



Meggitt Fuelling Products

Avery-Hardoll
Whittaker Controls

2.5 and 3 inch stainless steel self-sealing couplings

with

cam operated hose units CCMY8253 and CCMY8254 series

and fail safe tank units CCMY8250 (flanged), CCMY8251 and CCMY8252 (threaded) Series

Maintenance manual with spare parts list

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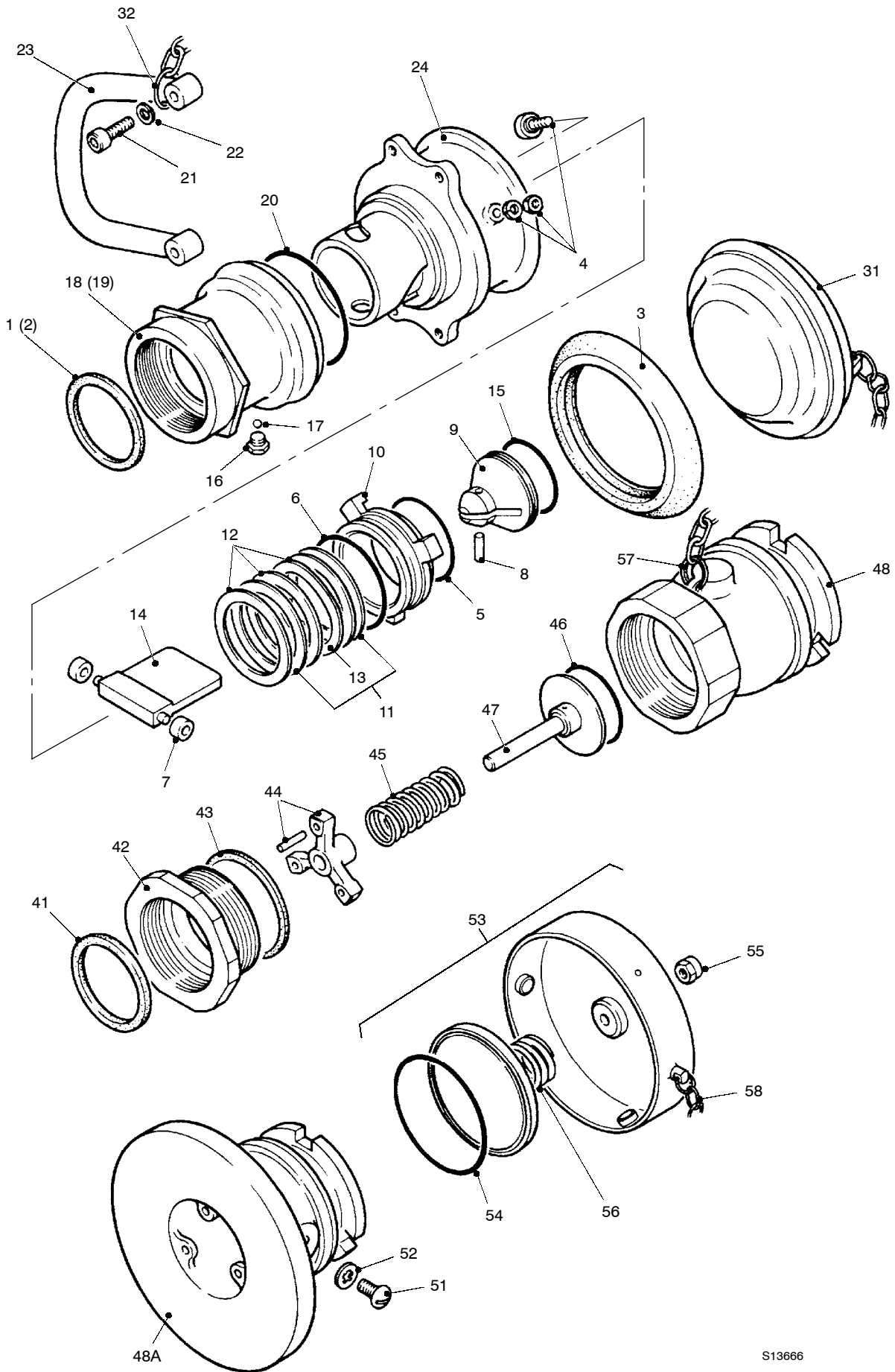
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S13666

Figure 1 2 1/2 / 3 in. stainless steel couplings with standard blanking caps

Spare parts identification and ordering

- The letters in the following 'Use on' column are the part number suffix letters of the coupling to which the part should be fitted. Always quote the coupling part number in full, as well as the item part number when ordering spares.

