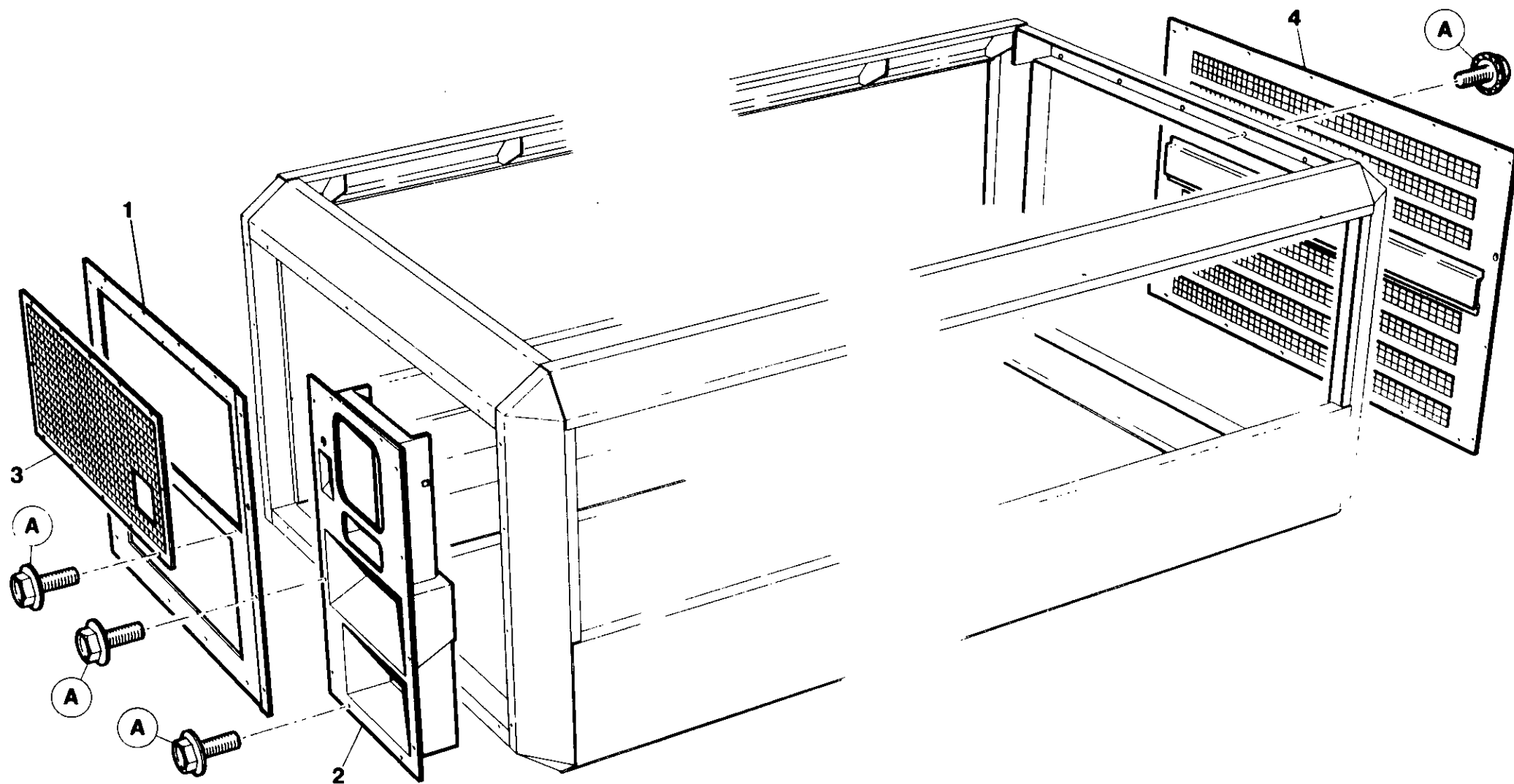
SOTTOGRUPPI

SUBCONJUNTOS

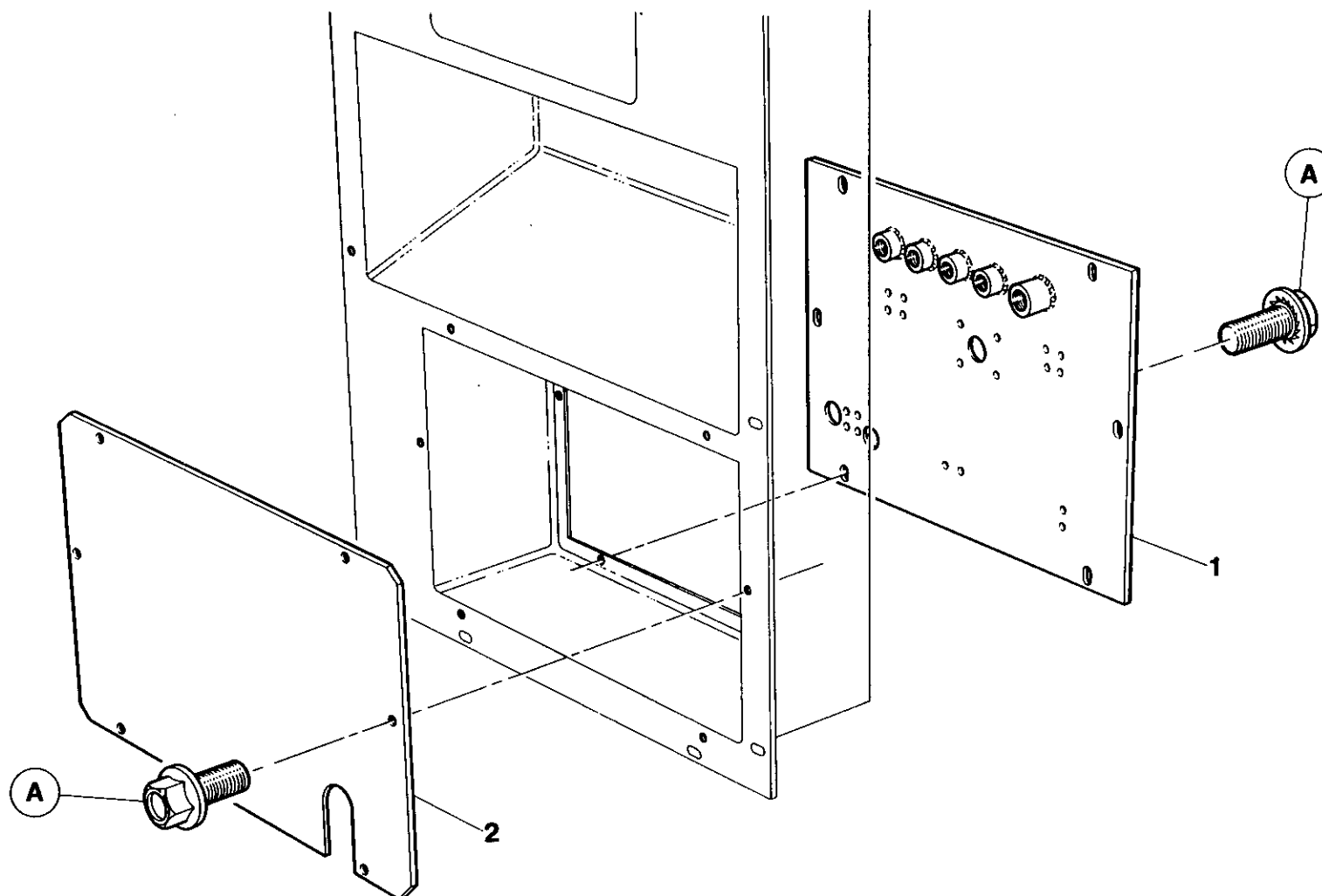
المجموعة الفرعية :

