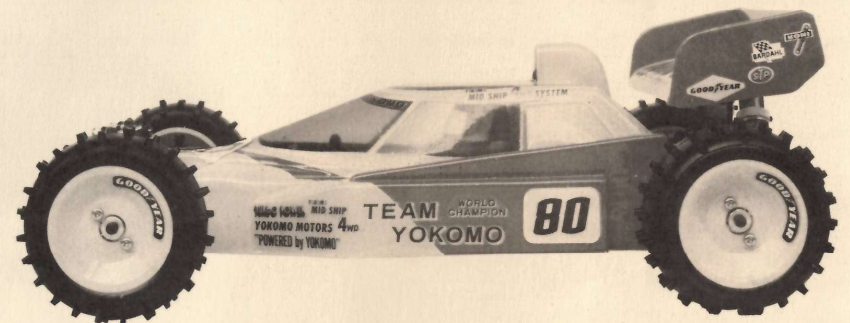
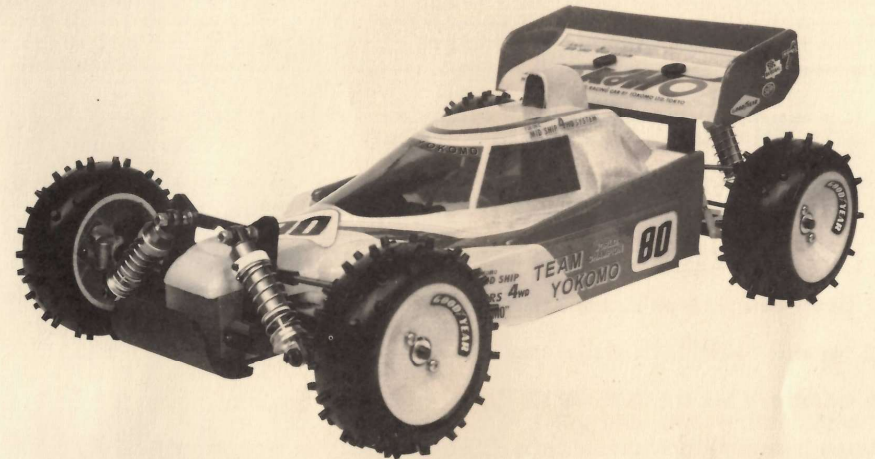


1/10SCALE ELECTRIC COMPETITION R/C OFF-ROAD 4WD RACING MACHINE

Super Dog Fighter

YOKOMO YZ-870C CHASSIS ASSEMBLY INSTRUCTIONS



TEAM YOKOMO

YOKOMO LTD. 25-2. SENJU-MOTOMACHI. ADACHI-KU, TOKYO 120. JAPAN

YZ-870C スーパードッグファイター

The YOKOMO YZ-870c Super Dog Fighter, 1/10 scale Off-Road 4WD racing Machine was developed by YOKOMO's CREATIVE and ADVANCED Racing Mind. We thank the following World and National Champions and their mechanic for helping us develop and fine-tune the YZ-870c to become the best 4WD Racing Car in the World. MASAMI HIROSAKA of TEAM YOKOMO, Jay Halsey, and Jim Halsey, of TEAM ASSOCIATED, Gil Losi Jr., Gil Losi Sr., Ron Rosetti, and Gary Kyes of TEAM LOSI.

ヨコモの独創性と先進性に富んだレーシングデザインから誕生した、1/10スケールオフロード4WDレーシングマシン YZ-870C スーパードッグファイターは、販売、生産に当り世界各地のRCレースに参戦、チームヨコモの広坂正美 ('87-'88 4WD ワールドチャンピオン) 選手を始め、世界中のRCトップレーサーの協力を得て、実戦的な改良を加えて登場した純競技用のマシンです。特にアメリカのチーム・アソシエイテッド所属、ジェイ・ハルゼイ ('85-'86 2WD ワールドチャンピオン) 選手、チーム・ロッシのギル・ロッシ, Jr ('85-'86 4WD ワールドチャンピオン) 選手、ロン・ロゼッティ ('86 USA 4WDチャンピオン) 選手、ゲーリー・カイズ選手の多大な協力を戴き完成できました事を心よりお礼申し上げます。

It is necessary for you to assemble the car correctly and carefully using these instructions and you will have the best exciting Off-Road 4WD car and enjoy it.

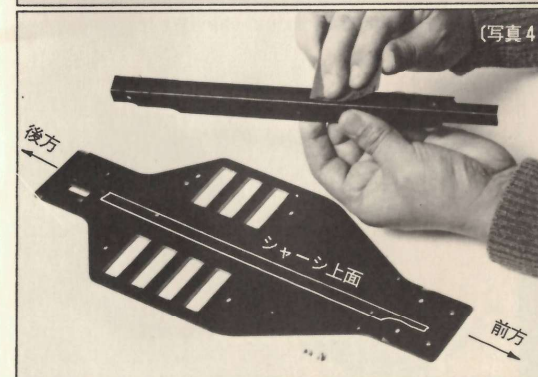
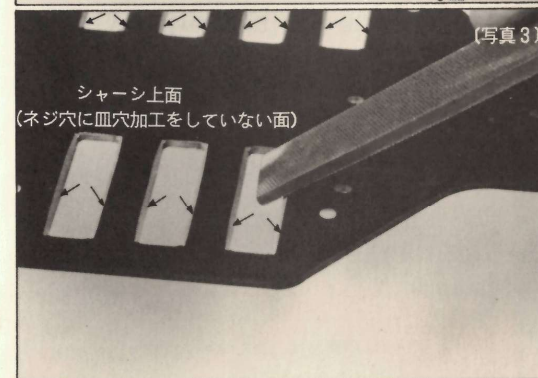
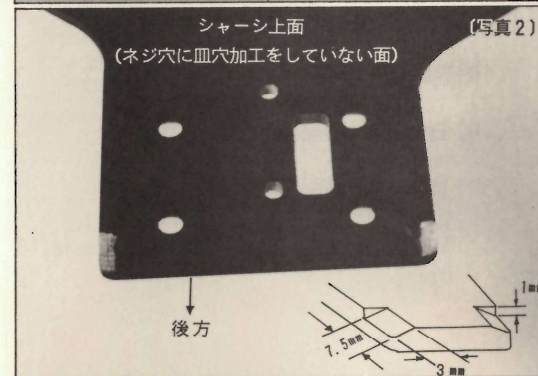
実戦で磨かれ、生まれ育ったYZ-870Cは、説明書に添って正しく丁寧に組み立てて戴ければ、必ず貴方にとってもRCオフロードスポーツの楽しさを満喫できる最高の4WDオフロードマシンになるものと確信しております

[REQUIRED ACCESSORIES FOR RACING]

- ☆ 2 Channel Radio System and Electronic Speed Controller
- ☆ 05 Type motor (YOKOMO Esprit 05 Super Stock or Esprit 05 RPM)
- ☆ Ni-Cad Battery 7.2~8.4V (YOKOMO 1700 SCE -7.2V- Separate) Sub-C type
- ☆ Battery Charger (YOKOMO Quick Turbo Custom -7.2~8.4V or YZ-721M Auto-Peak Charger)
- ☆ Tools Required for assembly:
 - Modelers knife ○ Thin Round File (2~4mm dia) ○ Flat File ○ Screwdrivers Small and large (+)
 - Small Pliers ○ Soldering Iron and some Solder ○ Wooden Toothpick ○ Instant Adhesive
 - Electric or hand drill ○ Drill Bits 2mm and 5.5mm ○ Silicon grease ○ Plastic sheet ○ Contact Cement

[組立・走行に必要なもの]

- ☆ 2チャンネル・プロポ (スピードコントローラーアンプ付)
- ☆ 05タイプ・モーター (例) ヨコモ エスプリ05スーパーストック又はエスプリRPM オフロード
- ☆ ニッカド・バッテリー 7.2V~8.4V (6N~7NサブCサイズ) (例) ヨコモ 1700(7.2V) SCEセパレートバッテリー
- ☆ ニッカド・バッテリー用急速充電器 (例) ヨコモ クイックターボ カスタム(7.2V~8.4V用) 又は ヨコモ YZ-721Mオートピークチャージャー
- ☆ 工具類
 - カッターナイフ ○丸型金ヤスリ (直径2~4mm位) ○平型金ヤスリ ○ラジオペンチ又はプライヤー ○+ドライバー (小)
 - +ドライバー (緑色のアルミ皿ネジにピッタリ合うもの) ○ハンダゴテ (60W位) 及び糸ハンダ少々 ○瞬間接着剤
 - セメダインコンタクト (ゴム系接着剤) ○つまようじ 1本 ○シリコングリス少々 ○サランラップ
 - ドリル (手動又は電動式) 及び金属用 2mm, 6mm ドリルの刃

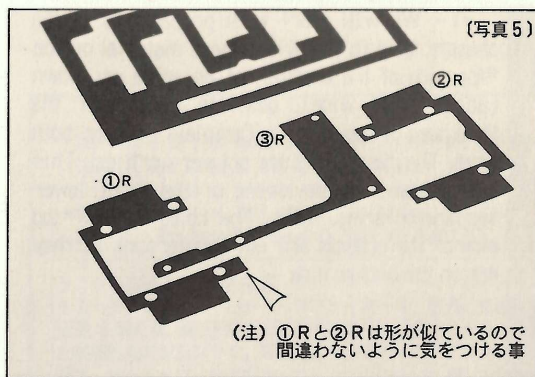


-1- We will start with preparation of the chassis. Using a flat file remove material on the *top side of the chassis, at an angle as shown (about 7mm wide), down to about half the thickness of the chassis. Complete this for both sides. The dimensions are not very critical. This will allow free movement of the front lower suspension arms. **Note:** The holes on the *top side of the chassis are not countersunk as they are on the bottom side.

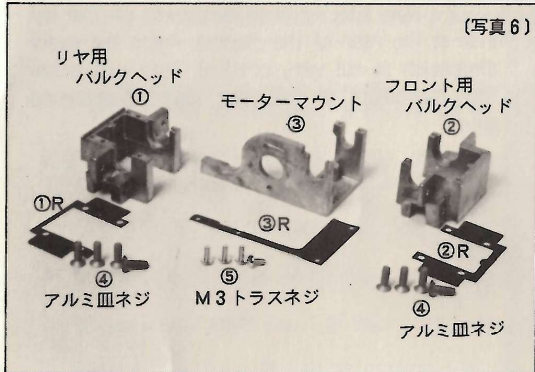
-2- Now file the area as shown, on the top side at the rear of the chassis. Again the exact dimension is not very critical. This will allow free movement of the rear lower suspension arms.

-3- File a small bevel on the front and rear edges of all seven battery mounting holes. This will allow batteries to sit firmly and a little lower. **Note:** Next we will start opening numbered bags. Please use labeled containers (paper plates, etc.) to hold parts. This will avoid confusion in following this assembly manual.

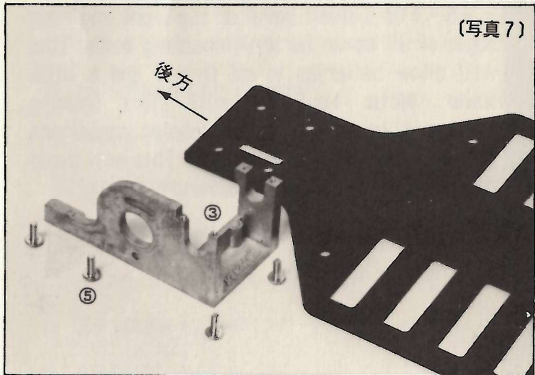
-4- Open Bag No.1 and take out the Backbone, and the M3x6mm screw and M3 nut. Temporarily attach the Backbone using the M3 screw and nut (align edge parallel with battery end mounting holes). Scribe a line around the Backbone then remove it. Using fine sandpaper (#320) sand the narrow (bottom) surface of the Backbone and the contact area on the chassis.