Item	Part Number	Description	Use on	Qty
-	-	HOSE UNIT	on	Ref
1	FCRZ430-1	. Seal, connector 2 1/2 in. - Viton (Fluorocarbon)	V	1
	FCRZ430-4	. Seal, connector 2 1/2 in. - E.P.	E	1
	Z062E231139A	. Seal, connector 2 1/2 in. - Chemraz	C	1
	FCRZ430	. Seal, connector 2 1/2 in. - Nitrile	N	1
2	FCRZ518-1	. Seal, connector, 3 in. - Viton (Fluorocarbon)	V	1
	FCRZ518-4	. Seal, connector, 3 in. - E.P.	E	1
	Z062E235139A	. Seal, connector, 3 in. - Chemraz	C	1
	FCRZ518	. Seal, connector, 3 in. - Nitrile	N	1
3	CCSZ1289	. Ring, buffer		1
4	CCMS8288	. Bayonet roller assy		3
5	Z032E229139A	. Seal, O-ring - Viton (Fluorocarbon)	V	1
	Z042E229139A	. Seal, O-ring - E.P.	E	1
	Z062E229139A	. Seal, O-ring - Chemraz	C	1
	Z022E229139A	. Seal, O-ring - Nitrile	N	1
6	Z032E231139A	. Seal, O-ring - Viton (Fluorocarbon)	V	1
	Z042E231139A	. Seal, O-ring - E.P.	E	1
	Z062E231139A	. Seal, O-ring - Chemraz	C	1
	Z022E231139A	. Seal, O-ring - Nitrile	N	1
7	CCSZ8291	. Roller, cam		2
8	ZT4011M0824A	. Pin		1
9	CCSZ8281	. Valve		1
10	CCSZ8279	. Spanner ring		1
11	CCPZ1371	. Washer, wave spring		2
12	CCSZ1370	. Washer, wave spring		3
13	CCSZ1280	. Spring, wave		1
14	CCSZ8278	. Rod, connecting		1
15	Z032E227139A	. Seal, O-ring - Viton (Fluorocarbon)	V	1
	Z042E227139A	. Seal, O-ring - E.P.	E	1
	Z062E227139A	. Seal, O-ring - Chemraz	C	1
	Z022E227139A	. Seal, O-ring - Nitrile	N	1
16	CCSZ8294	. Plug		1
17	ZASZ0068-8	. Ball, 9/32 in. dia		39
18	CCSS8282	. Connector, hose - 2 1/2 in. BSP		1
19	CCSS8286	. Connector, hose - 3 in. BSP		1
20	Z032E236139A	. Seal, O-ring - Viton (Fluorocarbon)	V	1
	Z042E236139A	. Seal, O-ring - E.P.	E	1
	Z062E236139A	. Seal, O-ring - Chemraz	C	1
	Z022E236139A	. Seal, O-ring - Nitrile	N	1
21	ZS4025M08030A	. Screw, skt cap hd, M8 x 30 lg		4
22	ZW4008M08A	. Washer, spring, 8 mm		4
23	CCSC8284	. Handle		2
24	NOT SPARED	. Cam		Ref
25 NI	CCSZ8297	. Pin, selective (Selective builds only)		6
31	CCMY6	Hose unit dust cap		1
32	ZASZ0098-12	. Ring, key		1
-	-	TANK UNIT		Ref
41	FCRZ430-1	. Seal - Viton (Fluorocarbon)	V	1
	FCRZ430-4	. Seal - E.P.	E	1
	Z062E231139A	. Seal - Chemraz	C	1
	FCRZ430	. Seal - Nitrile	N	1
42	CCSZ8292	. Adaptor, 3 in to 2 1/2 in BSP		1
43	FCRZ518-1	. Seal - Viton (Fluorocarbon)	V	1
	FCRZ518-4	. Seal - E.P.	E	1
	Z062E235139A	. Seal - Chemraz	C	1
	FCRZ518	. Seal - Nitrile	N	1
44	CCMS8276	. Guide assy		1
45	CCSZ1269	. Spring		1
46	Z032E227139A	. Seal, O-ring - Viton (Fluorocarbon)	V	1
	Z042E227139A	. Seal, O-ring - E.P.	E	1
	Z062E227139A	. Seal, O-ring - Chemraz	C	1
	Z022E227139A	. Seal, O-ring - Nitrile	N	1
47	CCMS8298	. Valve assy		1
48	NOT SPARED	. Body, screwed		Ref
48 A	NOT SPARED	. Body, flanged		Ref
51	ZS4005M0508A	. Screw, pan hd, M5 x 8 lg		1
52	ZW4006M05A	. Washer, int sh'/proof, M5		1
53	CCMY1271	Tank unit blanking cap assy		1
54	ZARZ0041-10	. Seal, O-ring - Viton (Fluorocarbon)		1
55	ZN4001A02A	. Nut, hex, SS-2BA		1
56	CCSZ1264	. Spring		1
57	ZASZ0098-7	. Ring, key		1
58	CCMZ1303	. Chain and jump links assy		1