**7.7.14****INGERSOLL-RAND**

Item	C.P.N.	Qty	SUB ASSEMBLY	SOUS ENSEMBLE	SEKUNDÄRE UNTERGRUPPEN	SOTTOGRUPPI	SUBCONJUNTOS	المجموعة الفرعية :
1	92713551	1	Roof Front					
2	92536754	1	Roof Middle					
3	92064526	1	Access Panel					
4	92666049	1	Grill					
5	92713601	1	Beam					
6	92517762	2	Clamp					
7	92549146	1	Cover					



Item	C.P.N.	Qty	SUB ASSEMBLY	SOUS ENSEMBLE	SEKUNDÄRE UNTERGRUPPEN	SOTTOGRUPPI	SUBCONJUNTOS	المجموعة الفرعية :
1	92679018	1	End Panel Front L.H. (Aftercooler)					
2	92540541	1	End Panel Front R.H.					
3	92540236	1	Grille					
4	92536606	1	End Panel Rear					



Item	C.P.N.	Qty	SUB ASSEMBLY	SOUS ENSEMBLE	SEKUNDÄRE UNTERGRUPPEN	SOTTOGRUPPI	SUBCONJUNTOS	المجموعة الفرعية :
1	92547728	1	Mounting Panel					
2	92547710	1	Access Panel					

SUB ASSEMBLY

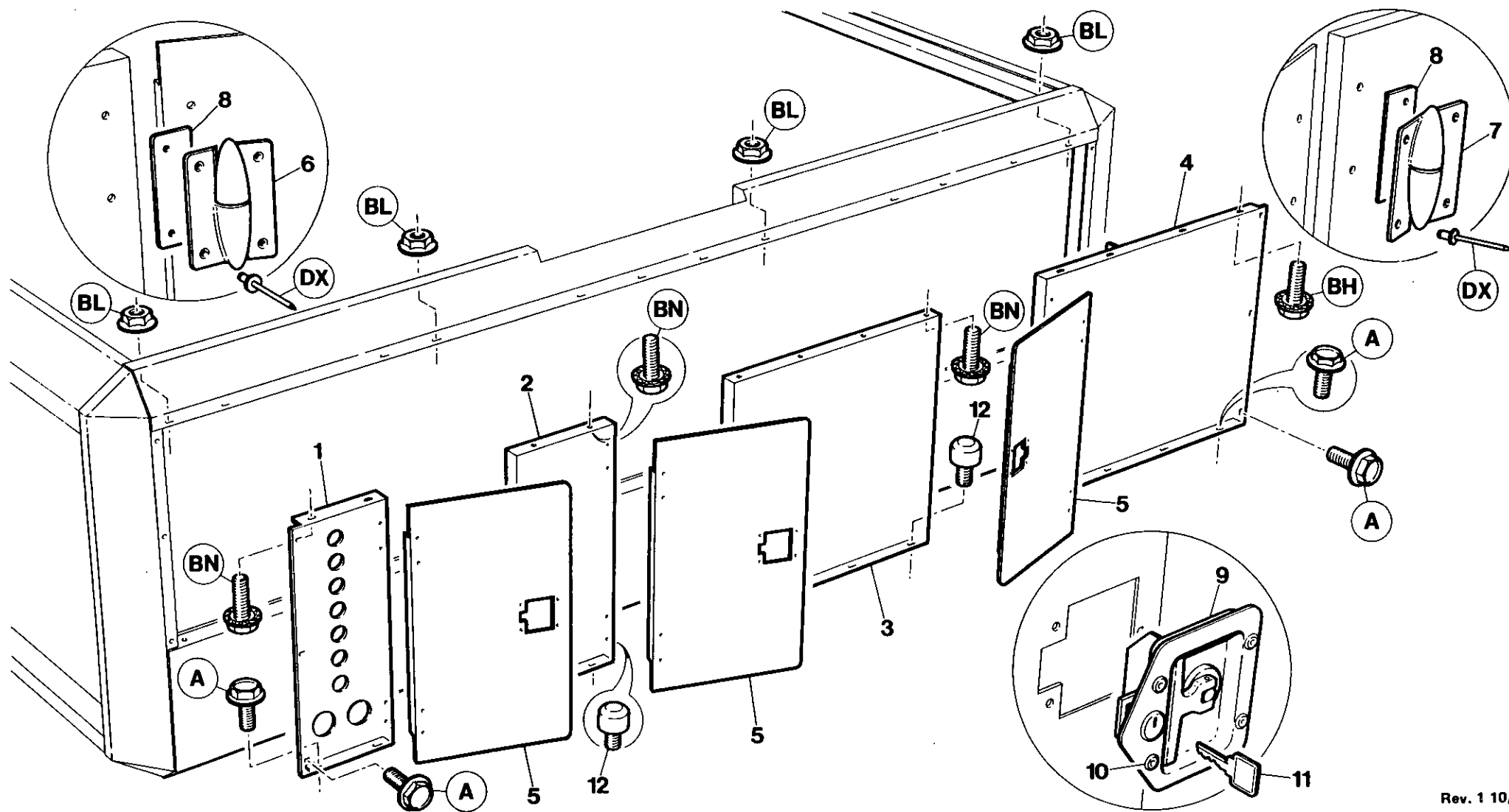
SOUS ENSEMBLE

SEKUNDÄRE
UNTERGRUPPEN

SOTTOGRUPPI

SUBCONJUNTOS

المجموعة الفرعية :



