SPECIAL "CLUBS" NOUVEAUTES

Serpent

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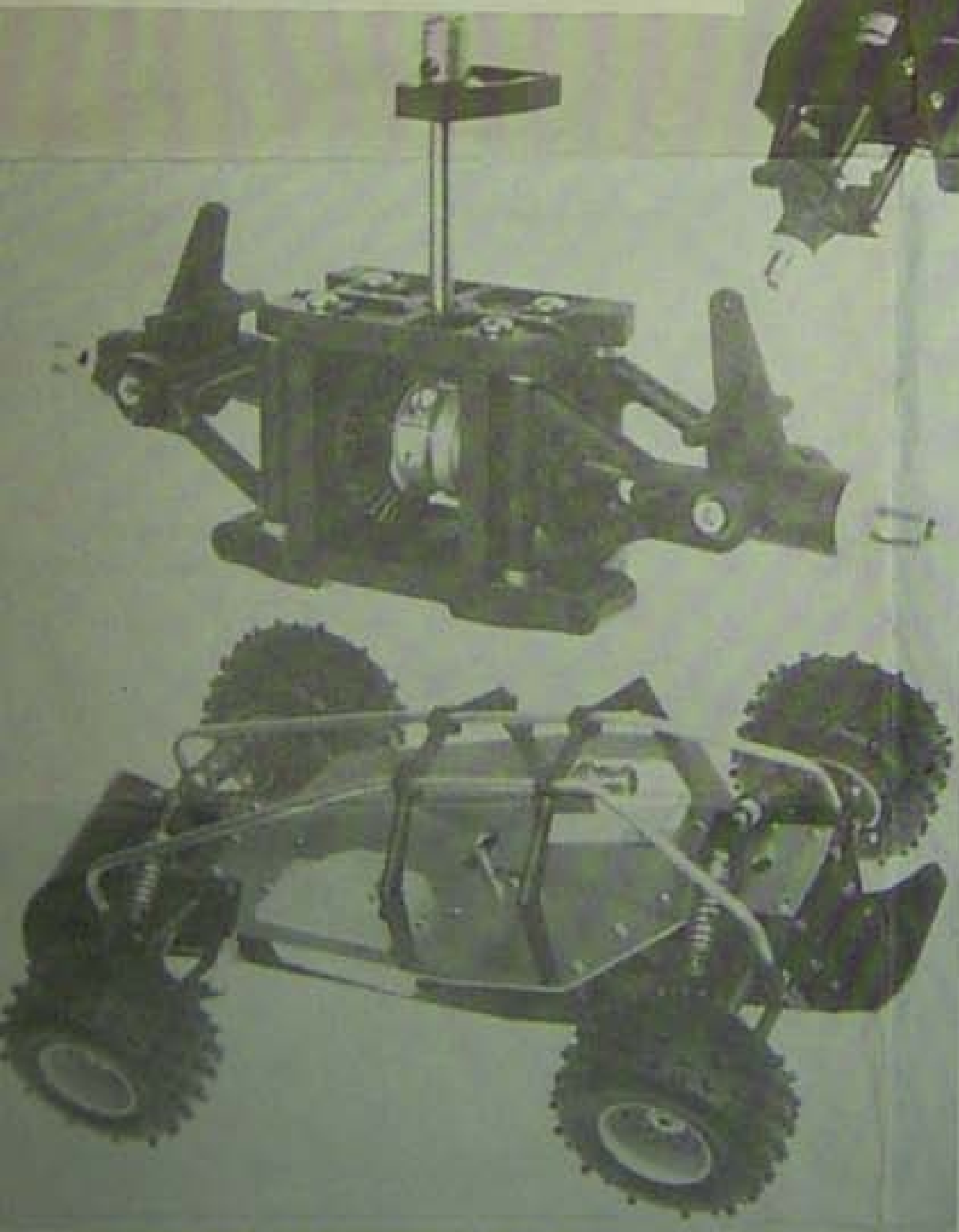
COBRA ORV 4x4

- 2 différentiels (AV et AR) à glissement limité
- nouvel embrayage
- nouveau volant 38 mm
- Amortisseurs à compensation
- Barres anti-rouli AV et AR
- Bâti moteur fileté (selon le moteur choisi,
- Sortie moteur à préciser)
- Résonateur
- 1 couronne 53 dents supplémentaire

TARIF Frs/TTC ~~2.562,00~~

★ PRIX SPECIAL CLUB Franco 2.305,00



COBRA ORV 4x2

- identique à 4 X 4 sauf
- 1 différentiel (AR) à glissement limité (il est possible, par la suite, de faire évoluer le 4 X 2 en 4 X 4)