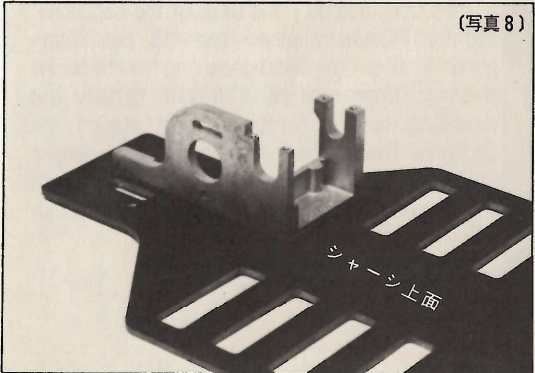
-5- From Bag No.2 take out the rubber gaskets and carefully separate them from the sheet. Bag No.2 contains the following parts. Check the contents and quantities. Also see Figure 6.



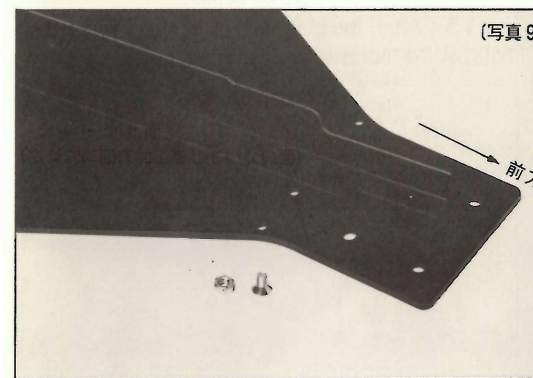
- 6- Contents of Bag No.2
- (1) Rear Bulkhead..... 1
 - (1R) Rear Bulkhead Gasket... 1
 - (2) Front Bulkhead..... 1
 - (2R) Front Bulkhead Gasket.. 1
 - (3) Motor Mount..... 1
 - (3R) Motor Mount Gasket..... 1
 - (4) 8-32 Screws..... 8 (for Bulkheads)
 - (5) M3x8mm Screws..... 4 (for Motor Mount)



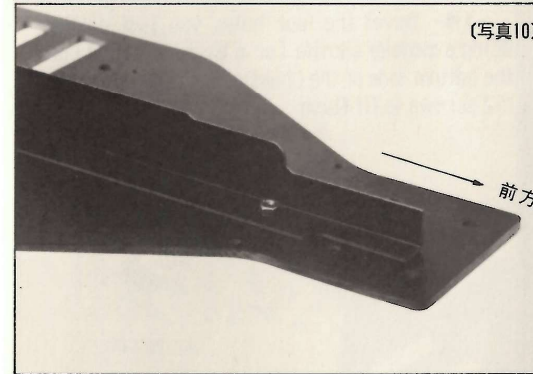
-7- Using the four [5] Screws temporarily and without the gasket, mount the [3] Motor Mount. We will use the Mount to align the installation of the Backbone.



-8- Your chassis should look like this.



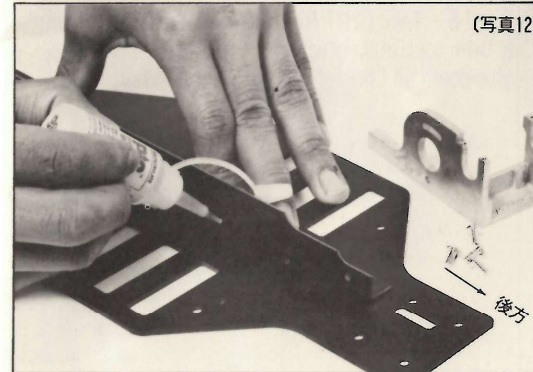
-9- Install the Backbone on the Chassis using the M3x6mm screw and M3 nut making sure the rear of the Backbone is firmly against the Motor Mount.



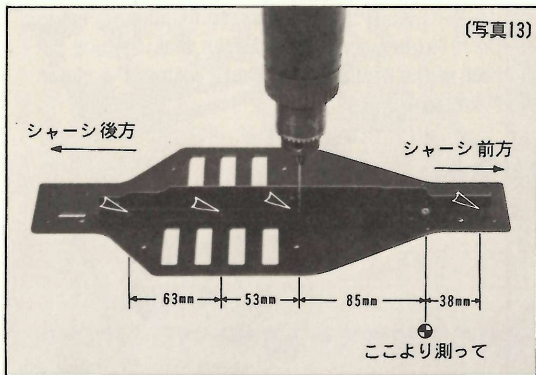
-10- The following steps must be done on a very flat surface (table, etc.) to ensure a flat and level Chassis/Backbone which is mandatory in order to have competition level track handling. Be sure to use a thin vinyl sheet to protect the flat surface you use from scratches and glue.



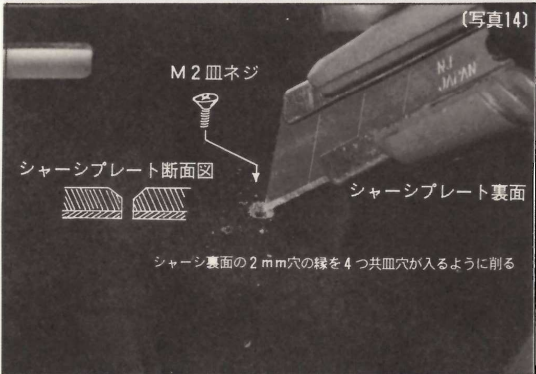
-11- First make sure that the rear end of the Backbone is against the side of the Motor Mount. While keeping Backbone flat against the Chassis, use Instant Adhesive to glue down only the front half of the Backbone to the Chassis.



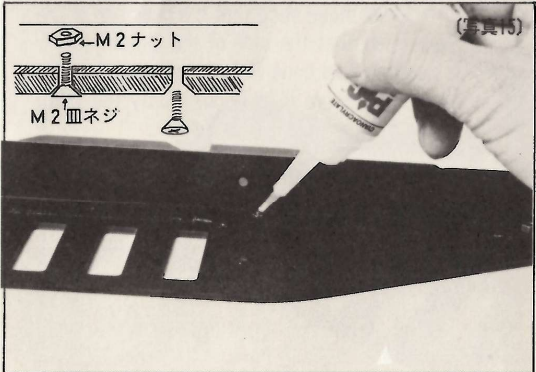
-12- Remove the Motor Mount and glue the rear half of the Backbone while applying pressure to keep the Backbone flat against the chassis.



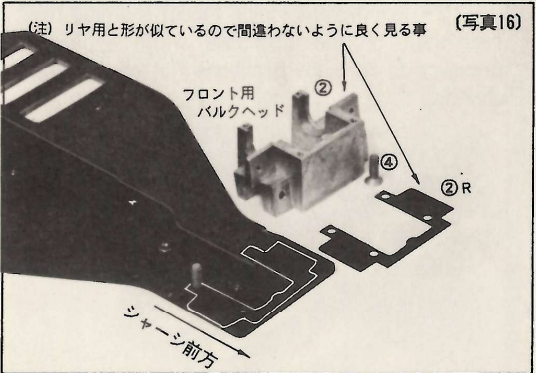
-13- After the glue has set drill four 2mm holes at the indicated points on the Backbone.



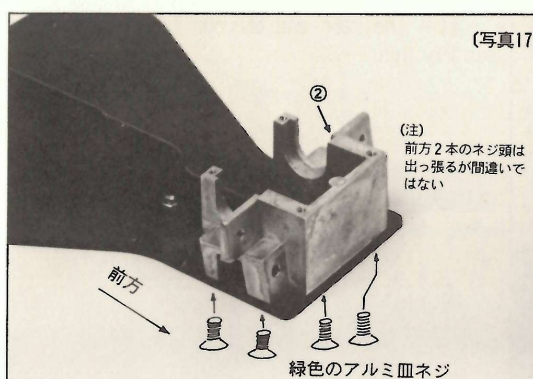
-14- Bevel the four holes you just drilled using a modeler's knife (or a 5mm Drill Bit) on the bottom side of the Chassis. This will allow the M2 screws to fit flush.



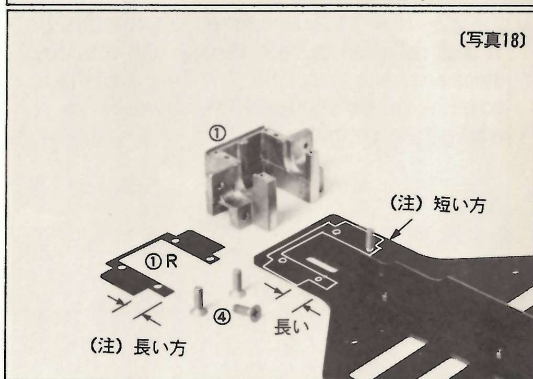
-15- Install the four M2 Screws from the bottom of the Chassis and tighten with M2 Nuts. Lock the M2 Nuts to the Backbone and Screws with Instant Adhesive. Your Chassis is now complete.



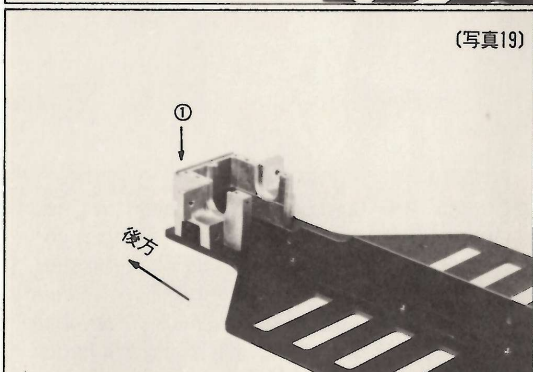
-16- Take [2R] Rubber Gasket and brush on a thin coat of contact cement, while still wet, glue down on Chassis (align over four holes).



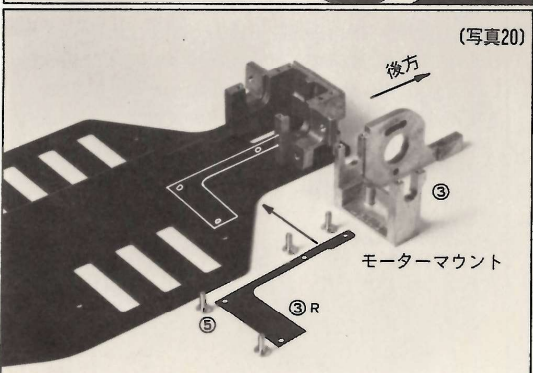
-17- Use four aluminum 8-32 Flat Head Screws to install the [2] Front Bulkhead on top of the rubber gasket. Don't over-tighten at this time. The front two holes are not countersunk and will be used later to fasten the bumper.



-18- Now install [1] Rear Bulkhead onto the chassis using the [1R] rubber gasket, just as you did in steps 16 and 17. Mount the Bulkhead with the open end forward.

