ARB AIR LOCKER Air Operated Locking Differentials

6151223

320203

200711

320212

320501B

290503

320501A

160250

180409

CO42

180209

180212

CO45

170802

180702

CO44

2102MA12

180703

6,7,8

3

3

3

5,8

CKMA12 & CKMA24 Air Compressor 01 O-RING (BS010V75) 160242 5 1 MANIFOLD CAP (1/4" NPT) 02 320214 03 1 PRESSURE SWITCH (1/4" NPT) **CO35** 04 O-RING (BS031N70) 160241 5 2 05 1 **MANIFOLD TUBE** 320215 06 2 HEX BOLT (M6 x 60mm) 200703 07 **COMPRESSOR HEAD ASSEMBLY** 1 320102 **SAFETY VALVE POPPET** 320205 80 SAFETY VALVE SPRING 150115 1 09 1 10 SAFETY VALVE FITTING 320204 1 11 1 HEX BOLT (M6 x 125mm) 200704 HEX BOLT (M6 x 12mm) 200702 12 MANIFOLD SUPPORT BRACKET 13 1 320207 14 **AIR LOCKER CONTROL SOLENOID (12V)** 180103 # 15 NIPPLE (1/8" to 1/8" BSPT) 170501 16 PUSH-IN FITTING (5mm to 1/8" BSPP) 170201 O-RING (BS032S70) 17 3 160247 5 **VALVE PLATE ASSEMBLY** 18 320105 19 **BARREL** 320201 1 20 1 PISTON ASSEMBLY (SERVICE KIT) 320302 21 1 STICKER, CKM COMPRESSOR 210122 22 MOUNT ASSEMBLY 320101 23(a) **MOTOR ASSEMBLY (12V)** 2 320104 23(b) 1 **MOTOR ASSEMBLY (24V)** 320106 24 4 HEX BOLT (M6 x 25mm) 200405 **CARRIAGE BOLT (M6 x 25mm)** 4 6151082 * 25 4 FLAT WASHER (M6) 200709 **BACKING PLATE** 26 290603

S	n	e	cs	•
_	~	•	-	н

Voltage	12 Volts (CKMA12), 24 Volts (CKMA24)
Current Draw	No-Load 14.2A (CKMA12 only)
	Load 25.2A (CKMA12 only)
Air Flow	87.2L/min @ 0kPa [3.08CFM @ 0psi]
	65.9L/min @ 200kPa [2.34CFM @ 29psi]
Total Weight	4.5kg [9.9lbs]
Size	145mm x 190mm x 98mm (H,L,W)
	[5.7" x 7.5" x 3.9"]
Manifold Port	1/4" NPT [Pressure Switch] x 1
	¹ / ₈ " BSPT [Solenoid nipple] x 2
ressure Switch	Open 690kPa [100psi]
	Closed 490kPa [70psi]
Safety Valve	OPEN @ > ~1250Kpa [180 PSI]

Notes:

- 1 Comes pre-assembled with HEAD ASSY (07).
- 2 Motor voltage is the only difference between the CKMA12 and the CKMA24 compressors. CKM motors are serviceable. Contact ARB.
- 3 AIR FILTER BASE (31) & COVER (33) available only in AIR FILTER ASSY #320501 which also includes the element.
- 4 Wiring loom #180409 suits 12 & 24 volt systems. See full wiring diagram attached.
- 5 Complete set of O-ring seals is also available as O-ring Service Kit #320301.
- 6 PISTON ASSEMBLY (20) comes only as a service kit also containing the BARREL (19), AXLE (28), and CAP SCREW (29).
- 7 Thread lock must be applied to threads of CAP SCREW (29) and then torqued to 10 Nm [7.4ft-lb]. CAP SCREW (29) should never be re-used once it has been fully torqued once.
- Pre June 2009 CKMA's used O-RING 160243 and CAP SCREW 200708 (M4 x 20mm torque to 6Nm [4.4ft-lb]).

Available separately or included with Air Locker kits.

* Not illustrated in exploded view.

FUSE,40A,MAXI TYPE

NYLON LOCK-NUT (M6)

AIR FILTER BASE

AIR FILTER COVER

O-RING (BS029N70)

RELAY (12V,40A)

PLUG (1/8" BSPT)

SWITCH (12V)

CAP SCREW (M5 x 20mm)

AIR FILTER FLANGE (1/4" NPT)

AIR FILTER ELEMENT (DISK TYPE)

WIRING LOOM (CKMA12 & CKMA24)

SCOTCH LOCK ELEC. CONNECTOR (564)

SWITCH COVER (COMPRESSOR)

EYE TERMINAL, 10MM (YELLOW)

EYE TERMINAL, 10MM (BLUE)