Rev. 1 10/88

7.7.20

INGERSOLL-RAND

Item	C.P.N.	Qty	SUB ASSEMBLY	SOUS ENSEMBLE	SEKUNDÄRE UNTERGRUPPEN	SOTTOGRUPPI	SUBCONJUNTOS	المجموعة الفرعية :
1	92713569	1	Side Panel Front					
2	92549476	1	Door Pillar					
3	92533504	1	Centre Panel					
4	92533496	1	Side Panel					
5	92540277	3	Door					
6	92540699	4	Hinge L.H.					
7	92540285	2	Hinge R.H.					
8	92540582	6	Spacer					
9	92757079	3	Latch					
10	92766690	12	Rivet					
11	92094358	3	Key					
12	92035187	6	Pin					

SUB ASSEMBLY

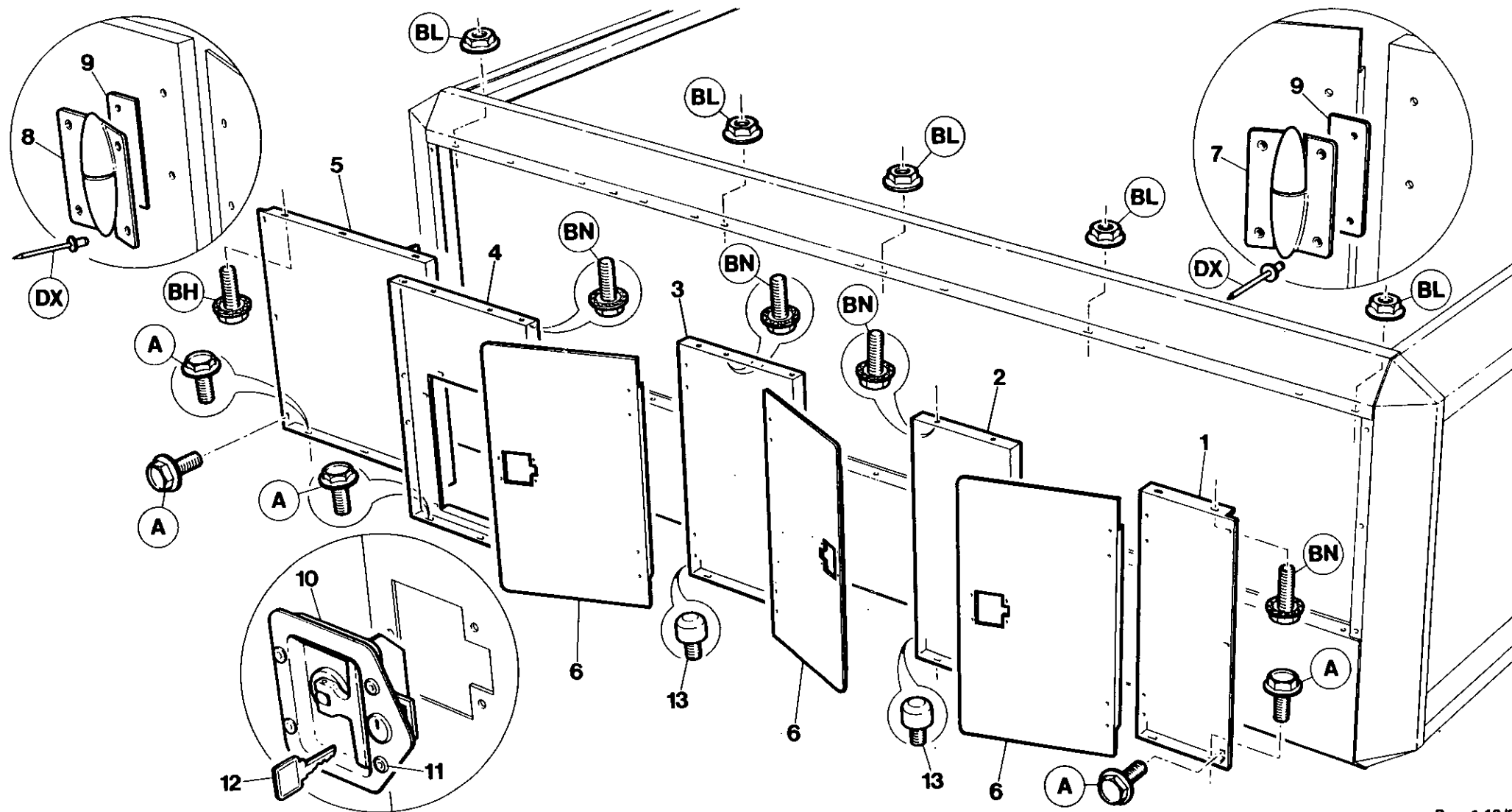
SOUS ENSEMBLE

SEKUNDÄRE
UNTERGRUPPEN

SOTTOGRUPPI

SUBCONJUNTOS

المجموعة الفرعية

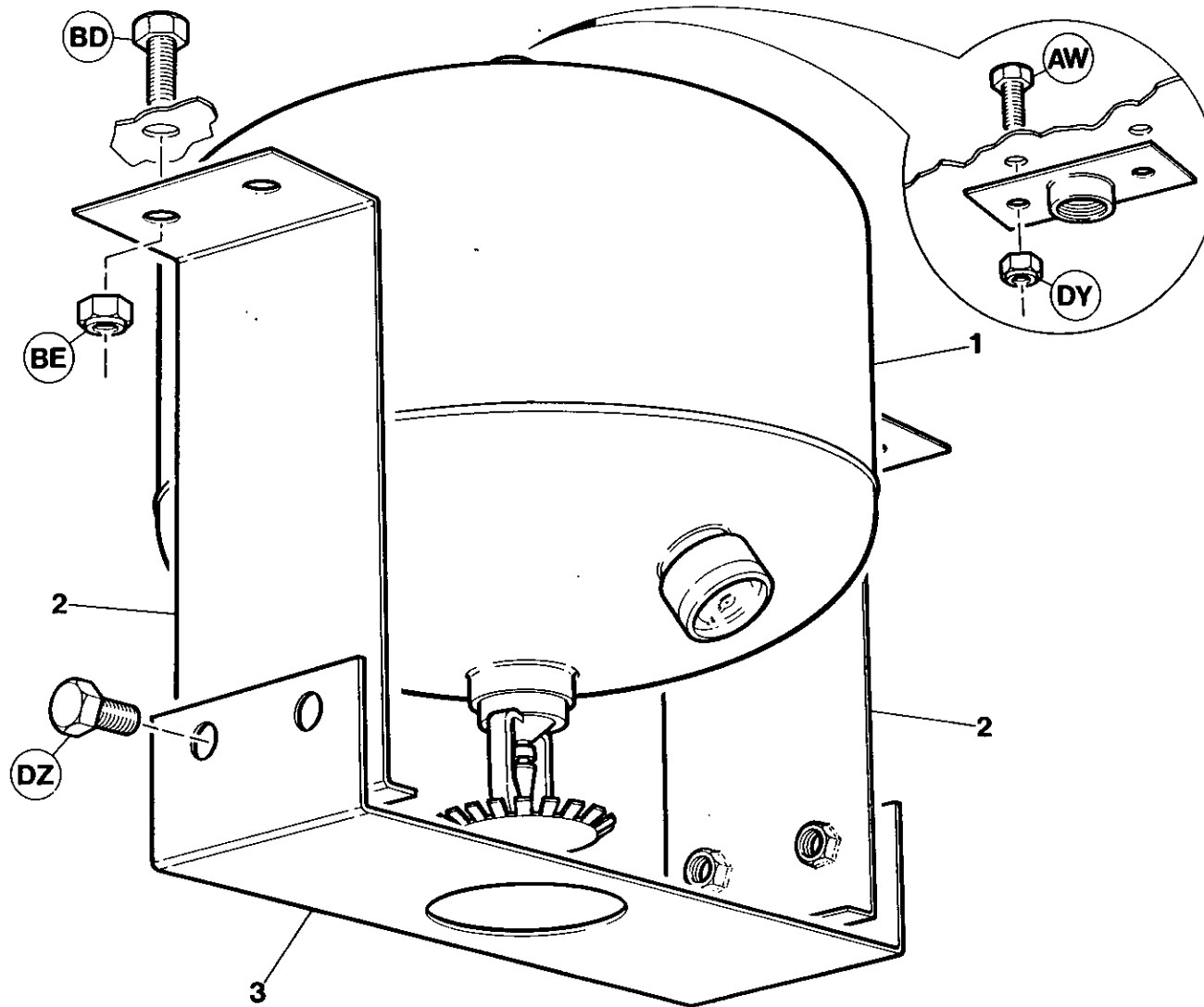


Rev. 1 10/88

7.7.22

INGERSOLL-RAND

Item	C.P.N.	Qty	SUB ASSEMBLY	SOUS ENSEMBLE	SEKUNDÄRE UNTERGRUPPEN	SOTTOGRUPPI	SUBCONJUNTOS	المجموعة الفرعية :
1	92549484	1	Side Panel Front					
2	92549476	1	Door Pillar					
3	92540293	1	Centre Panel					
4	92540566	1	Side Panel Fuel Filler					
5	92065267	1	Side Panel					
6	92540277	3	Door					
7	92540285	4	Hinge R.H.					
8	92540699	2	Hinge L.H.					
9	92540582	6	Spacer					
10	92757079	3	Latch					
11	92766690	12	Rivet					
12	92094358	3	Key					
13	92035187	4	Pin					



Item	C.P.N.	Qty	SUB ASSEMBLY	SOUS ENSEMBLE	SEKUNDÄRE UNTERGRUPPEN	SOTTOGRUPPI	SUBCONJUNTOS	المجموعة الفرعية :
1	92548833	1	Fire Extinguisher					
2	92708775	2	Bracket					
3	92708783	1	Bracket					

Item	C.P.N.	Qty	SUB ASSEMBLY	SOUS ENSEMBLE	SEKUNDÄRE UNTERGRUPPEN	SOTTOGRUPPI	SUBCONJUNTOS	المجموعة الفرعية :