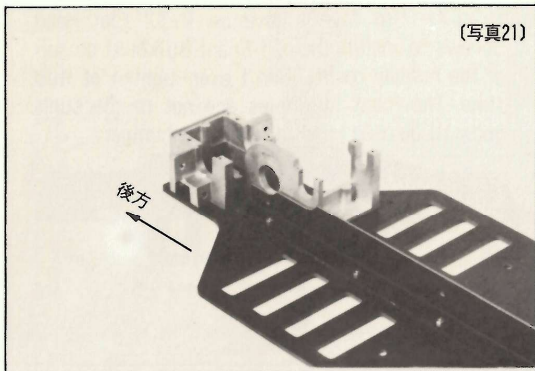


-19- Do not over-tighten, as this is also a temporary installation.



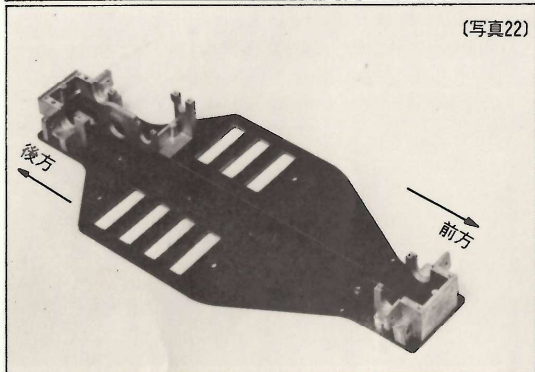
-20- Use the four [5] Button Head M3 screws from Bag No.2, to install [3] Motor Mount on top of [3R] rubber gasket just like you did for the Front and Rear Bulkheads.

(写真21)



-21- The rear end of your Chassis should look like this.

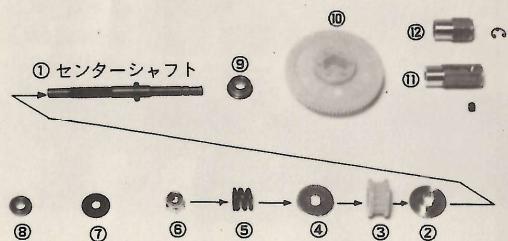
(写真22)



-22- Now the Chassis should look like this. If it does not, then go back through the previous steps and make corrections. ** This would be a good time to take a Coffee or Coke Break and relax a bit before continuing.

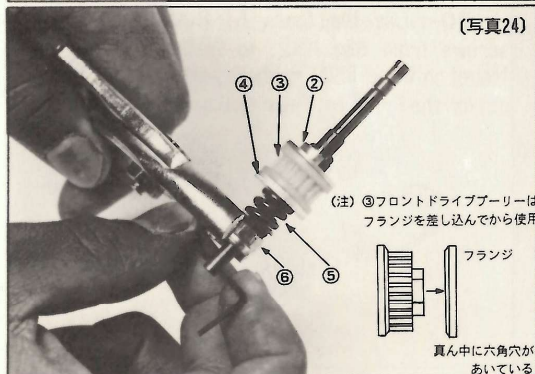
(写真23)

No.3の袋 (センターシャフト部) には
これだけ入っている

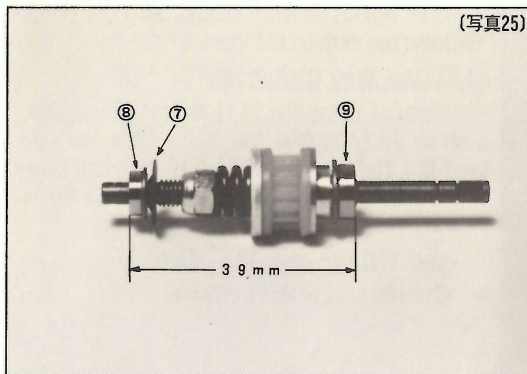


-23-24- Open Bag No.3 and check the parts inside. Follow carefully the next few steps for proper assembly. Hold [1] Center Shaft and slide on [2] Torque Limiter Hub, [3] Front Drive Pulley (First push on Nylon Washer, bevel to inside see Figure 24), [4] Torque Limiter Pressure Plate, and [5] Torque Limiter Spring then tighten them with [6] Nylon Lock Nut. To tighten the Nylon Lock Nut hold it with pliers and put the Allen Wrench from Bag No.16 through the hole and turn the wrench anti-clock wise.

(写真24)

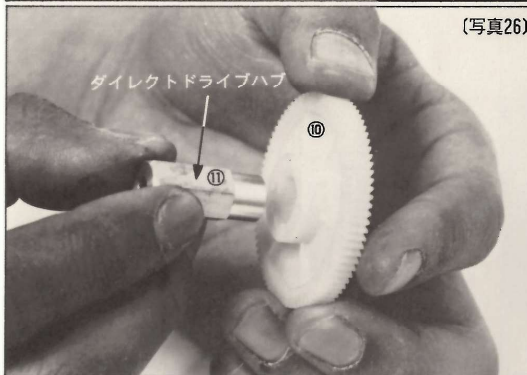


(写真25)



-25- Insert [7] Push Nut and 4x8 Flanged Bearing, the flange facing inside. Adjust the [7] Push Nut to give an overall distance between the two bearings of 39mm.

(写真26)



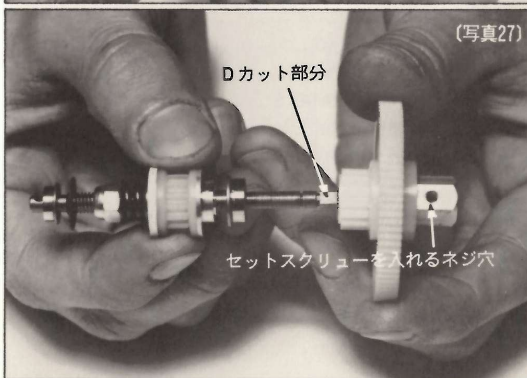
IMPORTANT NOTICE:

Your YZ-870c SUPER DOG FIGHTER can be set up two different ways for 4 Wheel Drive allowing you to choose the best one for current track conditions.

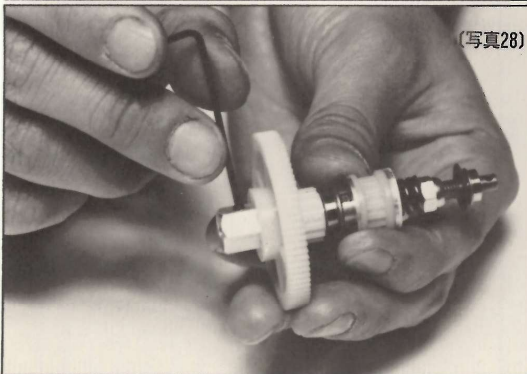
A FULL-TIME 4WD Use [11] Direct Drive Hub shown in Figure 26-28. This is best for Novice Drivers and slippery tracks, or if you like less responsive steering.

B PART-TIME AUTOMATIC 4WD Use [12] One-Way Clutch shown in Figure 29-30. This is for Drivers who like quick steering for fast cornering. This is a good set up for high traction tracks, but will make tire choices for front and rear more critical.

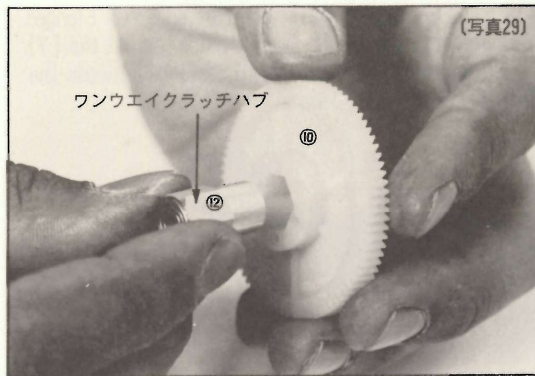
(写真27)



(写真28)



-26-28- Hold the [10] Main Gear and push the [11] Center Direct Drive Hub all the way in. Next hold the Center Drive Shaft with the Flat Cut facing up ("D"cut), slide the [10] Main Gear on and lock down with the set screw (Figure 28).



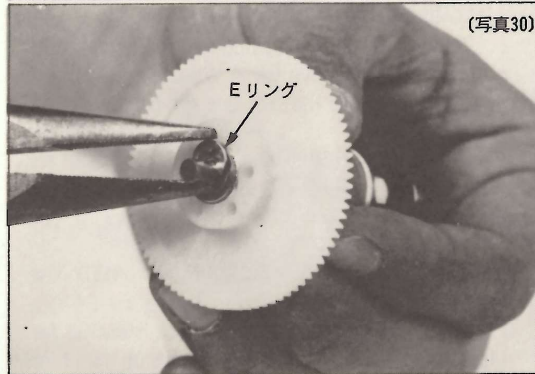
(写真29)

-29- Novice Drivers should use FULL-TIME 4WD and can skip on to Figure 31.

[12] One-Way Clutch Set-Up

Instead of using the [11] Center Drive Hub, push on the [12] One-Way Hub all the way into the [10] Main Gear. Next slide the Main Gear onto the Center Drive Shaft up to the 5x10mm bearing and lock it on with the "E" Clip.

-30- The "E" Clip can be easily installed by using needle nose pliers as shown.



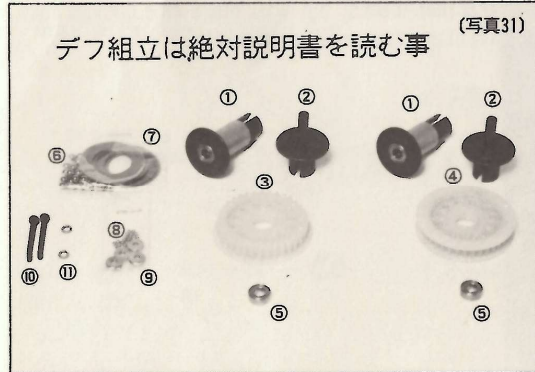
(写真30)

-31- Now open Bag No.4 and check its contents.

Contents of Bag No.4 Differentials

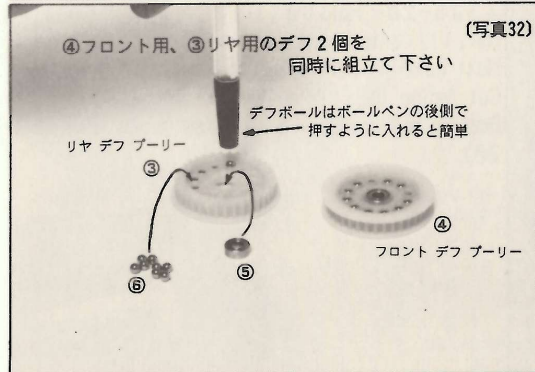
- (1) Diff Joint Long.....2
- (2) Diff Joint Short.....2
- (3) Rear Diff Sprocket (One Flange).....1
- (4) Front Diff Sprocket (Two Flanges).....1
- (5) 4x8mm Bearings for Sprockets.....2
- (6) Diff Balls.....24
- (7) Drive Rings.....4
- (8) Thrust Balls.....18
- (9) Thrust Washers.....4
- (10) 2mm Socket Head Screws.....2
- (11) Spring Washers.....2

-32- Install the [6] Diff Balls into the 12 holes of both the [3&4] Front and Rear Diff Sprockets. Push them in with the flat end of a Plastic Ball Pen or something not too hard. Install [5] 4x8mm Bearings in both Diff Sprockets.