General

- The 2¹/₂ / 3 inch stainless steel couplings are supplied in a range of seal materials and with optional selectivity to suit a particular application or customer requirement. The coupling build standard is indicated by the part number suffix letters:
 - 1st suffix; V, E, C or N = seal material
 - 2nd suffix; SA to SW (excepting SI and SO) = selectivity (optional)

Data

Tank unit:

Working pressure (max)	21 bar (305 psig)
Coupling pressure (no-flow conditions)	4 bar (58 psig)
Static test pressure	31.5 bar (457 psig)

Hose unit:

Working pressure (max)	10 bar (145 psig)
Coupling pressure (no-flow conditions)	4 bar (58 psig)
Static test pressure	15.5 bar (225 psig)

- Operating temperature range:

Fluorocarbon (Viton) seals (Part No. suffix V)	-20 to +120 deg C (-4 to +248 deg F)
E.P. seals (Part No. suffix E)	-45 to +120 deg C (-49 to +248 deg F)
Chemraz (Part No. suffix C)	-29 to +232 deg C (-20 to +450 deg F)
Nitrile (Part No. suffix N)	-30 to +120 deg C (-22 to +248 deg F)

WARNINGS: (1) Couplings fitted with E.P. seals must not be used to handle petroleum or kerosene products.

- (2) Fluorocarbon. Do not handle O-rings/seals if their material appears charred, gummy or sticky. Use tweezers and wear neoprene or PVC gloves. Do not touch adjacent parts with unprotected hands. Neutralize adjacent parts with a solution of calcium hydroxide. If the degraded material or adjacent parts touch the skin, do not wash off with water, seek immediate medical aid for possible contamination with hydrofluoric acid. Hydrofluoric acid in contact with skin has delayed symptoms of contamination. It is extremely toxic.

User Instructions

- Cleanliness is essential for trouble-free operation of the couplings. Always ensure that blanking caps are installed when units are disconnected for any length of time.
- Periodically examine couplings for contamination, evidence of leakage and damage. Clean couplings, as necessary, with lint-free cloth or a soft bristle brush moistened with a suitable cleaning agent; pay particular attention to hose unit and tank unit seal recesses.

Repair

- Repair of couplings is by replacement of faulty seals and worn or damaged components. Repair procedures are straightforward and no special tools are required. Refer to exploded views and the following outline procedures for guidance.

Dismantling notes

- Hose units: Separate hose connector (18 or 19) from cam (24) by removing plug (16) and rotating hose connector to release steel balls (17); collect cam rollers (7). Remove cap nuts and spring washers and the three bayonet rollers (4) from the cam. Remove spanner ring (10) and valve components from the cam. Remove pin (8) to separate valve (9) from connecting rod (14).
- Tank units: The valve in the tank unit is spring loaded and care must be taken to avoid injury when removing the valve guide assy. Push in and turn the valve guide (44) clear of the lugs in valve body (48 or 48A), then carefully allow the spring to expand. Remove guide, spring (45) and valve assy (47).

Cleaning and Inspection

- Clean all metal components using lint-free cloth moistened with a suitable non-toxic cleaning fluid. Ensure that residues of seal material are removed from O-ring seal grooves and from all sealing faces; use fine grade wire wool, if necessary. Do not remove fluoron coating from treated components.
- Examine all parts for damage, evidence of wear and condition of surface protection (Fluoron coated components). Discard unserviceable components together with all used seals and pins; refer to spares list for replacement parts.

Assembling

- Assemble units in the reverse order of dismantling and note the following:
- Exercise care when installing O-ring seals in 'dovetail' grooves; use a suitable lubricant if necessary, and wipe off any excess after assembly. Do not use petroleum jelly or liquid paraffin on E.P. seals.
- When installing the spanner ring in the hose unit, ensure that the stops are positioned under the bayonet roller locations.
- Ensure that the handles are correctly orientated on the hose unit.
- After installing the guide assembly in the tank unit, check that the grooved pins are fully engaged in the retaining lugs in the body.
- The Nyloc nut securing the seal support plate in the tank unit blanking cap must be slackened approximately one turn to allow the seal plate to rotate in the cap.

Testing

- Couple the repair unit to a serviceable hose or tank unit as appropriate and check for correct operation of valve actuating and bayonet locking mechanism. Couple and uncouple unit(s) several times.