(1-29)	92540368	1	External Decal Set					
1	92548684	1	I-R Specification					
2	92548692	1	Warning Restart					
3	92548700	1	Operating Instructions					
4	92548718	1	Daily Service Routine					
5	92548726	1	Fill Radiator Here					
6	92548734	2	Radiator Filler					
7	92548742	1	Fuel Filler					
8	92548759	1	Water Separator Drain					
9	92548767	1	Engine Oil Drain					
10	92548775	1	Air Start Drain					
11	92548783	1	Air Start Receiver					
12	92548791	1	Radiator Drain					
13	92548809	1	Oil Drain					
14	92548817	1	Yellow Alert					
15	92548825	1	Flame Arrestor					
16	92657386	1	Very Important					
17	92657394	1	Stop Reset					
18	92661669	1	Tell Tales					
19	92660943	1	Filter Indicators					
20	92660919	1	Overspeed Valve Reset					
21	92660927	1	Fuel Valve Reset					
22	92660935	1	Vibration Valve Reset					
23	92661958	1	Horn Stop					
24	92049337	1	Stripe LH					
25	92049345	1	Stripe RH					
26	92049436	1	HP 750 RH					
27	92049493	1	HP 750 LH					
28	92512581	3	IR Logo					
29	92512573	1	IR Logo					

Item	C.P.N.	Qty	SUB ASSEMBLY	SOUS ENSEMBLE	SEKUNDÄRE UNTERGRUPPEN	SOTTOGRUPPI	SUBCONJUNTOS	المجموعة الفرعية :
(1-7)	92540376	1	Internal Decal Set					
1	92657808	1	Pneumatic Control System					
2	92662139	1	Oil Level					
3	92660950	1	Oil Filler					
4	92660968	1	Oil Dipstick					
5	92660976	1	Safety Circuit Reset					
6	92548817	1	Yellow Alert Connection 24v					
7	92543734	1	Radiator Filler					