INSTALLATION GUIDE, CKMA

27

28

29

30

31

32

33

34

*

*

*

*

4

1

1

1

1

1

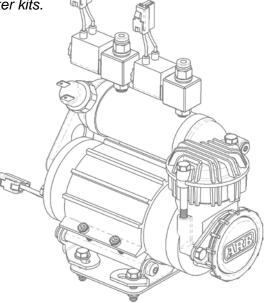
1

1

2

2

AXLE

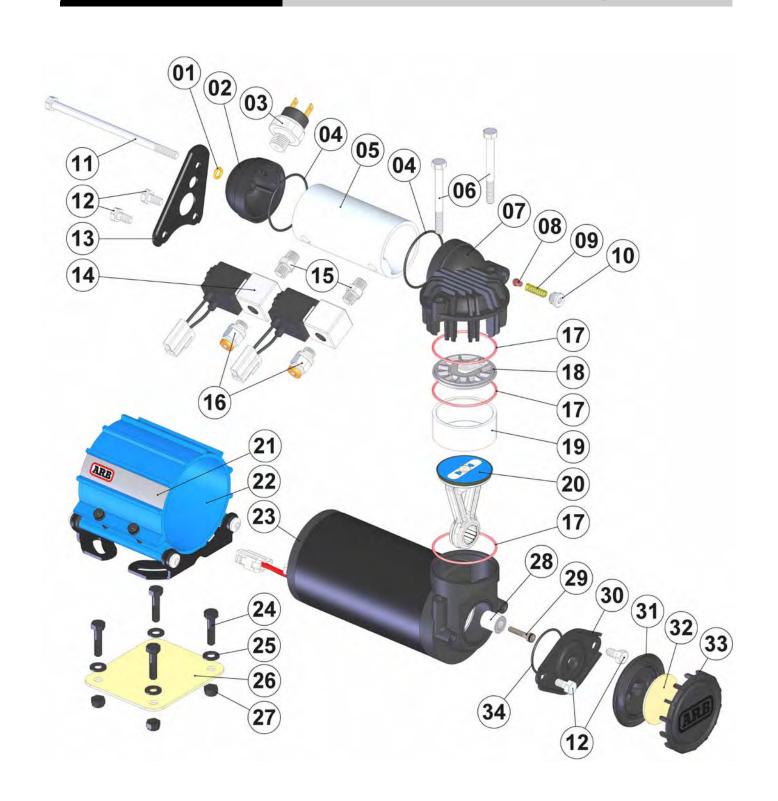




Revision Date 27/09/11

3.4

CKMA12 & CKMA24 Air Compressor – Exploded Parts Diagram



CKMA12 & CKMA24



CKMA12 & CKMA24 Air Compressor – Overall Sizes





ARB AIR LOCKER Air Operated Locking Differentials

CKMA12 & CKMA24 Air Compressor – Overview of Design Features

Description:

The ARB CKMA12 and CKMA24 compressor kits were designed specifically as a versatile, quick installing, compact yet high-flow air source to suit the ARB Air Locker, which also suits the harsh and demanding environment of the ARB Air Locker user.

Features:

- Available in 12V (CKMA12) or 24V (CKMA24) models.
- Ultra compact design makes it the highest flowing compressor in its class (voltage vs. size), and able to fit into tight areas where other high flowing compressors will not.
- Fully sealed components for moisture and dust resistance.
- Pressure switch controlled air manifold system specially designed to suit all ARB Air Locker equipped vehicles.
- Hard-anodized cylinder bore and PTFE (Teflon) impregnated carbon fibre piston seal for reduced friction and maximum trouble free life.
- Anodized mounting bracket dissipates motor heat and allows compressor to be repositioned 180°.
- Anti-vibration / sound deadening is integrated into the mount.
- Relocatable splash resistant air filter assembly for cleaner, cooler air supply and versatile waterproof air intake positioning.
- High density and high flow washable sintered bronze air filter element.
- Full wiring loom included for simplified installation and easy plug-in connectivity to Air Locker control solenoids.
- Heavy duty Maxi-Fuse equipped for professional in-line circuit protection.
- Motor is 100% ball bearing equipped, and features a unique linear brush pre-load system for extra long life, low heat and quiet operation throughout the life of the unit.
- Compressor piston is equipped with a German made high shock load rated cylindrical roller bearing.
- Constructed entirely of light weight, high strength, engineering grade materials, including military and aerospace standard components.
- Over-pressure safety valve equipped.
- Motor has internal thermal protection against extreme temperature damage.
- *Motor has integrated EMC noise suppression to protect sensitive auto electronic systems.

Kit Includes:

- Fully assembled and tested air compressor (12V or 24V).
- Complete wiring loom w/ Air Locker solenoid plug-in contacts.
- OEM quality IP54 rated compressor isolating dash switch.
- Air Locker supply rated pressure switch (490-690 KPa [70-100 PSI]).
- Relocatable splash resistant air filter with washable high-flow sintered bronze filter cartridge.
- Mounting hardware with reinforcing backing plate.
- Comprehensive photo illustrated installation guide.
- * 12V Model is certified compliant to EN 55014.1 (AS/NZS CISPR 14.1) and meets or surpasses the following Australian and European directives.





ARB Part # 180409

Air Compressor Loom - Wiring Diagram