TARIF Frs/TTC ~~1.915,00~~

★ PRIX SPECIAL CLUB Franco 1.725,00

Serpent®

IMPORTATIONS - DIRECTES

1	5323	Differenzial Achswelle, lang
2		Federring
3	5325	Stahl-Scheiben
4		Käfig
5		Kugeln
6	5326	Alu. Spannring
7	5327	Nadellagergehäuse mit Nadellager
8	5331	Drucklager, klein
9	5332	Sicherungs-Federring
10	5328	Differenzial Achswelle, kurz
11	5335	Distanzring
12-32	5329-32	Teller-Kegelrad 32 Zähne, vorn
12-33	5329-33	Teller-Kegelrad 33 Zähne, hinten
13	5334	Kugellager 12x21x5
	5344	Kugellager 12x21x5
14		Segering 12mm
15	5343	Differenzial Achsböcke
16-32	5346-32	Kegelrad mit Welle, vorn
16-33	5346-33	Kegelrad mit Welle, hinten
17		Kugel/Gleitlager 6x13x5
18	5342	Platte Antriebsgehäuse
19	5301	Obere Querlenker, hinten
20	5402	Untere Querlenker, hinten
21	5303	Radführungsböcke, hinten
22	5208	Alu. Stifte, 63mm
	5304	Alu. Stifte, 63mm
23	5305	Alu. Stifte, 43mm
24		Sicherungs Ringe
25	5358	Achswellen mit Sechskant, hinten
26	5359	Felgenaufnahme
26-1	5360	Radmutter Alu.
27	5357	Halbwelle, hinten
28	5361	Gummi-Abdichtung
29	5341	Vorder- und Hinterplatte
30	5202	Achsschenkel-Block, L+R
31	5204	Kugelgelenk-Aufnahme
32	5356	Achswelle vorn, geschlitzt
33	5206	Obere Dreieckslenker, vorn
34	5207	Untere Dreieckslenker, vorn
35	5205	Kugelgelenk Lager
36		Schraube für Kugelgelenk M4x12
37	5355	Halbwelle vorn
38		Stahl Stifte 3x12
39		Messing Kugel 4,5mm
40	5209	Nylon Kugelgelenk
41		Gewinde Stange M2,5x25
42		Stabilisator vorn
43		Messing Kugel mit Gewinde
44	5215	Servo Saver, Oberteil
45	5215	Servo Saver, Unterteil
46	5216	Servo Saver Feder
47	5215	Servo Saver Achse
48		Kugelköpfe
49	5217	Nylon Kugelgelenk
50		Spurstange
51	5101	Alu Chassis Platte
52	5349	Bremsgehäuse und Zwischenlager
53	5504	Stahlstifte 2,5x20
	5605	Stahlstifte 2,5x20
54	5608	Stahl-Bremsplatten
55	5607	Bremswelle, Exzenter
56	5601	Vierkant-Aufnahme für Bremsscheiben
57	5606	Bremsscheiben
58	5604-50	Mittel Zahnrad 50 Z
	5604-53	Mittel Zahnrad 53 Z
59		Sicherungs Ring 10mm
60	5352	Verbindungs-Muffe
61	5351	Zwischenwelle
62	5348	Lagerbock Zwischenwelle, Mitte
63	5354	Sechskant-Gehäuse, kurz
64		Segering 12mm
65	5347	Lagerbock, vorn
66	5353	Halbwelle, mitte
67	5501-2	Schwungscheibe OPS,PICCO,CIPOLLA,HP
	5501-1	Schwungscheibe K&B, Veco
	5501-3	Schwungscheibe OS Max
68	5502-1	Kurbenwellenadaptor 1/4 UNF
	5502-3	Kurbenwellenadaptor M6
69	5503	Kupplungsbacken
69-1	5313	Spezialen Kupplungsbacken
69-2	5314	Federn fur Kuppling
70	5505-11	Kupplungs-Glocke 11 Z
	5505-10	Kupplungs-Glocke 10 Z
	5505-12	Kupplungs-Glocke 12 Z
	5505-13	Kupplungs-Glocke 13 Z
71	5506	Kugellager für Glocke, mit Bund
72	5510-2	Kugellager für Glocke, ohne Bund
73	5508	Sicherungsring fur Glocke
74	5520	Motorböcke, ohne Bohrung
	5521	Motorböcke OPS
	5522	Motorböcke ST
	5523	Motorböcke PICCO,CIPOLLA,K&B
	5524	Motorböcke OS Max
75	5710	Resonanzrohr
75-1	5701	Silicon-Schlauch 15x20
75-2	5712	Alu. Rohr für Endschlauch
75-3	5711	Silicon Schlauch 10x14
76	5710-B	Drahtbügel, Befestigung
77	5420	Kolbenstange
78		Sicherungsringe 1,9mm
79		Alu. Kegelventil
80		Kolben
81	5411	Druck Anschluss
82		O-Ring 2,9mm
83		O-Ring 8mm
84		O-Ring Aufnahme
85		Verschluss-Schraube
86	5415	Kunststoff Federaufnahme
87	5405	Kunststoff Lager
88	5401	Zylinder
89		Distanz-Hulse
90	5402	Alu. Lager
91	5416-2	Druckfeder, 1,4/60mm
	5416-1	Druckfeder, 1,3/60mm
	5416-3	Druckfeder, 1,5/54mm
92	5414	Überwurfmutter
93	5417	Lager-Stift
94	5417	Sicherungs-Ring 8mm
95	5418	Aufnahmebock für Stossdämpfer
96	5102	Radio-Platte, Alu.
97	5111	Fernsteuerung Halter
98	5110	Servo Befestigung
99	3801	Servo Scheiben, Futaba,Robbe
	3801-1	Servo Scheiben, Sanwa,Simprop,KO
100		Kunststoff Bremsanlenkungs Hebel
101	5609	Alu. Bolzen M5x20
102		Stellringe, 2mm
103		Kunststoff Hebel, klein
104	5760	Tank
105	5106	Alu. Überroll Käfig
106	5104	Kunststoff Käfig-Halter, vorn
107	5105	Kunststoff Käfig-Halter, hinten
108	5108	Deckel
109	5103	Vorder-Rammer
110	5103-1	Hinter-Rammer
111	5452	Felgen 45mm
	5451	Felgen 35mm
	5453	Felgen 55mm
112	5460	Off-Road Reifen
	5461	Off-Road Reifen
	5462	Off-Road Reifen
	5463	Off-Road Reifen
113	5112	Drahtbügel fur Spoiler
114	5109	Spoiler-Befestigung
114-1	5109	Alu. Mutter M8
115		Spoiler
116		Abdeckplatte
117		Luftfilter
118		Servo
119		Empfänger
120		Akku
121		Schalter
122		Antenne