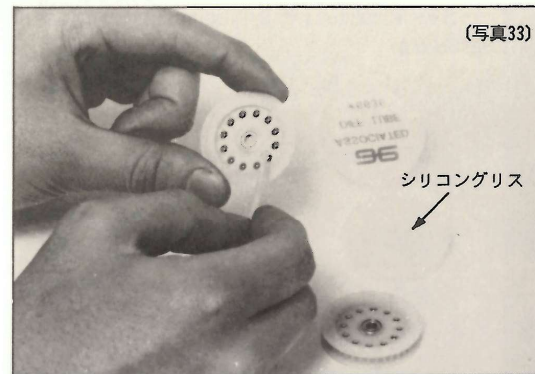


(写真31)

デフ組立は絶対説明書を読む事

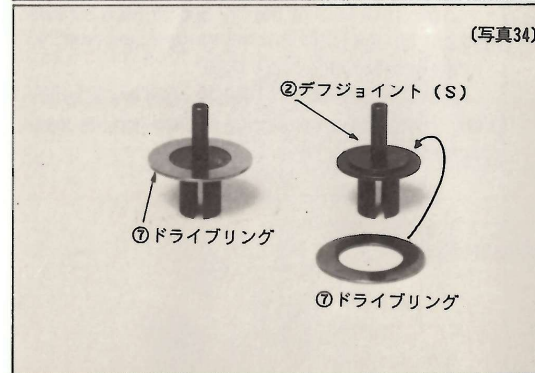


(写真32)



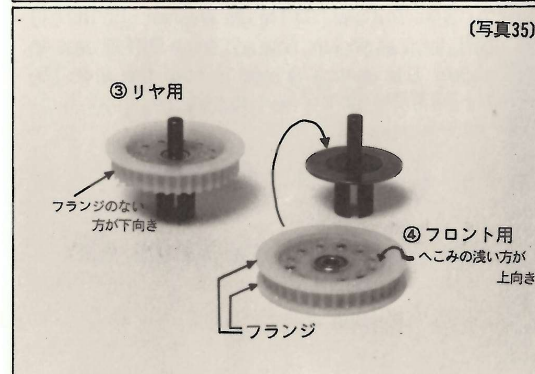
(写真33)

-33- Apply a small amount of Diff Grease (Associated's AS-6636) on each ball using a wooden toothpick.



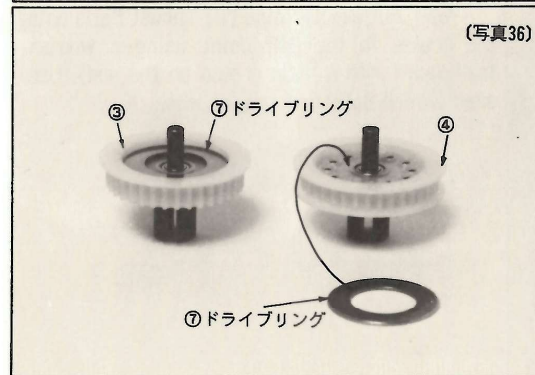
(写真34)

-34- Stand up both [2] Diff Joints (short) now place [7] Drive Rings on each one.



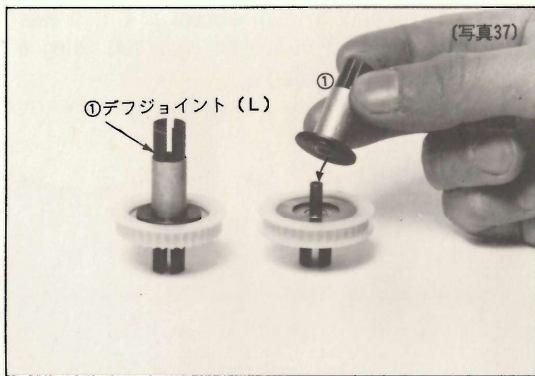
(写真35)

-35- Place the lubricated Diff Sprockets on the Diff Joints. The [3] Rear Diff Sprocket is flanged on one side only, the flange faces upward. The [4] Front Diff Sprocket has flanges on both sides, the shallower side faces upward.

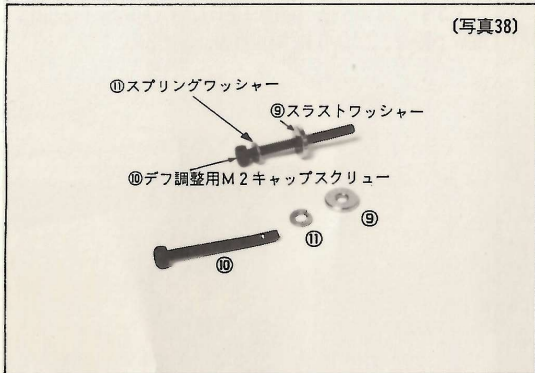


(写真36)

-36- Set [7] Drive Rings on both Sprockets.

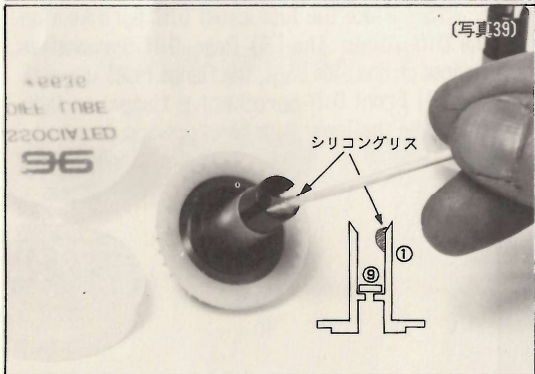


-37- Place the [1] Diff Joints (long) on both Sprockets.

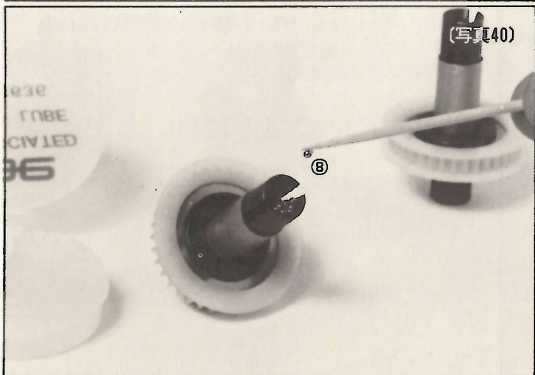


-38- Take both of the M2 Socket Head Screws and put on one [11] Spring Washer and one [9] Thrust Washer on each of them.

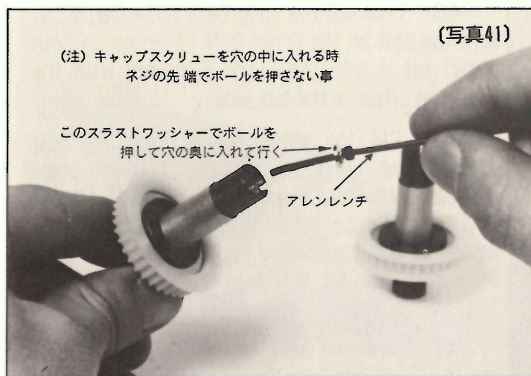
Note: The M2 Socket Head Screws are slightly bent. These are not defective, this is done to keep them from loosening up.



-39- Put one [9] Thrust Washer into the [1] Diff Joint as shown, now add some Diff Grease as shown. Use enough grease to hold the nine [8] Thrust Balls for the next step.



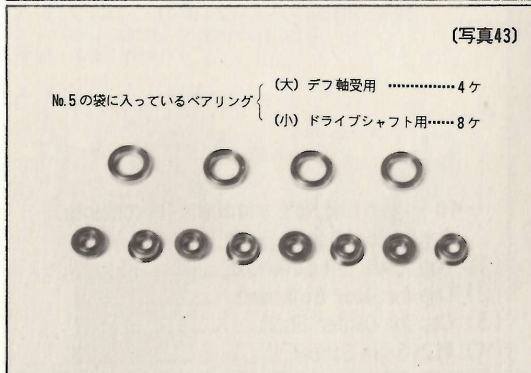
-40- Put exactly nine [8] Thrust Balls onto the grease in the Diff Joint using a wooden toothpick (with a little grease on the end). Use exactly nine Balls no more, no less.



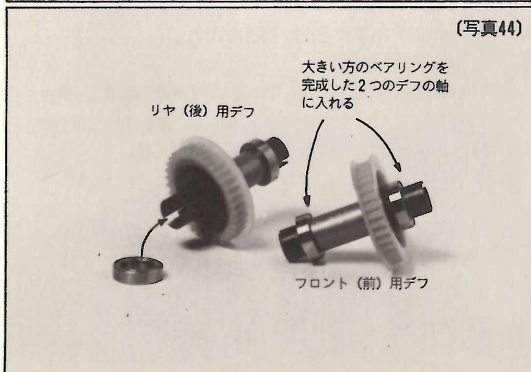
-41-42- Use the Allen Wrench from Bag No.0 to put the Socket Head Screw from Figure 38 into the Diff Joint. This must be done carefully so the the Thrust Balls don't fall out. Now tighten it all the way down then back out about 45 degrees. This should be a good setting for the Diff.



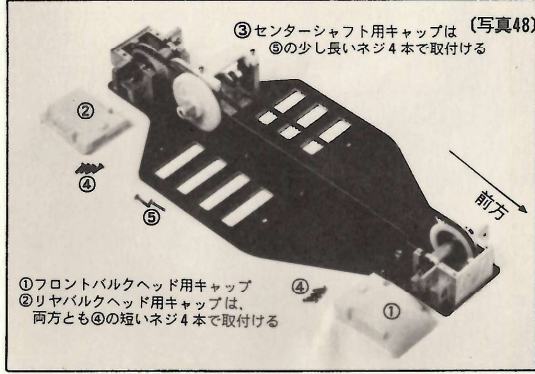
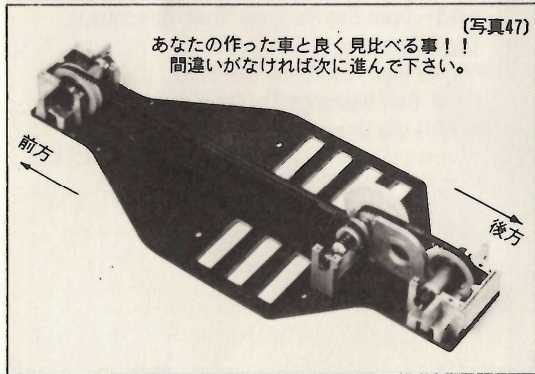
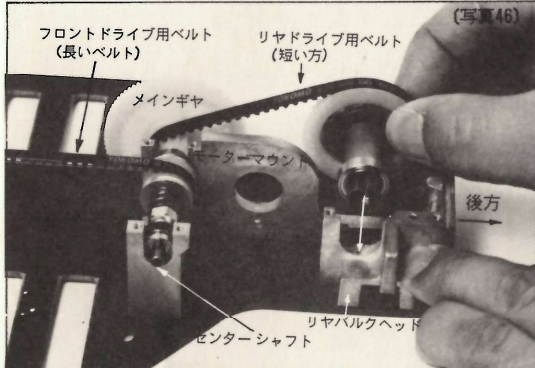
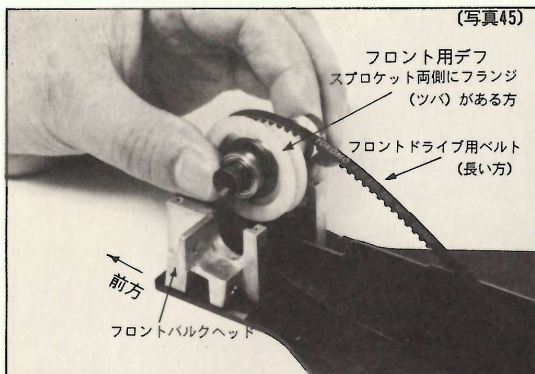
(1) アレンレンチでM2キャップスクリューをガッチリと締める
(2) 今、締めたキャップスクリューをアレンレンチで45度逆方向に回し戻す(ゆるめる)と出来上がり



-43- Open Bag No.5 and check its contents.
Contents of Bag No.5
Ball Bearings 10x15mm (for Diff) 4
Flanged. Ball Bearings 5x10mm (Drive Shafts) 8
(We will use these later Figure 57)



(写真44)



-45- Take out the Long Belt from Bag No.1. Slip the belt on the Front Diff (Flanges on both sides) set it into the Front Bulkhead with the Sprocket offset to the left side.