Item	C.P.N.	Qty	FASTENERS
A	92368687		M6 x 12 Taptite Screw
B	92367663		M16 x 35 Setscrew
C	92359371		M16 Lockwasher
D	92398569		M16 x 65 Bolt
E	92311695		M16 Locknut
F	90103185		M12 x 30 Setscrew
G	90103854		M12 Nut
H	92304682		M12 Lockwasher
I	92329341		M12 Washer
J	92304401		M10 x 25 Setscrew
K	95081857		3/8 dia. Spring Washer
L	95214987		5/8 x 1 1/4 Setscrew
M	95081790		5/8 Lockwasher
N	92311703		M16 x 100 Bolt
O	90103839		M16 Nut
P	92271667		3/4 Nut
Q	92359363		M16 Washer
R	90141078		M8 x 25 Setscrew
S	92304666		M8 Lockwasher
T	95470993		3/8 Bolt
U	92273226		5/16 Nut
V	95245288		7/16-20 UNF Nut
W	92341973		M6 x 25 Setscrew
X	92304500		M6 Nut
Y	92304674		M10 Lockwasher
Z	95035481		3/8 x 1" UNC Setscrew
AA	92680347		M10 x 65 Bolt
AB	92341239		M20 x 40 Setscrew
AC	92391374		M20 Lockwasher
AD	92280940		M16 x 40 Setscrew
AE	92280981		M10 x 30 Setscrew
AF	92304526		M10 Nut
AG	92329309		M10 x 35 Setscrew
AH	92304567		M10 Locknut
AI	35294578		M24 Locknut
AJ	92304419		M10 x 40 Setscrew
AK	92304617		M10 Washer
AL	92304575		M12 Locknut
AM	92398171		M12 x 75 Bolt
AN	92304435		M12 x 25 Setscrew
AO	92304625		M12 Washer
AP	35272558		M20 x 45 Setscrew
AQ	92391382		M20 Washer
AR	92391366		M20 Nut
AS	92081470		M16 x 30 Setscrew

Item	C.P.N.	Qty	FASTENERS
AT	92329283		M10 Washer
AU	92304427		M10 x 50 Setscrew
AV	92367655		M12 x 90 Bolt
AW	92304484		M6 x 20 Setscrew
AX	92341981		M6 Washer
AY	92421411		M8 x 25 Capscrew
AZ	92304518		M8 Nut
BA	92304609		M8 Washer
BB	92421403		M8 x 20 Capscrew
BC	92304658		M6 Lockwasher
BD	92304344		M8 x 20 Setscrew
BE	92304559		M8 Nut
BF	92179043		M6 x 25 Screw
BG	35279025		M8 x 20 Screw
BH	35300771		M6 x 20 Screw
BI	92101112		M8 x 25 Screw
BJ	92398130		M8 x 20 Screw
BK	92398114		M8 Whiztite Nut
BL	92398106		M6 Nut Whiztite
BM	92304591		M6 Washer
BN	92398122		M6 x 20 Screw
BO	92398627		M12 x 30 Screw
BP	92473594		M10 Nut
BQ	35273416		M8 x 25 Capscrew
BR	92479963		M5 x 20 Pan Head Screw
BS	92304641		M5 Lockwasher
BT	92304492		M5 Nut
BU	92304583		M5 Washer
BV	30345508		Washer
BW	95214938		5/16" x 1" Setscrew
BX	92472638		M10 x 20 Screw
BY	95264149		3/8" UNC x 2" Capscrew
BZ	35299353		M10 x 60 Capscrew sk.t.
CA	35271154		M10 x 30 Capscrew
CB	92280973		M12 x 35 Setscrew
CC	92340421		M4 x 12 Setscrew
CD	92472935		M10 x 60 Bolt
CE	35295013		M10 x 70 Bolt
CF	92398643		N12 Nut Whiztite
CG	95792321		3/8" x 2" Shoulder Bolt
CH	92304443		M12 x 40 Screw
CI	92304450		M12 x 50 Setscrew
CJ	92304682		M12 Lockwasher
CK	92465590		M10 x 25 Skt. Head

Item	C.P.N.	Qty	FASTENERS
CL	92040823		M16 x 130 Setscrew
CM	95251138		3/8 x 1 1/4 UNC Setscrew
CN	95064671		5/16 Washer
CO	92304393		M10 x 20 Setscrew
CP	92329283		M10 Washer
CQ	92419282		M6 x 12 Pan Head Setscrew
CR	95775037		1/4 x 1/2 x 10 UNC Bolt
CS	92488733		M8 x 70 Bolt
CT	92340447		M4 Lockwasher
CU	92340439		Washer
CV	92274828		1/4 UNF Nut
CW	95064655		1/4 Washer
CX	95076733		No. 10 Nut
CY	92697812		Tabwasher
CZ	92441450		M6 x 15 Pozipan
DA	35279710		M20 x 45 Skt. Head
DB	30345326		Steel Washer
DC	95055265		3/8 UNC x 1 1/4
DD	92700590		M20 Self Locking Nut
DE	40014888		M8 x 60 Bolt
DF	92176718		M12 x 20 Setscrew
DG	92184811		M6 x 12 Whizlock Screw
DH	35299353		M10 x 60 Capscrew
DI	92421460		M10 x 20 Capscrew
DJ	92096031		M6 x 16 Screw
DK	35293869		M10 x 30 Bolt
DL	95251229		1/4" UNC x 3/4" Screw
DM	95214995		5/8 x 11 x 1 1/2 UNC Setscrew
DN	92421361		M6 x 40 Capscrew
DO	92304542		M6 Nut
DP	92483478		M20 x 40 Setscrew
DQ	95215000		5/8 x 1 3/4 Setscrew
DR	92421304		M5 x 15 Skt. Head Capscrew
DS	92329275		M10 Lockwasher
DT	92281369		5/32 x 1/2 Rivet
DU			Avdel Lock
DV	92148659		M6 Wingut
DW	92677541		M10 x 100 Bolt
DX	95420451		3/16 x 5/8 Rivet
DY	92304542		M6 Locknut
DZ	92359751		M8 x 12 Setscrew

Item	C.P.N.	Qty	FASTENERS	FERMOIRS	BEFESTIGUNGEN	DISPOSITIVI DI CHIUSURA	FIJADORES
EA	03199270		Screw				
EB	03459229		Washer				
EC	03020708		Lockwasher				
ED	03021458		Screw				
EE	92359355		Bolt, M10 x 75				
EF	95251187		½" UNC x 1½" Screw				
EG	95081824		Lockwasher ½"				
EH	95251138		Screw 3/8" UNC x 1¼"				