ADJUSTABLE LIMITED SLIP DIFFERENTIAL

The COBRA is equiped with so called limited slip differentials. These can be adjusted to suit the conditions of the track and are one of the great advantages of the COBRA.
Assemble as follows:
Place the steel spring washer 2* over the differential main shaft 1*, followed by the steel washer 3*, the cage 4* with nine balls 5* and the second steel washer 3*. Apply some grease to the cage, differential main shaft and the thread of the differential hub 7*. Turn the alu. adjusting nut 6* on the hub. (use also grease when you open the differental for maintenance)
Slide hub 7* over the differental shaft, insert the thrust bearing 8*, using some grease again. The small spring clips 9* goes into the groove of the main shaft and locks the differential hub.
Tighten adjusting nut 6* gently, making sure that the small clips is correctly in the groove, check by pressing the clips in with a small screw-driver. When you are sure the clips is in place, tighten the nut by hand, and increase the pre-load (adjustable limited slip) by turning the nut 6* another 1/2 till 3/4 turn by inserting a 4mm pin in the hole of the nut and holding the hub.
Tighten the socket head screw of the nut 6* to lock the nut on differential hub 7*.
Apply the drive flange 10* and fix with 3 screws M3x8 c.h.

NOTE: The correct setting of the differential can only be checked when the car is ready to run. At full throttle, hold all 4 wheels of the COBRA by pushing the car on the ground, the main gear 58* should then not turn. If it does, either of the 2 differentials or both must be tightened. This can be done through the holes in the radio-plate. Undo socket head screw of adjusting nut 6*, insert the 4mm pin in the hole of the nut and turn the wheel on the drive flange side counter clockwise. Tighten screw and check again.
Be carefull not to loosen the adjusting nut too much since this may cause the small spring-clips 9* to escape from the groove, and with the differential assembled, this cannot be seen.

The differential unit is now ready. Front and rear differentials are identical so far. The differences are in the crown wheels 12-32* and 12-33*, to be placed over the cage of the differential. (see next chapter)
Insert ballbearing 13* in the crown wheel, and slide the crown wheel over the differential cage. The Circlips 14* locks the crown wheel onto the differential shaft 1*.
Place the spacer 11* over the drive flange 10* followed by ballbearing 13* on both ends of the differential. Now the complete differential can be placed between the bearing blocks 15*.

PINION AND CROWNWHEELS OF THE TRANSMISSION

We have experienced that it is a great advantage to have a slight difference in gear ratio between the front transmission and the rear transmission. With about 4% more drive on the front wheels, the COBRA is extremely stable in fast cornering and straight line. This ofcourse means that both the crown wheel and the pinion have to be different, as they have to be used as a pair. Although the pinions have the same number of teeth, they are not the same! Therefore remember the following:

REAR TRANSMISSION : CROWN WHEEL 33 TEETH WITH PINION MARKED 14-33
FRONT TRANSMISSION: CROWN WHEEL 32 TEETH WITH PINION MARKED 14-32

The difference between the crown wheels can be distinguished as follows:
the 32 teeth crown wheel has 2 marks on its outline, and the 33 teeth crown wheel has 3 marks.
Another difference between front and rear transmission is the position of the crown wheel to the center of the car. As is shown clearly on the drawings, the crown wheel 12-33* of the rear transmission is placed left from the center of the car, and the crown wheel 12-32* of the front transmission is placed right from the center of the car. If you do this wrong, you may see very strange things to happen !)

REAR TRANSMISSION AND SUSPENSION

Apply ballbearing 17* to the pinion shaft 16-33* and check if the ballbearing bears against the pinion itself. This is very important since this determines the clearance between pinion and crown wheel. When there is some light between the bearing and the pinion, sharpen the edge with a little file and check again.
Insert the pinion shaft 16-33* with the ballbearing into the transmission plate 18* (with 13mm hole) and apply this to the pre-mounted differential with the bearing blocks 15*. (crown wheel 12-33*, positioned left of center !)
Check the play between the crown wheel and the pinion, they should not be tight.
Plate 18* is fixed to the bearing blocks 15* with 4 parkers 4,2x16 r.h.

We will now assemble the rear wheel uprights 21*
Insert the 2 ballbearings 17* and push the rear wheelaxle 25* (with hex.) in. Fix the wheelhub 26* with setscrew M3x6. Aluminium wheelnut 26-1* fixes the wheel.
Press the alu. pivot pins 22* (length 63mm) into the upper and lower rear suspension arms (19* and 20*). It should be possible to gently press them in, but if not, be carefull not to damage the pins when using a hammer!
Attach the upper arm 19* and the lower arm 20* to the upright 21*, by inserting alu. pivot pins 23* (lenght 43mm) and placing the 8 C-clips 24*.
Check if the suspension arms all can turn freely.

Slide the rubber gaiters 28* over the rear cardan shafts 27* (length 66mm and 2 hex.). Now the rear suspension can be assembled to the pre-mounted rear transmission.
IMPORTANT: for the right axial play of the rear cardan shafts 27*, do not apply any nylon spacers in the hexagons of shafts 1*, 10* and 25*.

Put some grease in the hexagons of wheel axles and differential and place the rear cardan shafts 27* in the hexagons of the rear wheelaxles 25*.
Place the alu. pivot pins 22* in the lower and upper (outside) hole of the plate 18*. Meanwhile manouvre the cardan shaft in the diff. hexagon. Now the bracket 29* can be installed and fixed to the bearing blocks 15* with 4 parkers 4,2x20 r.h.
Check the movement of the suspension arms and the axial play of the rear cardan shafts 27*. Check in both bottom and upper suspension position: the play must be minimum 0,5mm. If all is OK, the pinionshaft 16-33* can be turned easely and make the wheelhubs 26* to turn.
It may be that there are some tight points but these will disappear after a few minutes of running.
The complete assembled rear transmission and suspension can now be fitted to the chassisplate 51* with 5 parkers 3,5x13 r.h.