-46- Put the other end of the Long Belt around the sprocket of the Center Shaft assembly. Now put the Rear Drive Belt (Short Belt), on the Sprocket (smaller gear) on the inside of the Main Gear, and to the Rear Diff Sprocket, then set Diff into the Rear Bulkhead. The Rear Diff Sprocket is offset to the right side.

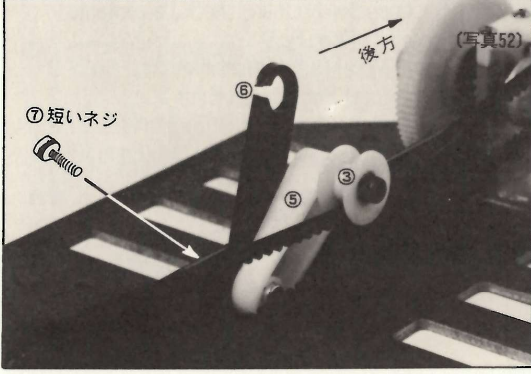
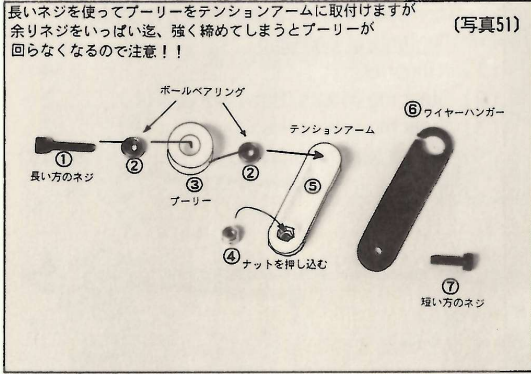
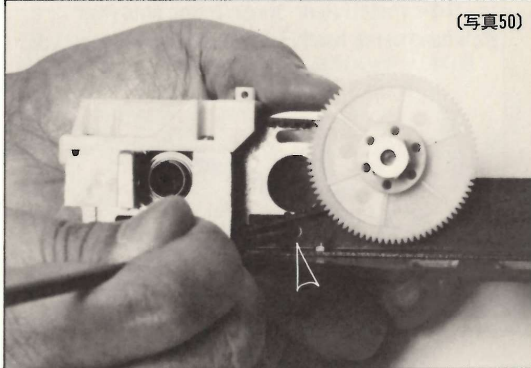
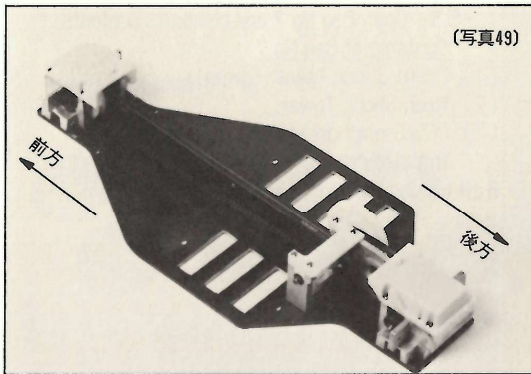
-47- Now you have assembled the Chassis, and the Front and Rear Drive Units. Check yours against the figure and if everything is right continue with the assembly steps.

-48- Open Bag No.6 and check its contents.

Contents of Bag No.6

- (1) Cap for Front Bulkhead..... 1
- (2) Cap for Rear Bulkhead..... 1
- (3) Cap for Center Shaft..... 1
- (4) M2x8mm Screw..... 8
- (5) M2x12mm Screw..... 4
- (Not Shown) Hood Pin for Body Mounting..... 2

Install the Caps on the Bulkheads and Center Shaft using the screws supplied. Use the longer [5] 12mm screws for Center Shaft Cap.

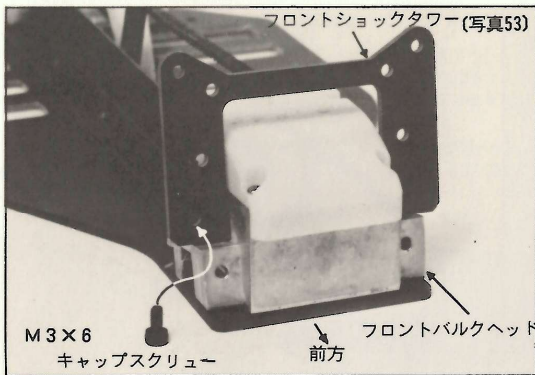


-49- Your chassis should now look like this.

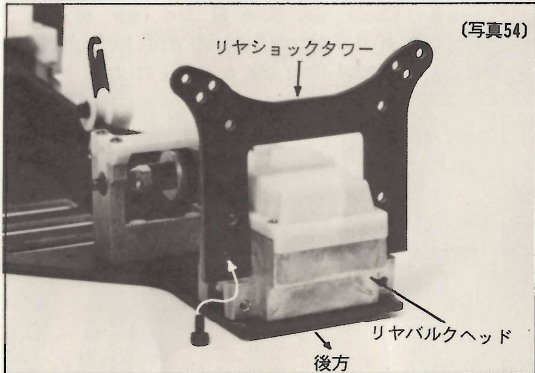
-50- Check the hole at the rear of the Backbone, if it does not line up with the hole in the Motor Mount then use a small round file to elongate it.

-51- Take out the small bag containing the Belt Tensioner from Bag No.1. Install the [2] Bearings into both sides of the [3] Tension Pulley. Use the long [1] Socket Head Screw and attach the pulley to the [5] Tension Arm, do not over-tighten. Push the [4] Nylon Nut into the bottom of the [5] Tension Arm (hexagonal part).

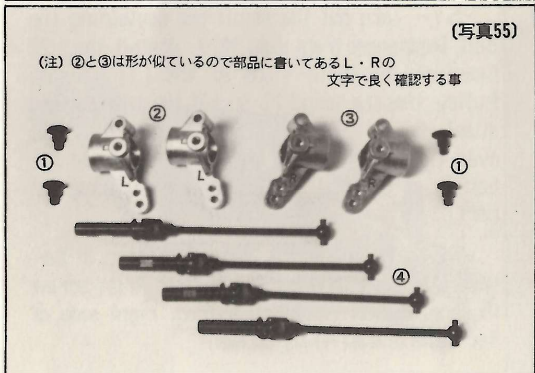
-52- Attach the [6] Harness Hanger in between the Backbone and the Tension Arm, screw in short Socket Head Screw from right side of Backbone to the [4] Nylon Nut.



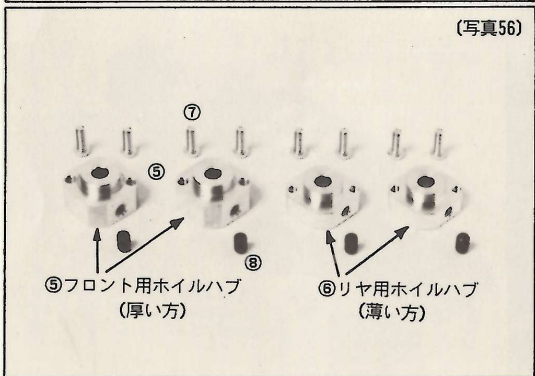
-53- Open Bag No.7 and check its contents.
Contents of Bag No.7
 (1) Front Shock Tower (small)..... 1
 (2) Rear Shock Tower..... 1
 (3) M3x6mm Socket Head Screw..... 4
 Install Front Shock Tower onto Front Bulkhead using two M3x6mm Screws.



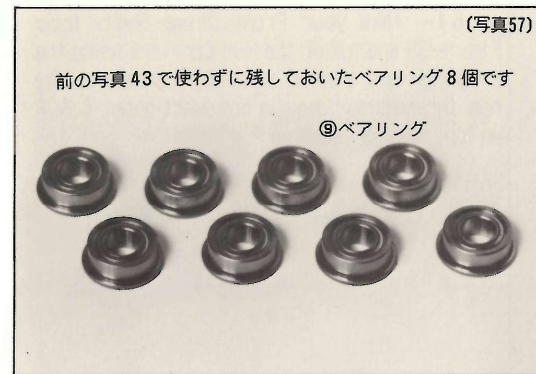
-54- Install Rear Shock Tower onto Rear Bulkhead using two M3x6mm screws.



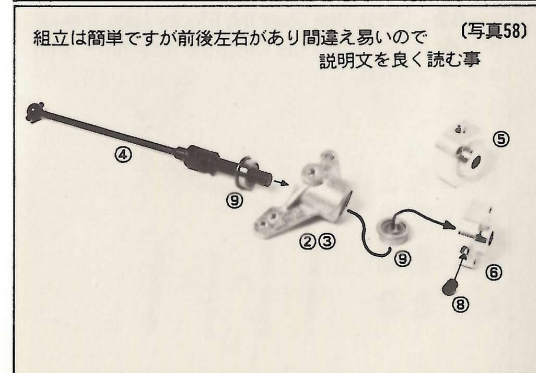
-55- Open Bag No.8 and check its contents.
Contents of Bag No.8
 (1) Kingpins..... 4
 (2) Steering Blocks/Hub Carriers (L)..... 2
 (3) Steering Blocks/Hub Carriers (R)..... 2
 (4) Universal Drive Shafts..... 4



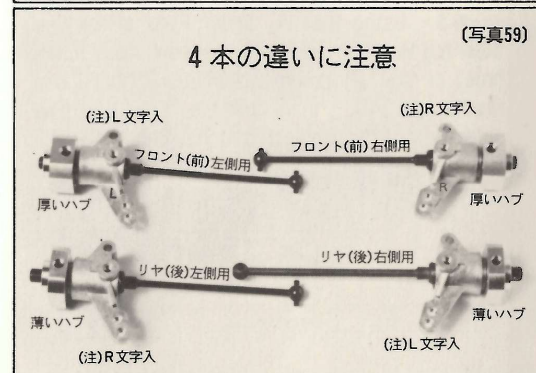
-56- Open Bag No.9 and check its contents.
Contents of Bag No.9
 (5) Front Wheel Hub (Offset 8mm)..... 2
 (6) Rear Wheel Hub (Offset 6mm)..... 2
 (7) Screws for Wheel Hub (M3x8mm)..... 8
 (8) Set Screws for Wheel Hub (M4x6mm).... 4



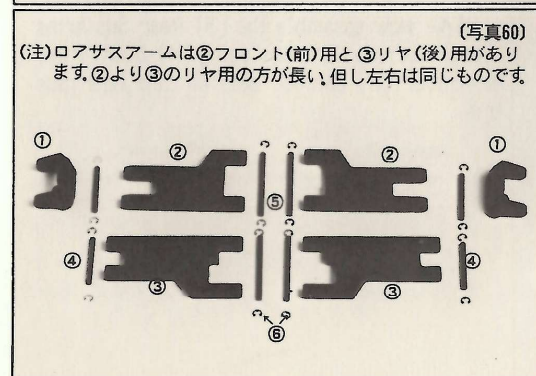
-57- Reopen Bag No.5 and take out all eight 5x10mm Flanged Ball Bearings.