Item	C.P.N.	Qty	RECOMMENDED SPARE PARTS MAINTENANCE/ SERVICE KITS/ ACCESSORIES	PIECES DE RECHANGE RECOMMANDEES ET KITS D'ENTRETIEN	EMPFOHLENE ERSATZ- TEILE WARTUNGS- UND INSPEKTIONS-SATZE	SERIE DE RICAMBI CONSIGLIATI KIT DE SERVIZIO	REPUESTOS RECOMEN- DADOS Y KITS DE MANTENIMIENTO	قطع الغيار الموصى بها وصناديق ادوات الصيانة/ الخدمة
	92736446	1	Airend Overhaul Kit					
1	35313550	1	Bearing					
2	35313568	1	Bearing					
3	35264977	1	Bearing					
4	39437686	2	Bearing					
5	35601517	1	Bearing					
6	39438221	2	Bearing					
7	35594571	1	Gasket					
8	35597723	1	Gasket					
9	35210087	1	Gasket					
10	35572494	1	Gasket					
11	95023388	2	O-Ring					
12	35593482	1	Seal					
13	35593508	1	Seal					
14	35299361	2	Shim Set					
15	39437009	4	Shim Set					
16	39437017	6	Shim Set					
17	39437025	4	Shim Set					
18	35104082	1	Locknut					

Item	C.P.N.	Qty	RECOMMENDED SPARE PARTS MAINTENANCE/ SERVICE KITS/ ACCESSORIES	PIECES DE RECHANGE RECOMMANDEES ET KITS D'ENTRETIEN	EMPFOHLENE ERSATZ- TEILE WARTUNGS- UND INSPEKTIONS-SATZE	SERIE DE RICAMBI CONSIGLIATI KIT DE SERVIZIO	REPUESTOS RECOMEN- DADOS Y KITS DE MANTENIMIENTO	قطع الغيار الموصى بها ومستلزمات أدوات الصيانة/ الخدمة
	92668151		Filter Service Kit					
1	92035948	2	Element Air					
2	92035955	2	Element Air					
3	92071182	2	Element Oil					
4	92658095	1	Element Oil					
5	92744523	1	Element Fuel					

Item	C.P.N.	Qty	RECOMMENDED SPARE PARTS MAINTENANCE/ SERVICE KITS/ ACCESSORIES	PIECES DE RECHANGE RECOMMANDEES ET KITS D'ENTRETIEN	EMPFOHLENE ERSATZ- TEILE WARTUNGS- UND INSPEKTIONS-SATZE	SERIE DE RICAMBI CONSIGLIATI KIT DE SERVIZIO	REPUESTOS RECOMEN- DADOS Y KITS DE MANTENIMIENTO	قطع الغيار الموصى بها ومستلزمات أدوات الصيانة/الخدمة
(1-25)	92666007		Gasket Set					
1	35594571	1	Gasket					
2	35597723	1	Gasket					
3	95023388	2	O-Ring					
4	35210087	1	Gasket					
5	35572494	1	Gasket Gear Case					
6	35575471	1	Gasket					
7	35279942	2	O-Ring					
8	95823688	2	O-Ring					
9	35192129	1	Gasket					
10	95765806	2	O-Ring					
11	35328244	1	Seal					
12	35328251	1	Gasket Piston Housing					
13	95214524	1	Gasket Ring					
14	30549919	1	Gasket					
15	92095413	2	O-Ring					
16	92095421	2	O-Ring					
17	92058544	1	Gasket Discharge Pipe					
18	35575570	1	Gasket					
19	92023175	1	Sealing Washer					
20	92546530	1	Gasket					
21	92517846	2	Gasket					
22	92546514	1	Gasket					
23	92293661	4	Seal					
24	92756592	1	Gasket Separator					
25	95358032	1	O-Ring					
	92744911		Service Kit					
1	35163054	1	Oil Temperature Valve					
2	35318161	1	MPV Spring					
3	35359090	1	Regulator					
4	35583210	1	Two Way Valve					
5	35592534	1	Unloader Diaphragm					
6	92035898	1	Blowdown Valve					
7	92035948	2	Air Element					
8	92035955	2	Air Element					
9	92049188	1	Safety Valve					
10	92065747	1	Drive Belt					
11	92071182	2	Oil Element					
12	92095363	1	Oil Level Gauge					
13	92120013	1	Fuel Filler Cap					
14	92124692	3	Pressure Gauge					
15	92278787	1	Tachometer					
16	92294461	1	Valve					
17	92546779	1	Valve Fuel Shut-Off					
18	92513183	1	Silencer Regulator					

Item	C.P.N.	Qty	RECOMMENDED SPARE PARTS MAINTENANCE/ SERVICE KITS/ ACCESSORIES	PIECES DE RECHANGE RECOMMANDEES ET KITS D'ENTRETIEN	EMPFOHLENE ERSATZ- TEILE WARTUNGS-UND INSPEKTIONS-SATZE	SERIE DE RICAMBI CONSIGLIATI KIT DE SERVIZIO	REPUESTOS RECOMEN- DADOS Y KITS DE MANTENIMIENTO	قطع الغيار الموصى بها وصناديق ادوات الصيانة/ الخدمة
19	92657410	1	Valve Waterloss					
20	92657444	1	Valve Eng. Oil Pressure					
21	92681006	1	Valve, Spool					
22	92658095	1	Oil Element					
23	92666007	1	Gasket Set					
24	92686856	1	Push Button					
25	92698240	1	Pressure Gauge					
26	92698257	1	Exh. Temp. Gauge					
27	92698273	1	Indicator					
28	92721448	1	Gauge Water Trap					
29	92744523	1	Fuel Element					
30	92721430	1	Temp. Gauge					