5 FRONT TRANSMISSION AND SUSPENSION

We start with assembling the steering blocks 30*.
Turn the inserts 31* in the threaded holes of the steering block. It is advisable to use some Loctite here. You must check the inside of the steering block because some nylon may be pushed inside by turning in the insert. Cut away any protruding nylon, otherwise the front wheelaxle 32* will not run free.
Push the ballbearings 17* in and insert the front wheelaxle 32* (slotted). The alu. wheelhub 26* is fixed with setscrew M3x6.

Note: The steering blocks left and right are different, although very hard to see. The steering-arm is placed off the middle as you see. Regard that the steering arm must be placed above the centre, and this tells you which one is the right steering block and which one is the left.
If you do this wrong, the track-rods are too low and will not be completely free when steering from left to right.! This also creates bump-steering, which is bad.

Now that we know what is left and what is right, we can continue with the suspension arms 33* and 34*.
Press in the spherical bearings 35*. This must be done gently by squeezing them in with a bushing between a wrench (or with plyers)
The upper and lower front suspension arms 33* and 34* may now be fixed on the steering blocks with screws M4x12 c.h. and make sure you tighten them well.
Insert the aluminium pivot pins 22* (lenght 63mm) into the suspension arms.
Since the caster-angle is controlled by the steel washers that fill the space between the brackets 18* and 29*, the pivot pins in the upper arm must protrude about 2mm more to the front than to the back, and the pins in the lower arms visa versa. Consequently, on the pivot pin of the upper arm, use 3 steel washers 5mm in the front and 1 in the back, and at the lower pin 1 in the front and 3 in the back. (watch left and right suspension, and see drawing)

Take the front cardan-shaft 37* (with hex. and ball) and press in the steel pin 38*. Place the rubber gaiter 29* over the hexagon.
The suspension arms and steering blocks, pre-mounted, can now be assembled to the front transmission.
The differential with crown wheel 12-32* is placed between the bearing blocks 15*, with the crown wheel right of the center.
Put the pinion shaft 16-32* in the transmission plate 18* and fix the plate to the bearing blocks 15* with 4 parkers 4,2x16 r.h.

IMPORTANT: for a correct side-play of the front cardan shafts 37*, insert in all drive-holes of axles 1*, 30* and 32* the nylon pads 3x8mm. When the side-play turns out to be too little, cut away some nylon of the inside pads.

Put some gresse in the drive-holes and insert the pivot pins 22* in the inside holes of the transmission plate 18*. The front cardan shaft 37*, to be placed in the front wheelaxle 32*, has to be manouvered into the drive hex. of the differential. Do not forget to apply the steel washers 5mm !
Check the side play of the cardan shafts, the same routine as for the rear suspension (see chapter 4).
The front suspension and transmission is now ready and can be fixed onto the chassisplate 51*, using 3 parkers 3,5x13 r.h. in the plate 18*, and 2 parkers 3,5x13 c.h. in the bracket 29*. With these 2 parkers also the front bumper 109* is attached to the chassis.

6 FRONT ANTI-ROLL BAR

The ant-roll bar is a very usefull device to increase the stability of the COBRA and prevents the car from looking in to the corners (oversteering).

Assemble as follows:
The small brass balls 43* are soldered to the ant-roll bar 42*.
Take the brass balls 39* (threaded) and turn in the screw M2x8. Use some Loctite on the screw. After tightening the screw cut the head off and turn the ball 39* in the lower front suspension arm 34*.
The screw 41* M2,5x25 is screwed into the nylon ball-joint 40* . When completely turned in, cut off the head again and screw the other nylon ball-joint on the tread-rod 41*, total length must be 44mm.
The anti-roll bar 42* is placed in the slot of the bracket 29* and held with the 2 parkers 4,2x20 r.h. These 2 parkers should not be tightened because the anti-roll bar 42* must be able to turn freely in the slot in order to work correctly. The rods 41* with the ball-joints 40* can now be pressed over the brass balls and the anti-roll bar is finished!

7 TRACK-RODS AND SERVO SAVER

Fit the brass balls 48* (6,3mm) on the top-side of the arms of the steering blocks 30*, and the bottom-side of servo saver part 44*, using screws M2,5x16 and nuts M2,5.

Turn the nylon ball-joints 49* on the track-rods 50*, total length should be 79mm to get the correct toe-in on the front wheels.
Cut the un-used part of the servo-saver part 45* and fix another brass ball 48* at the bottom side, inner hole. Put the spring 46* over the servo saver parts 44* and 45* and insert the servo saver shaft from the bottom.
The servo saver can now be mounted underneath the radioplate 96* with screw M4x12 r.h.
You can apply the track-rods onto the servo saver. After assembling the radioplate on the chassis, the track-rods are attached to the steering arms.

8 MIDDLE SHAFT AND DISK-BRAKE

The middle shaft and the disk brake are distributing the engine power and the braking power to both the front and the rear wheels.
The middle shaft may be replaced by a third differential (partnr. 5320-1). We have the expirience that under almost all circumstances the COBRA performes as well or even better with a solid middle shaft as with the middle differential.
One of the advantages of the middel shaft is that in the case of breaking or loosing a cardan shaft the drive remains on either one of the transmissions.
With the extra drive on the front wheels (chapt. 3) we have gained a very important advantage and the solid middle shaft aids to thisas well.