-58- Drive Shaft Assemblies. Refer to Figures 55-57. Please note that there are two Steering Blocks marked L, and two marked R. At the front, L goes on the left side and R on the right side. At the rear, R goes on the left side and L goes on the right side. Use 8mm [5] Hubs on Front, 6mm [6] Hubs on Rear Shafts. Follow the order of the arrow to assemble, but note that there are left and right sides. When you install the [5] [6] Wheel Hubs be sure to firmly tighten set screw on the flat "D" Cut of the Drive Shaft.

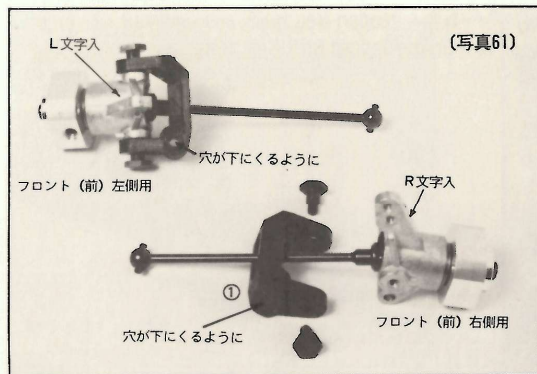


-59- Assembled Drive Shafts, Front and Rear, Left and Right.

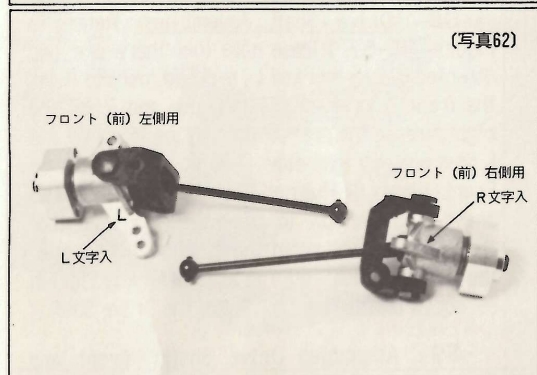


-60- Open Bag No.10 and check for these parts.

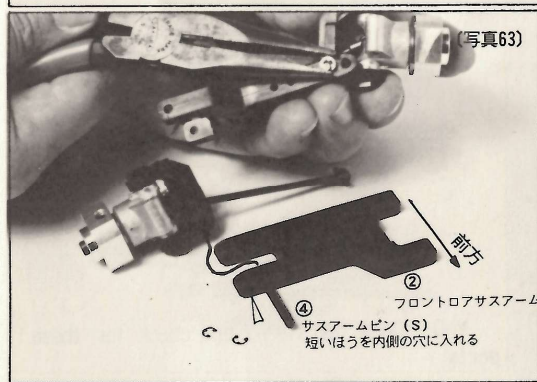
Contents of Bag No.10
 (1) Front Steering Hub Carrier..... 2
 (2) Front Lower Sus Arm (Short)..... 2
 (3) Rear Lower Sus Arm (Long)..... 2
 (4) Sus Arm Pin (Short)..... 4
 (5) Sus Arm Pin (Long)..... 4
 (6) E Clips for Sus Arm Pins..... 16
 Note: Front & Rear Sus Arms are different. The word Sus will at times, be used in place of Suspension.



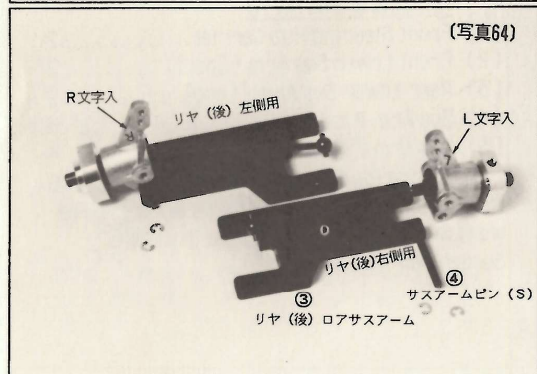
-61- Take your Front Drive Shafts from Figure 59 and install the Hub Carriers using the Kingpins. Use a small amount of grease on the non-threaded surface. Do not overtighten. L & R on top, hole for Sus Arm Pin at bottom.



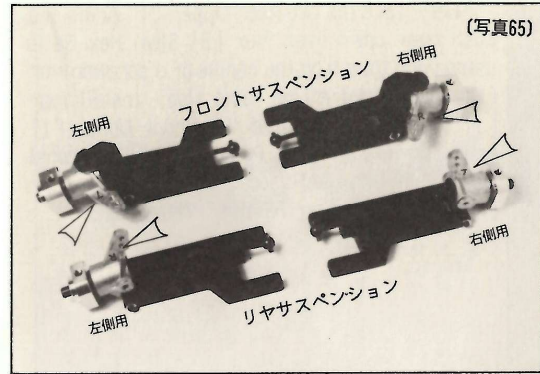
-62- Check that Steering Blocks turn freely. If they do not, then the Kingpins may have been over-tightened.



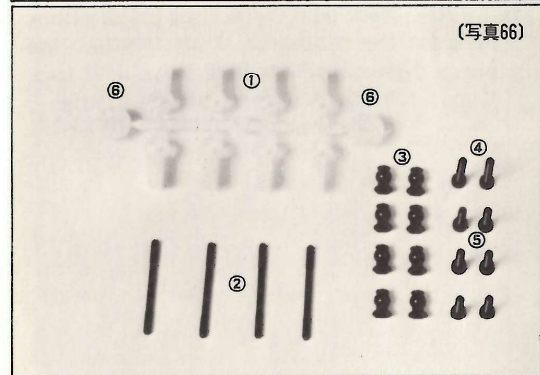
-63- Using the [4] Short Pins attach the Steering Hub Carrier to the narrow side (inner hole) of the [2] Lower Sus Arms (Short). Use needle nose pliers to install the "E" Clips. The outer hole is for use with optional parts ZC-405 & ZC-422.



-64- Now assemble the [3] Rear Sus Arms (Long) and Hub Carriers using [4] Short Pins. Remember (R) Carrier goes on Left Rear Sus Arm.

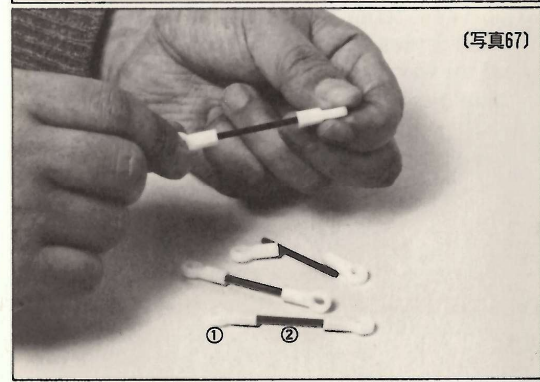


-65- Compare your Sus Arm Assemblies to this picture and be sure you have Front & Rear and Left & Rear assembled correctly.

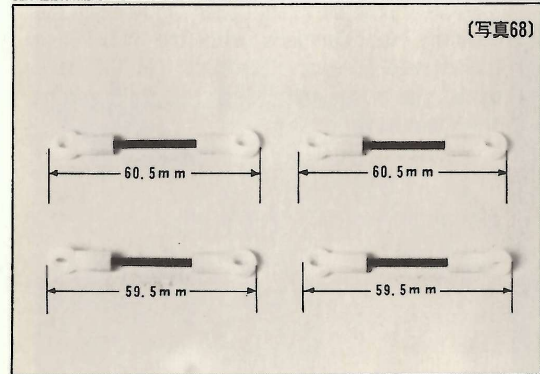


-66- Open Bag No.11 and check for these parts.

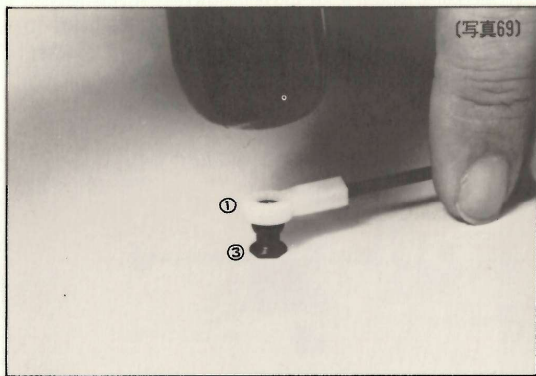
- Contents of Bag No. 11
- (1) Plastic Ball Ends for Upper "I" Arms.....8
 - (2) Rods for Upper "I" Arms.....4
 - (3) Steel Hex Ball End for Upper "I" Arms...8
 - (4) M3x15mm Socket Head Screw.....2
 - (5) M3x10mm Socket Head Screw.....6
 - (6) *Wing Holder.....2
- *(We will use these later)



-67- Assemble four Upper "I" Arms by screwing on the [1] Plastic Ball Ends onto the [2] Rods as shown (you will need to use pliers to tightly grip the Rods in the center).



-68- Use pliers to tightly hold the Rods, then adjust the Plastic Ball Ends to the following outside dimensions;
 Front--59.5mm Rear--60.5mm
 Be sure the two Front Arms have the Plastic Ball Ends at 90 degrees to each other (see also Figure 71).



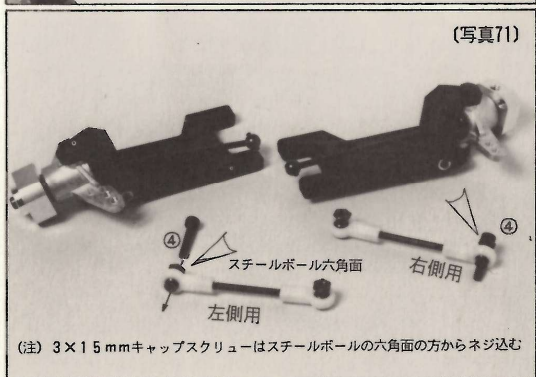
(写真69)

-69- Take the two Rear Upper "I" Arms and push them down over four [3] Steel Hex Balls using your thumb or the handle of a screwdriver (Hexagonal part all on same side). Install four [3] Steel Hex Balls into the Front Upper "I" Arms, while referring to Figure 72. Hexagonal part of Steel Hex Balls face upwards on the outer ends, and forward on the inner ends.



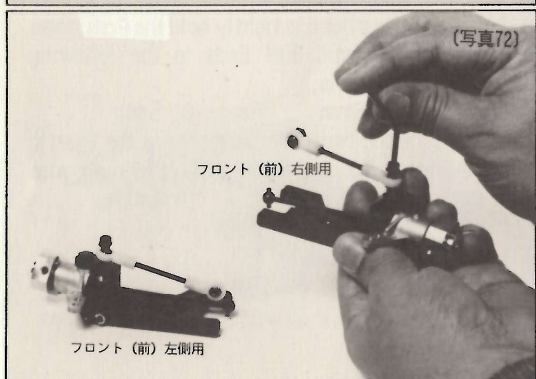
(写真70)

-70- Check each of the eight [3] Steel Hex Balls for free movement. If not free then use pliers to gently pinch the plastic ends until free. If you pinch too hard they can become too loose.



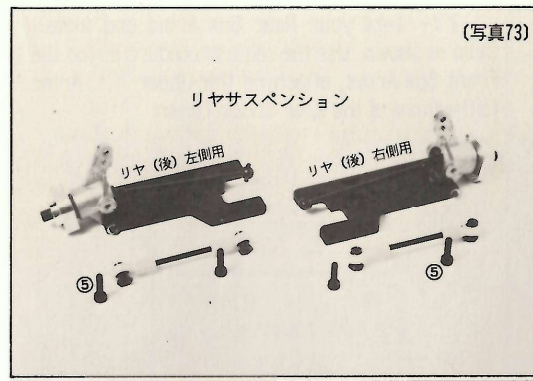
(写真71)

-71- Screw the two [4] M3x15mm Socket Head Screws all the way down on the outer ends of the Front Upper "I" Arms (hexagonal side of Steel Hex Balls). You should have both a left and right side if you carefully followed Figure 69.