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01126648	7.4.15	03604378	7.4.15	35279850	7.4.29	35328228	7.4.53	39437017	7.2.3	92039239	7.4.49
01126648	7.4.17	03604428	7.4.3	35279868	7.5.5	35328236	7.4.53	39437025	7.2.3 *	92040751	7.5.7
01204015	7.4.57	03606928	7.4.17	35279876	7.5.35	35328244	7.4.53	39437686	7.2.3	92040757	7.5.11*
03019858	7.4.17	03607504	7.4.15	35279942	7.5.17	35328251	7.4.53	39438221	7.2.3	92041441	7.1.11
03020476	7.4.17	03607504	7.4.59*	35280353	7.5.1	35328269	7.4.53	92005701	7.4.35	92041458	7.1.11
03020492	7.4.17	03608494	7.4.17	35283068	7.4.27	35331578	7.4.53	92008382	7.4.3	92041466	7.1.11
03020500	7.4.17	03691102	7.4.13	35283076	7.4.27	35331586	7.4.53	92008580	7.4.55*	92041664	7.5.3
03020526	7.4.17	30345508	7.4.51	35283076	7.4.29	35332006	7.4.53	92010446	7.4.55	92041987	7.6.1
03020534	7.4.17	30549919	7.5.33	35283076	7.5.35	35332683	7.4.53	92023175	7.5.35	92042233	7.5.9
03020559	7.4.17	30672430	7.5.33	35283084	7.4.27	35332691	7.4.53	92028372	7.1.9	92042639	7.7.5
03020591	7.4.17	30865315	7.4.51	35283084	7.4.37	35337583	7.2.1	92029644	7.4.39	92042696	7.6.1
03020617	7.4.17	35072222	7.4.53	35283092	7.5.35	35359090	7.4.25	92029651	7.4.11	92042936	7.4.25
03020716	7.4.17	35101468	7.1.9	35288117	7.5.33	35572494	7.2.1	92029651	7.4.39	92042951	7.4.51
03020724	7.4.17	35104082	7.2.1	35288166	7.1.27	35573070	7.2.1	92032036	7.5.29	92043017	7.4.25
03020757	7.4.17	35112333	7.3.5	35290881	7.2.1	35575471	7.4.47	92032648	7.4.45	92043041	7.5.21
03020815	7.4.17	35117845	7.3.3	35290881	7.2.3	35575570	7.5.23	92034438	7.1.11	92043058	7.1.25
03020823	7.4.17	35163054	7.5.33	35293059	7.5.7 *	35579630	7.5.17	92034446	7.1.11	92043116	7.4.59
03020831	7.4.17	35192129	7.4.51	35293059	7.5.9	35579942	7.4.45	92034495	7.5.3	92043116	7.5.21
03020872	7.4.17	35192145	7.4.51	35293059	7.5.11*	355833210	7.6.3	92034503	7.5.3	92044098	7.4.45
03021094	7.4.17	35201565	7.4.51	35293059	7.5.13*	35591163	7.4.53	92035187	7.7.21	92044890	7.4.47
03021102	7.4.17	35210087	7.2.1	35295799	7.5.11*	35591171	7.4.53	92035187	7.7.23	920449006	7.5.3
03021219	7.4.17	35214543	7.5.33	35295799	7.5.13	35591189	7.4.53	92035898	7.4.51	920449014	7.5.3
03021672	7.4.17	35214683	7.5.23	35296219	7.4.23	35592534	7.4.53	92035948	7.3.1	920449097	7.4.23
03085628	7.4.17	35251800	7.6.1	35296227	7.4.23	35592757	7.2.1	92035955	7.3.1	920449097	7.4.29
03086212	7.4.17	35262955	7.2.1	35299361	7.2.3	35593482	7.2.3	92035963	7.3.1	920449097	7.5.25
03141520	7.4.17	35262963	7.2.1	35301126	7.4.23*	35593508	7.2.1	92036656	7.5.3	920449105	7.7.11
03141579	7.4.17	35264977	7.2.1	35301225	7.4.11	35594571	7.2.3	92038652	7.5.1	920449188	7.5.17
03144995	7.4.17	35269232	7.2.1	35301225	7.4.27	35597723	7.2.1	92038660	7.5.1	920449337	7.7.26
03154226	7.4.17	35273937	7.1.7	35313350	7.2.1	35601517	7.2.1	92038678	7.5.1	920449345	7.7.26
03388709	7.4.17	35273937	7.1.9	35313568	7.2.1	35804905	7.1.25	92038884	7.5.1	920449436	7.7.26
03390226	7.4.17	35273937	7.2.1	35318161	7.4.45	36722452	7.4.53	92038918	7.5.1	920449493	7.7.26
03390234	7.4.17	35279108	7.7.23	35321389	7.5.25	36722460	7.4.53	92039049	7.4.47	920449881	7.5.1
03404365	7.4.17	35279801	7.5.35	35321389	7.5.35	39141742	7.2.1	92039049	7.4.49	920449899	7.5.1
03457280	7.4.3	35279827	7.4.29	35327204	7.4.53	39436977	7.2.3	92039056	7.4.47	920449915	7.5.1
03517232	7.6.3	35279843	7.4.27	35328210	7.4.53	39437009	7.2.3	92039056	7.4.49	92050335	7.4.27