We start with the disk brake housing 52*, insert the 2 pins 53* (2,5x20) from the rear side of the brake housing, the blank part first.
The steel brake-pads 54* have to be deburred, (on the outline with a file and on the holes with a 4mm drill). After having done this, place the 3 brake pads over the pins 53*.
Insert the disk brake cam 55* from the top of the brake housing and press the ballbearing 17* in the 13mm hole.
The main gear 58* is placed on the brake hub 56* and fixed with the Circlips 59*. The brake disks 57* are placed over the other side of the brake hub (if necessary enlarge the square holes with a file to make them move easely).
Insert the middle shaft 61* in the brake hub 56*. Now the middle shaft with brake hub and brak disks can be placed in the brake housing, with the 2 brake pads 54* asides the disks and 1 in the middle.

The middle shaft 61* can now be pushed further in, through the ballbearing 17* untill the middle shaft protrudes about 10mm on the back-side of the brake housing.
Slide the connecting bushing 60* over the pinion shaft 16-33*, with the smallest side facing the front.
The brake housing with the middle shaft is placed on the chassis plate and fixed with 2 parkers 3,5x13 r.h.
Push the middle shaft 61* further in untill it is about 1mm from the pinion shaft 16-33*. Slide the connecting bushing 60* foreward against the ballbearing 17*.
Fix the connecting bushing and the brake hub on the middle shaft and the pinion shaft with setscrews M5x6. Don't forget to possition the flats on the shafts!
Turning the main gear 58* will now make the rear wheels to turn.

9 MIDDLE CARDAN SHAFT

The middle cardan shaft transfers the engine power to the front wheels. Because of possible distortion of the chassis plate and radio plate, this part of the transmission is made flexible.

Press ballbearing 13* in the bearing block 62* and ballbearing 17* in bearing block 65*. Fix the bearing blocks to the chassis plate with parkers 3,5x13 r.h.
The ballbearing in 62* facing the front, and the ballbearing in 65* facing to the rear.
Drive hex. 63* is fixed on the pinion shaft 16-12* with setscrew M5x6.
Place Circlips 64* over the second drive hex. 63* and fix on the middle shaft 61* with setscrew M5x6. The Circlips 64* holds bearing 13* in place.
Apply the 2 rubber gaiters 28* to the middle cardan shaft 66*. By bending the chassis plate a little bit, the distance between the bearinblocks 62* and 65* will get bigger and thus allowing the middle cardan shaft 65* to be inserted in the 2 drive hex. 63*.
This completes the transmission to the front wheels. Turning the main gear 58* will now make all 4 wheels to turn.

10 ENGINE, CLUTCH AND MUFFLER

Only engines with a side-exhaust can be used in the COBRA. Since all the major manufacturers of engines produce a side exhaust Buggy version (OPS, PICCO, OS MAX, CIPOLLA, HP) this will not be a problem.
The flywheel in the kit is with a 7mm hole, and is suitable to all the forenamed engines exept the OS Max. (see ref. list)

Insert the steel pins 53* in the 4 holes of the flywheel67*, from the back side.
Place the flywheel on the engine and turn the clutch nut 68* tight. Check the flywheel for possible unbalance. If you notice any side-movement, relocate the flywheel and try again.
The clutch shoes 69* have to be cut according to the drawing. Then place them on the pins of the flywheel and make sure they are placed counter-clockwise (i.e. the revolution of the engine).
Clutch ballbearings 71* are placed in the clutch-housing 70* (gently) and slided over the clutch nut 68*. C-clips 73* locks the clutch housing.
Check the free running of the clutch.

As an optional special clutch shoes 69-1* are available, together with springs 69-2*. Also 2 more ballbearings 72* can be inserted to increase reliability.
By using different clutch housings and main gears, 8 gear ratio's are available, as you can see from next table:

main gear 58*	clutch housing 70*	gear ratio
53 teeth	10 teeth **	12.3 : 1
50 teeth	10 teeth **	11.6 : 1
53 teeth	11 teeth	11.2 : 1
50 teeth	11 teeth	10.6 : 1
53 teeth	12 teeth	10.3 : 1
50 teeth	12 teeth	9,7 : 1
53 teeth	13 teeth	9,4 : 1
50 teeth	13 teeth	8,9 : 1