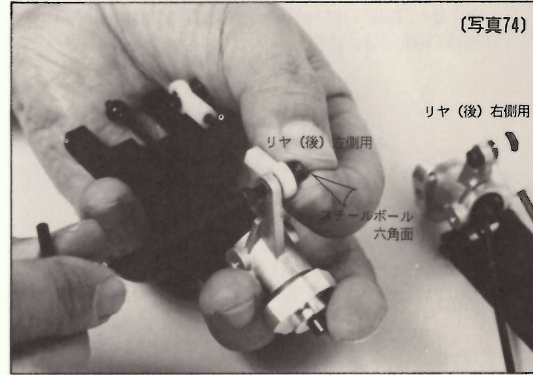
(写真72)

-72- Mount the Front Upper "I" Arms to the Steering Hub Carriers with the M3x15mm Socket Head Screws. Make sure that the hexagonal side of the inner Steel Hex Balls of the Arms face forward.



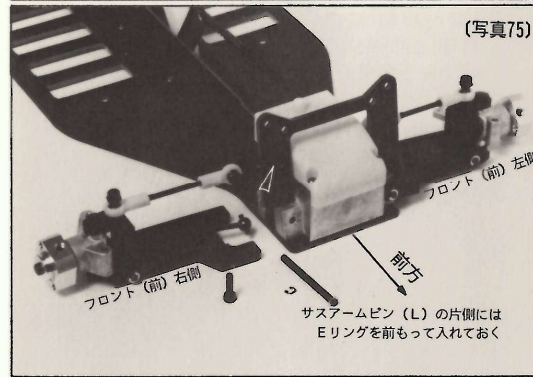
(写真73)

-73- Next we will install the Rear Upper "I" Arms to the Rear Hub Carriers using the [5] M3x10mm Socket Head Screws.



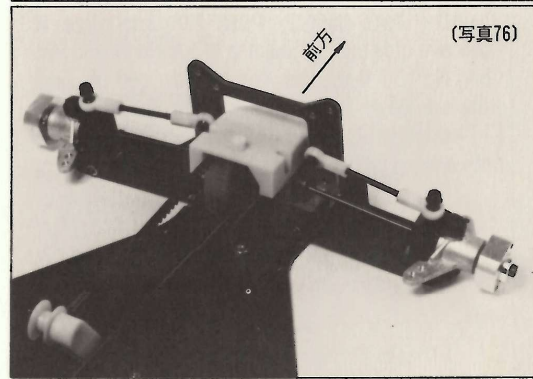
(写真74)

-74- Take two [5] M3x10mm Socket Head Screws and tighten them all the way down (from the front side) in the top hole of both Rear Hub Carriers. Now tighten down the Steel Hex Balls to the Screws while keeping the hexagonal side of the Balls to the rear of the car.



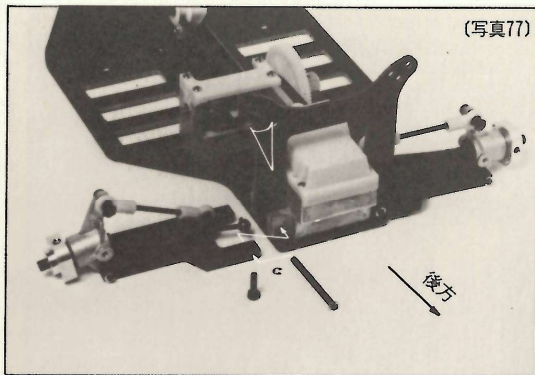
(写真75)

-75- Take the Front Suspension Arms you made in Figure 72, and install them as shown. Attach the Lower Sus Arms using the (long) Lower Sus Arm Pins (install one "E" Clip), align with Bulkhead then push Pins through, add second "E" Clip. Align Drive Shaft into Diff Joint then attach Upper "I" Arm to back of Front Shock Tower with M3x10mm Socket Head Screw.



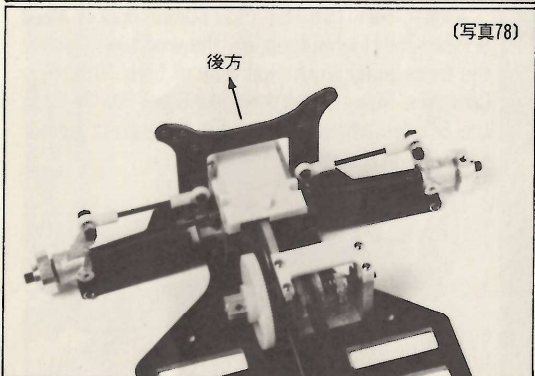
(写真76)

-76- Your Front Suspension Arms should look like this.



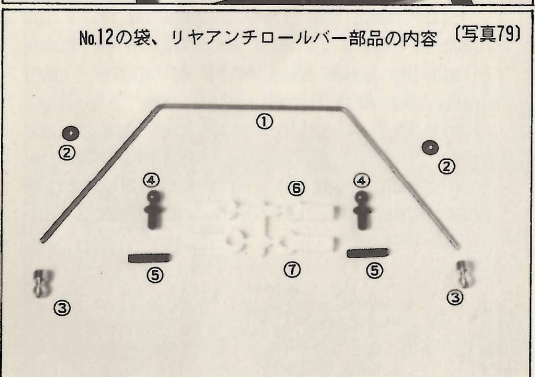
(写真77)

-77- Take your Rear Sus Arms and install them as shown. Use the same procedure as for the Front Sus Arms, attaching the Upper "I" Arms to the front of the Rear Shock Tower.



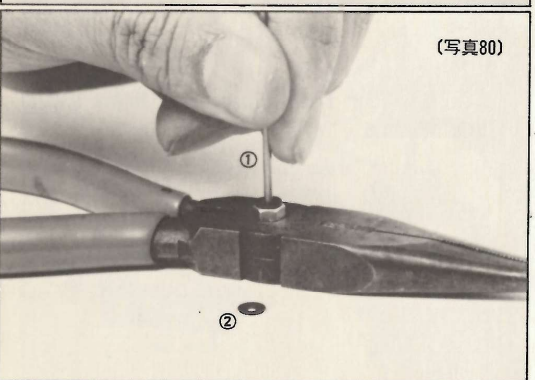
(写真78)

-78- Your installed Rear Suspension Arms should look like this.



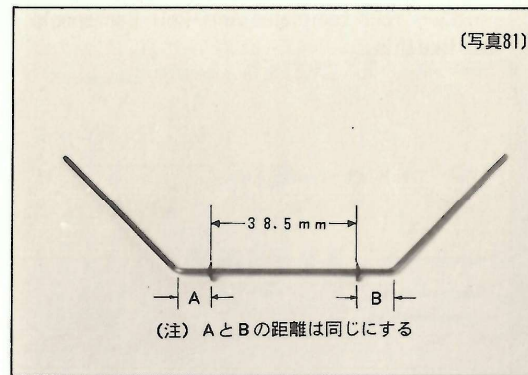
-79- Now open Bag No.12 and check its contents. Contents of Bag No.12

- (1) Anti-Roll Bar.....1
- (2) Push Nut.....2
- (3) Brass Ball.....2
- (4) Steel Ball End.....2
- (5) Threaded Rod (Short).....2
- (6) Plastic Ball Rod Ends (Closed).....2
- (7) Plastic Ball Rod Ends (Open).....2



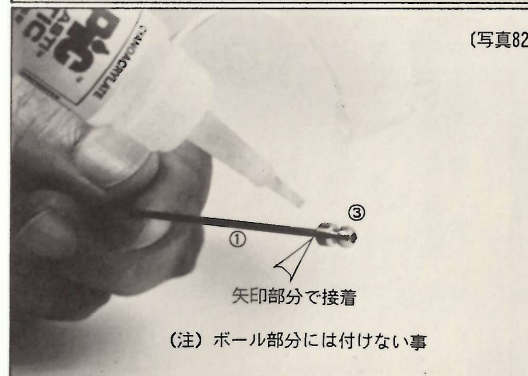
(写真80)

-80- Take the [2] Push Nut and place it (concave side up) on top of a M3 Nylon Lock Nut (Bag No.13) then over the narrow gap of some pliers or other tool. Carefully push the end of the [1] Anti-Roll Bar into the Push Nut. Do this for both ends.



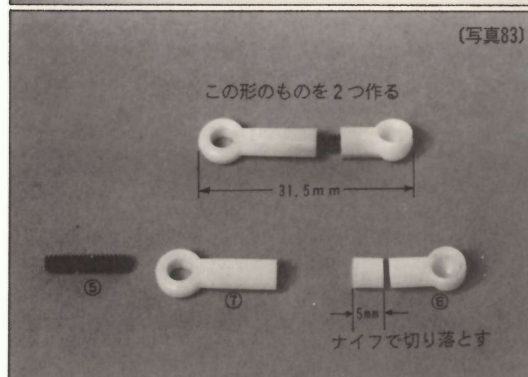
(写真81)

-81- Use the Lock Nut to push the Push Nuts in so the distance between them becomes 38.5mm (centered). If you push them in too far, it requires more pressure to return. Make marks on the Bar at the proper locations to aid assembly.



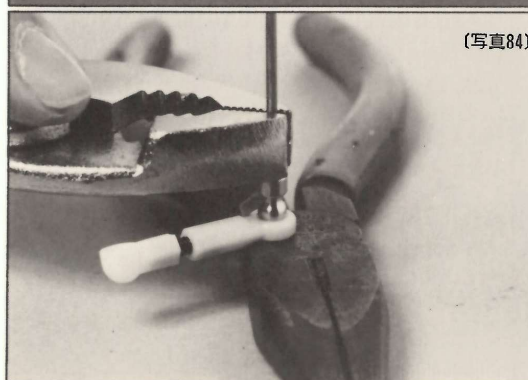
(写真82)

-82- Next use Solder or Instant Adhesive to attach the [3] Brass Balls to both ends of the [1] Bar. Be careful not to get Solder or Glue on the ball surface of the Brass Balls.



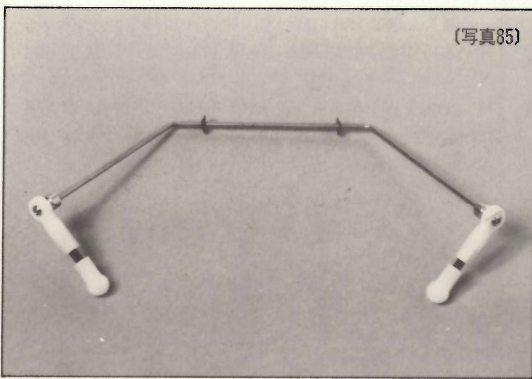
(写真83)

-83- Cut off about 5mm from both [6] Closed Plastic Ball Ends. Hold the [5] Threaded Rod in the center with some needle-nose pliers and screw on [6] Closed Ball End and [7] Open Ball End to an overall dimension of 31.5mm, make two.