92053875	7.3.3	92062157	7.2.1	92094994	7.5.17	92251735	7.5.29	92281013	7.5.9	92395433	7.4.11
92053875	7.3.5	92064526	7.7.15	92095363	7.5.17	92251982	7.4.51	92281195	7.5.29	92395433	7.4.27
92053876	7.1.21	92064559	7.5.1	92095371	7.5.17	92252725	7.4.61*	92281427	7.4.19	92395433	7.4.39
92055201	7.5.9	92065267	7.7.23	92095389	7.5.17	92252733	7.4.3	92288706	7.1.23	92395458	7.1.23
92055235	7.3.3	92065408	7.5.1	92095397	7.5.17	92252733	7.4.9	92292812	7.4.55	92395458	7.1.29
92055235	7.6.5	92066208	7.1.11	92095405	7.5.17	92252741	7.4.7	92293661	7.5.17	92395458	7.4.13
92055300	7.3.1	92066299	7.5.19	92095413	7.5.17	92252964	7.1.19	92294461	7.4.7	92395458	7.4.35
92055326	7.1.21	92067339	7.2.1	92095421	7.5.17	92253079	7.5.7	92294461	7.4.55	92395458	7.4.47
92055326	7.3.3	92067933	7.4.35	92095439	7.5.17	92253079	7.5.9	92321702	7.5.5	92395458	7.5.15
92055326	7.3.5	92067933	7.4.39	92095447	7.5.17	92253079	7.5.11*	92321702	7.5.13	92395458	7.5.27
92057066	7.5.35	92067958	7.4.11	92098235	7.4.25	92253079	7.5.13	92321702	7.5.39*	92395466	7.4.25
92058064	7.4.23	92067958	7.4.39	92100924	7.4.27	92253111	7.1.1	92341767	7.4.55*	92395540	7.1.27
92058064	7.5.29	92067958	7.4.61*	92100924	7.4.35	92253905	7.5.39*	92347459	7.5.13	92395557	7.1.27
92058072	7.4.23	92069038	7.1.27	92100924	7.5.15	92253913	7.4.13	92351170	7.4.23	92395557	7.5.37
92058080	7.4.23	92071166	7.5.29	92100924	7.5.27	92254887	7.5.37	92354364	7.4.35	92409671	7.5.1
92058080	7.4.25	92071174	7.5.29	92100957	7.4.11	92255934	7.4.3	92354380	7.1.23	92417849	7.5.5
92058106	7.4.25	92071182	7.5.29	92100957	7.4.37	92255934	7.4.7	92354380	7.5.25	92419563	7.5.21
92058163	7.4.29	92071380	7.5.35	92100957	7.5.27	92255934	7.4.9	92354450	7.4.35	92420058	7.5.35
92058429	7.7.7	92075498	7.2.1	92101286	7.4.57	92255934	7.4.55	92354513	7.5.21	92441294	7.4.21
92058494	7.5.29	92079474	7.4.23	92109875	7.4.15	92255942	7.4.55	92354521	7.4.27	92472943	7.3.3
92058544	7.5.23	92079474	7.4.29	92109875	7.4.47	92256759	7.5.1	92354547	7.4.51	92472943	7.3.5
92058593	7.3.5	92083245	7.4.23	92111228	7.4.13	92256759	7.5.1	92354653	7.1.13*	92472950	7.3.5
92058718	7.4.25	92083245	7.5.35	92111335	7.6.5	92257344	7.5.3	92354661	7.4.3	92477207	7.1.27
92058767	7.4.27	92083252	7.5.35	92117480	7.2.1	92257344	7.7.3	92354661	7.4.25	92477207	7.5.21
92061811	7.6.1	92083260	7.5.35	92117761	7.4.57	92257401	7.4.53	92354661	7.4.41	92478221	7.4.5
92061936	7.4.45	92087832	7.5.29	92119882	7.6.1	92257641	7.4.51	92354661	7.5.3	92478247	7.5.35
92061944	7.4.45	92087840	7.5.29	92119924	7.6.1	92258110	7.4.35	92354661	7.5.27	92478262	7.4.13
92061985	7.7.13	92089556	7.4.31	92119932	7.6.1	92258110	7.4.39	92354729	7.4.35	92478270	7.4.3
92061993	7.7.13	92089556	7.4.33	92120013	7.1.25	92258706	7.4.61*	92365923	7.4.55	92478270	7.4.7
92062009	7.7.9	92089556	7.4.43	92123264	7.4.57	92258706	7.5.25	92367622	7.4.55*	92478270	7.4.59*
92062041	7.4.45	92089556	7.4.47	92124692	7.6.3	92258714	7.4.27	92394261	7.1.29	92478288	7.4.59
92062058	7.7.13	92089556	7.5.15	92168871	7.5.1	92258714	7.4.39	92394261	7.4.13	92478304	7.5.13
92062066	7.7.13	92089556	7.5.23	92169630	7.4.19	92258755	7.4.3	92394295	7.4.27	92478379	7.4.15
92062157	7.1.7	92094358	7.7.21	92178524	7.4.7	92258755	7.4.4*	92394352	7.4.27	92478387	7.4.25
92062157	7.1.9	92094358	7.7.23	92185800	7.4.13*	92278787	7.6.3	92394653	7.4.39	92478387	7.5.5

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92478387	7.5.25	92517010	7.4.3	92536754	7.7.15	92546290	7.4.55	92546936	7.5.1 *	92548742	7.7.26
92478387	7.5.35	92517713	7.1.7	92539394	7.4.57	92546340	7.5.9	92546977	7.5.13	92548759	7.7.26
92478569	7.4.13	92517721	7.4.19	92539927	7.2.1	92546365	7.2.3	92547637	7.4.37*	92548767	7.7.26
92478569	7.4.25	92517747	7.5.37	92540186	7.1.23	92546381	7.1.1	92547637	7.4.47	92548775	7.7.26
92478569	7.4.27	92517754	7.5.1	92540236	7.7.17	92546399	7.1.1	92547645	7.5.27	92548783	7.7.26
92478569	7.4.31	92517762	7.5.3	92540277	7.7.21	92546407	7.1.13	92547652	7.1.29	92548791	7.7.26
92478569	7.4.33	92517762	7.7.15	92540277	7.7.23	92546415	7.6.7	92547652	7.4.11*	92548809	7.7.26
92478569	7.4.39	92517770	7.5.7	92540285	7.7.21	92546423	7.1.13	92547652	7.4.21	92548817	7.7.26
92478569	7.4.41	92517788	7.5.7	92540285	7.7.23	92546431	7.1.15	92547652	7.4.27*	92548817	7.7.27
92478569	7.4.43	92517846	7.1.17	92540293	7.7.23	92546449	7.3.7	92547652	7.4.31	92548825	7.7.26
92478569	7.5.15	92517846	7.1.19	92540368	7.7.26	92546456	7.1.15	92547652	7.4.35	92548833	7.7.25
92478569	7.5.23	92517911	7.4.19	92540376	7.7.27	92546464	7.4.47	92547652	7.4.37*	92548882	7.1.27
92478569	7.5.27	92519917	7.1.7	92540541	7.7.17	92546464	7.5.23	92547652	7.4.41	92549146	7.7.15
92478569	7.5.35	92520386	7.4.21	92540566	7.7.23	92546472	7.4.33	92547652	7.5.15	92549153	7.7.11
92479674	7.4.27	92520386	7.4.29	92540574	7.1.25	92546480	7.4.31	92547710	7.7.19	92549161	7.7.11
92479674	7.4.35	92520386	7.5.25	92540582	7.7.21	92546498	7.3.7	92547728	7.7.19	92549187	7.1.9
92479674	7.4.37	92520394	7.4.13*	92540582	7.7.23	92546506	7.5.11	92547736	7.4.11	92549278	7.4.19
92490358	7.4.11	92520394	7.4.27*	92540699	7.7.21	92546514	7.5.11	92547736	7.4.39	92549278	7.4.39
92490358	7.4.35	92520394	7.4.37	92540699	7.7.23	92546522	7.5.13	92547769	7.4.39	92549286	7.1.9
92490358	7.4.61*	92520410	7.4.25	92540756	7.6.1	92546530	7.5.13	92547777	7.4.27	92549294	7.1.9
92492800	7.4.3	92520410	7.4.27*	92540772	7.4.49	92546555	7.7.7	92547777	7.4.35	92549328	7.7.3
92492800	7.4.9	92520428	7.1.29	92540780	7.5.9	92546621	7.1.19	92547777	7.4.39	92549401	7.1.21
92492800	7.5.25	92520428	7.4.43	92540806	7.1.1	92546670	7.5.11	92547793	7.1.27	92549450	7.1.23
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