** only for very short tracks because of over-corrected pitch

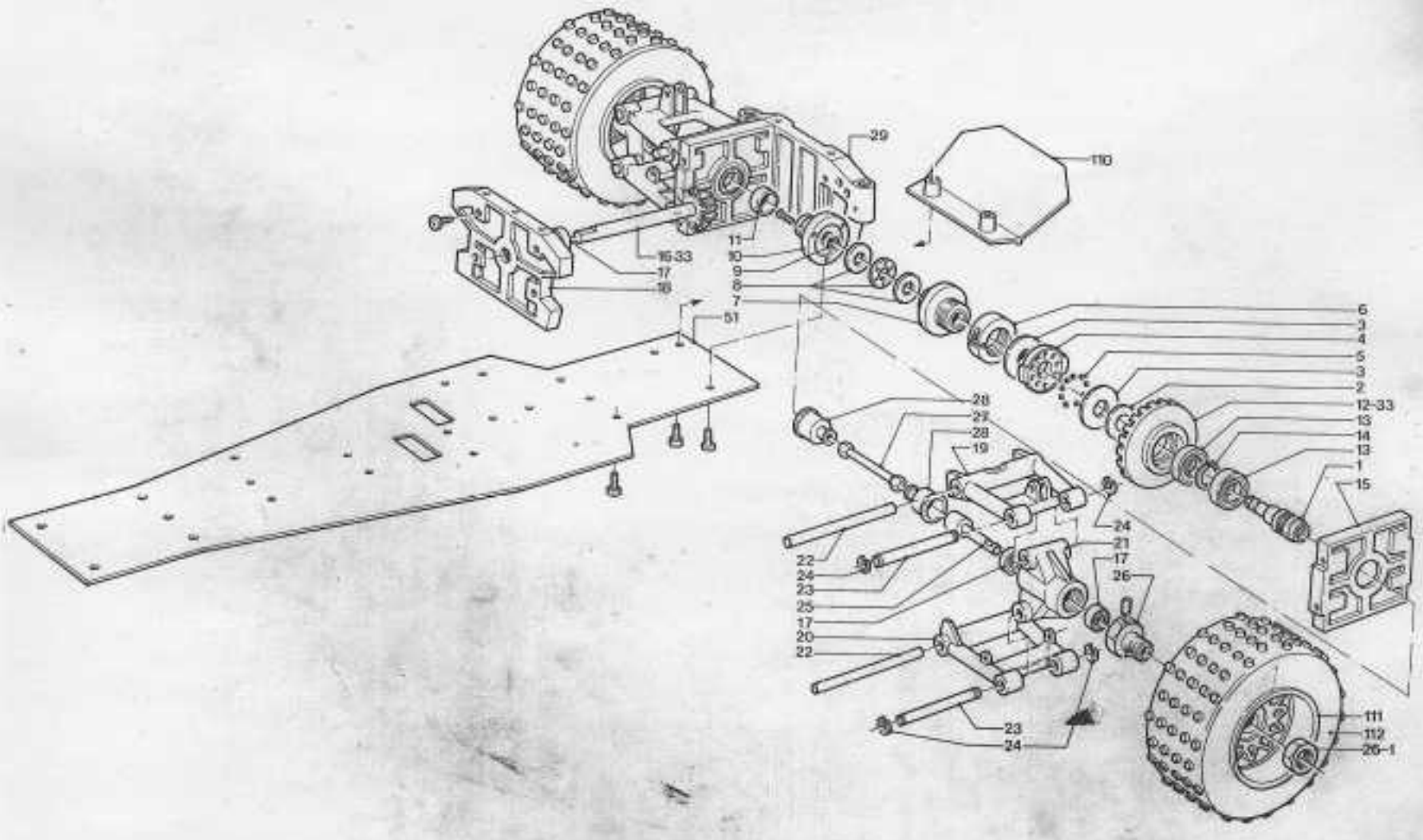
The engine mounts 74* only have M5 holes to fix them to the chassis plate. This is because it is not predicteble to know what engine you choose to fit in your COBRA. Engine mounts for each type of engine are available (see ref. list).
To mark the holes to fix the engine on the engine mounts, fix the engine mounts to the chassis (hex. screws M5x12 with washers). Place the engine on the engine mounts and line-up the clutch housing with the main gear 58*. Mark the holes in the mounting flanges of the engine and take the engine off.
Drill 2,5mm holes and after tap M3 thread in the engine mounts . Now fix the engine mounts 74* to the engine, using socket head screws M3x12.
After fixing the carburator and the exhaust adaptor on the engine, it can be placed on the chassis plate, the gear-play adjusted, and the hex. screws tightened.
The special high-torque side muffler 75* is mounted to the chassis plate with mounting wire 76*, using a screw M4x12 r.h.,4mm washer and M4 Nylock nut.
The silicone tubing 75-1* goes in between the engine and exhaust adaptor, and is fixed with 2 wire-wraps.

11 HYDRAULIC SHOCKABSORBERS

Shockabsorbers are extremely important on off-road cars and we have choosen for the QUANTUM type of shockabsorbers, because of their very efficient construction. They are rather complicated, but they feature constant volume and double action with a built-in one-way valve. They are assembled as follows:

Place a small C-clip 78* in the groove nearest to the thread of the piston rod 77*.
Next the alu. valve 79*, a C-clip 78*, the nylon piston 80* with the valve-seat facing the valve, and a C-clips 78* in the third groove.
Apply from the thread-side of the piston rod 77* in this order: alu. O-ring bushing 84*, small O-ring 82*, large O-ring 83*, and last the bottom screw-plug 85* with O-ring 82* inside.
The piston rod is ready to be inserted in the cilinder 88*.
Place the alu. adjusting nut 92* on the cilinder 88*.
Turn the pressure nipple 81* into the alu. pivot point 90* and apply a piece of silicone tube of 5cm. The O-ring 6x1 is applied to the alu. pivot point as well.
We advise to use an oil with a visocity of W60. (Castrol M60) Ofcourse this changes with conditions of the track and temperature. Lighter oil should be used under colder conditions and very rough tracks.

Place the brass spacer 89* in the cilinder and turn the alu. pivot point 90* in the cilinder 88*. (no O-ring is used on the top side)
Turn the open side of the cilinder up and fill it with oil untill the oil flows out of the silicone tube. Then close the tube with your fingers to prevent all the oil to escape. Do this slowly to let the air escape.
Insert the piston rod in the cilinder. Again very slowly to allow the oil to make place for the piston and valve. Turn the bottom screw-plug 85* in and if necessary let some oil escape through the silicone tube.
Still keeping the tube closed, turn the cilinder upside down and with the pivot eye 90* up, the tube may be let loose. Make sure the tube stays full with oil.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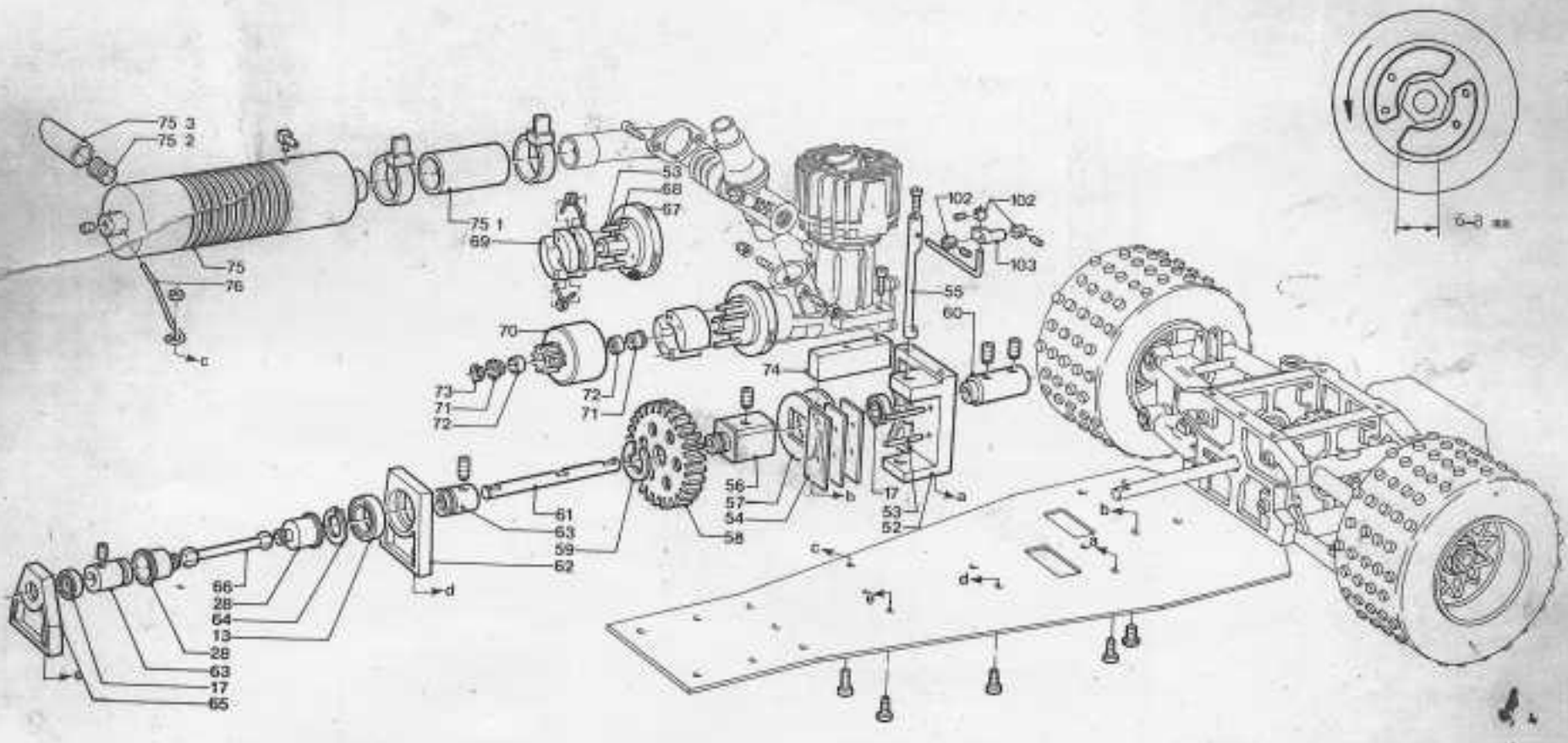
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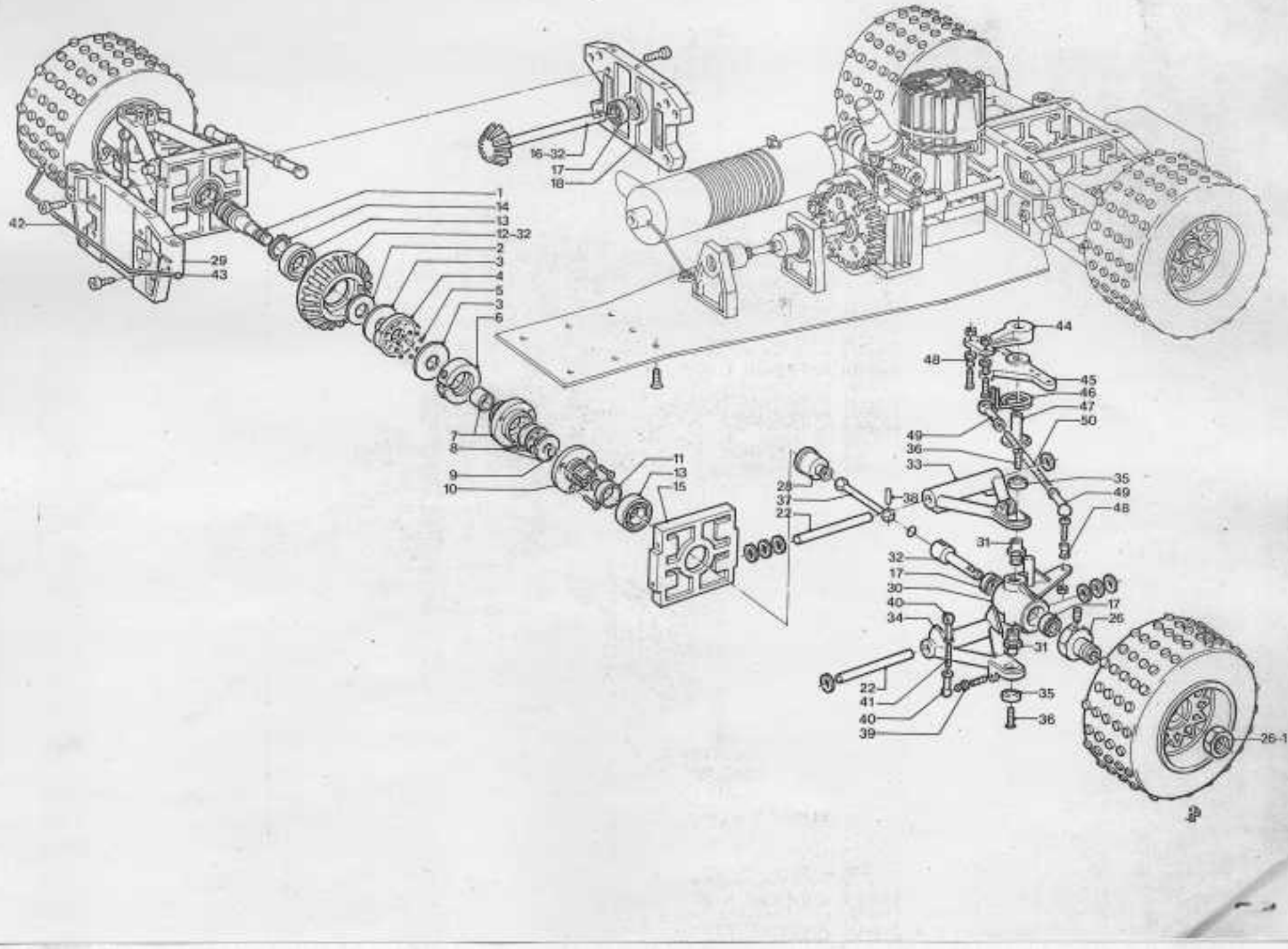
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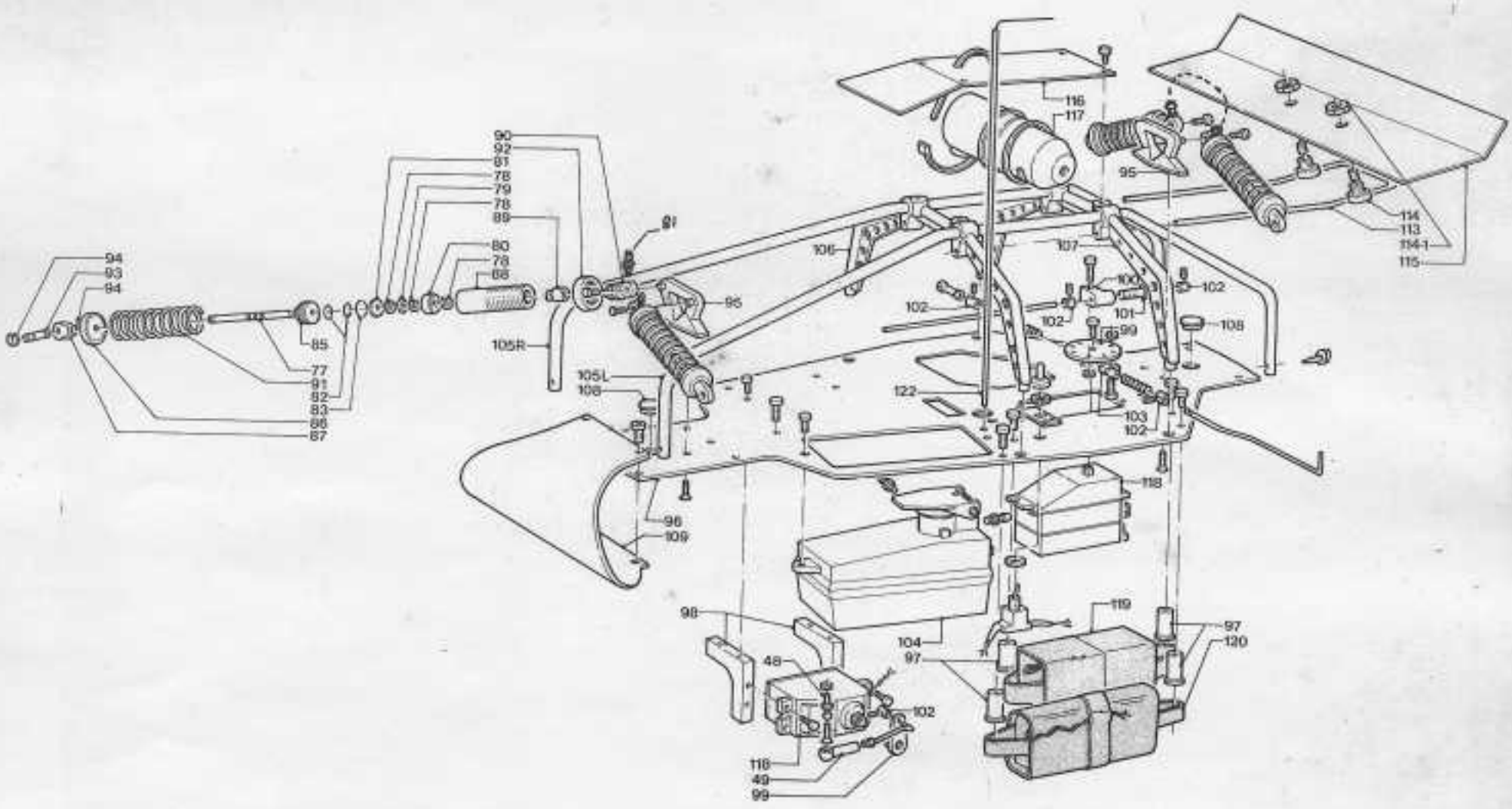
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