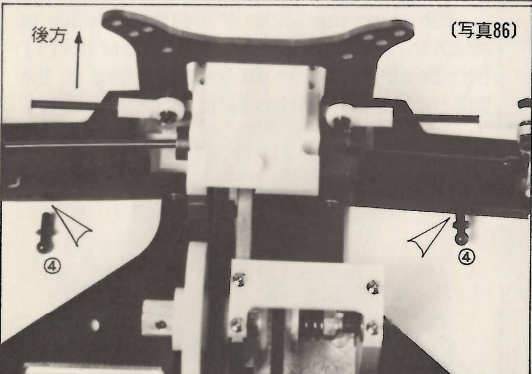
(写真84)

-84- Hold the Bar with pliers and push into the [7] Open Plastic Ball End, do both ends.



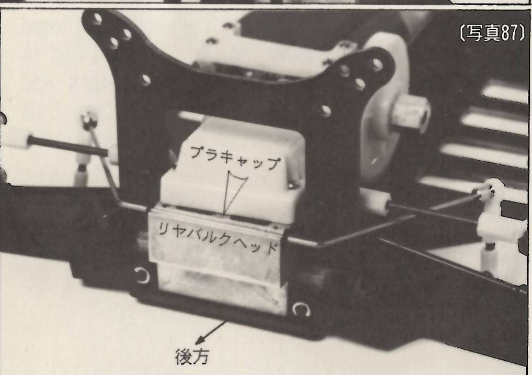
(写真85)

-85- Your completed Anti-Roll Bar should look like this.



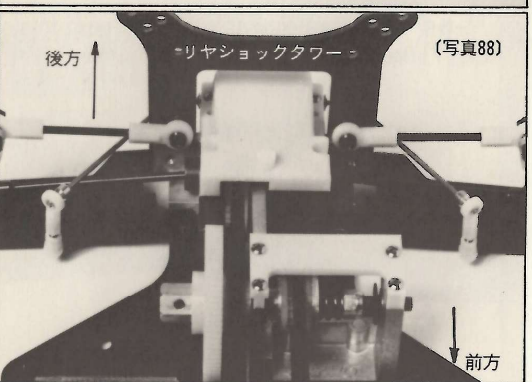
(写真86)

-86- Screw in the [4] Steel Ball Ends in the inside hole on the front side of the Rear Lower Sus Arms.



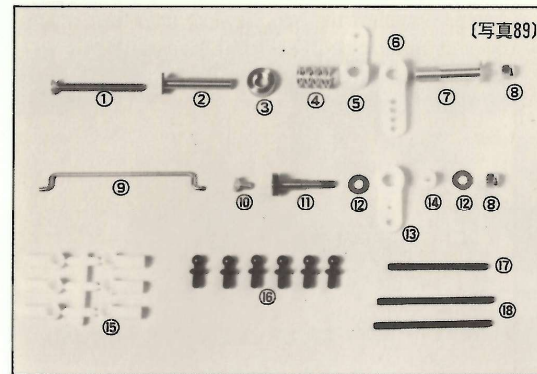
(写真87)

-87- Next attach the Anti-Roll Bar to the Steel Ball Ends, Bar goes under the Rear Upper "I" Arms. Remove the Cap for Rear Bulkhead, now put a small amount of Grease in the narrow groove at the rear of the Rear Bulkhead, lay the A.Roll Bar in the groove and reinstall the Cap for Rear Bulkhead.



(写真88)

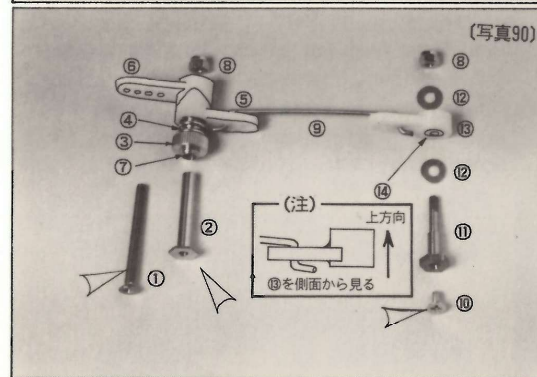
-88- Here is a front view of the completed Anti-Roll Bar installation.



(写真89)

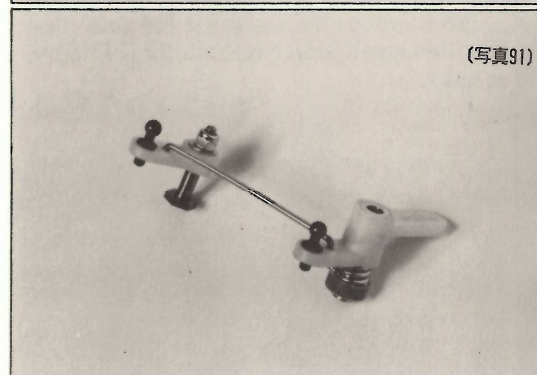
-89- Now open Bag No.13 and check its contents. Contents of Bag No.13

- (1) to (8) Parts for Servo Saver
- (9) Center Tie Rod
- (10) to (14) Parts for Counter Crank
- (15) to (18) Parts for Steering Tie Rod



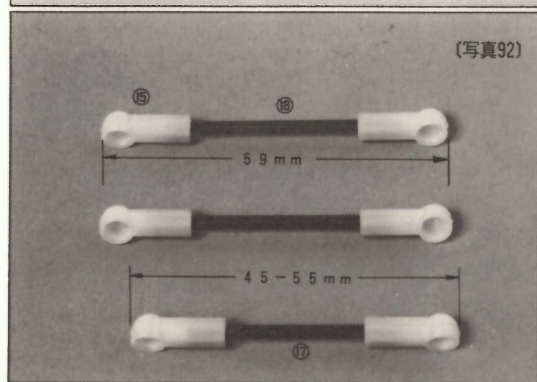
(写真90)

-90- Take Aluminum [7] Servo Saver Post and insert [6] Crank, [5] Tie Rod Crank, [4] Spring, now screw on [3] Knurled Nut recessed side to Spring. Next take Steel [11] Counter Crank Mount push on [12] Washer, Plastic [14] Counter Crank Bushing, [13] Counter Crank, another [12] Washer, then tighten M3 [8] Nylon Lock Nut down, and back off enough to allow free turning of [13] Counter Crank. Parts [1], [2], and [10] will be used in Figure 96. Option Bearings ZC-202 can be used instead of [12] Washer and [14] Bushing.



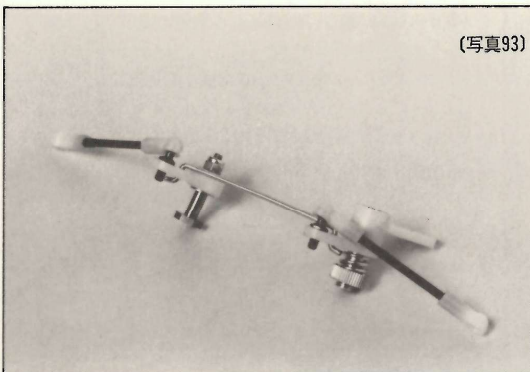
(写真91)

-91- Screw in two [16] Steel Ball Ends and install [9] Center Tie Rod. The Center Tie Rod is installed (from the top) with Twisting and Downward Movement.



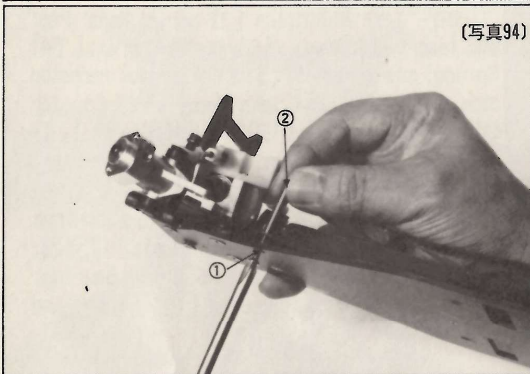
(写真92)

-92- Now take the two [18] Long Rods and while holding with pliers, screw on the [15] Closed Plastic Ball Ends to an overall dimension of 59mm. Final adjustments can be made later. Take the [17] Short Rod and make it to an overall dimension of between 45-55mm, same way as outer Tie Rods above. We will use it in Figure 120-121.



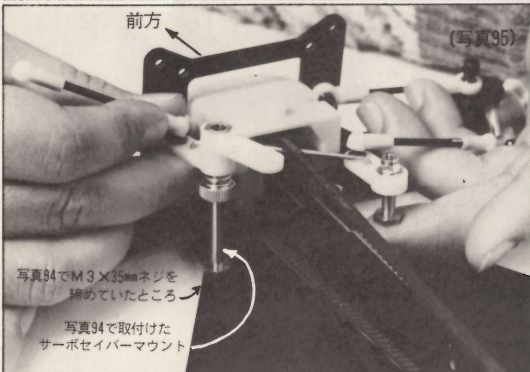
(写真93)

-93- Install the two Tie Rods onto the Servo Saver and Counter Crank. You may use pliers to carefully squeeze the Plastic Ball Ends onto the Steel Ball Ends.



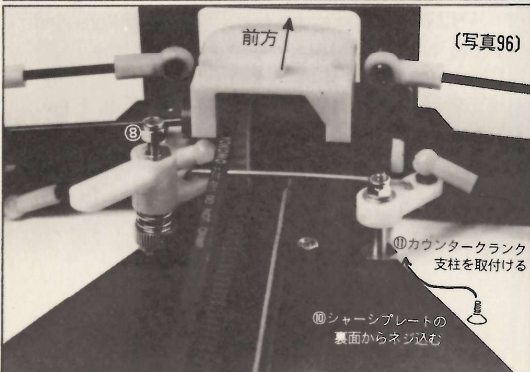
(写真94)

-94- Push up the [1] Stainless Steel Flat Head Screw from the bottom side of the Chassis. Screw on the [2] Servo Saver Mount with your fingers down to the top of the Chassis, then tighten fully with a small Phillips Head (+) Screwdriver.



(写真95)

-95- Position the Center Tie Rod under the Belt, then install Servo Saver onto the [2] Mount as shown.

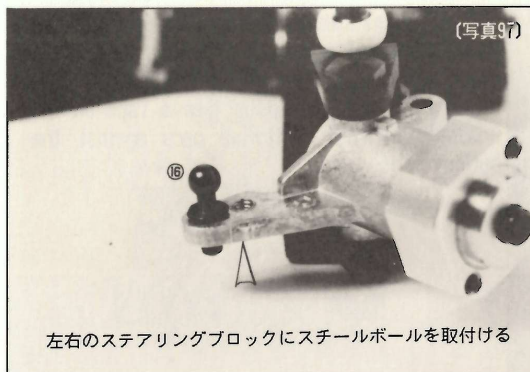


(写真96)

-96- Install [11] Counter Crank Mount with [10] M3x6mm Flat Head Screw, up from bottom of Chassis, tighten securely. Install [8] M3 Nylon Lock Nut onto [1] Stainless Steel Flat Head Screw.

⑪カウンタークランク支柱を取付ける

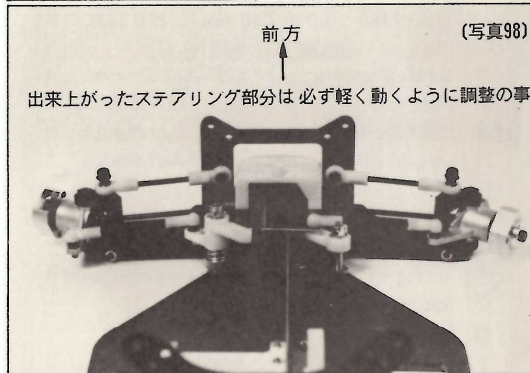
⑩シャーシプレートの裏面からネジ込む



(写真97)

-97- Tighten down a [16] Steel Ball End into the outer hole of both arms of the Left and Right Front Steering Blocks.

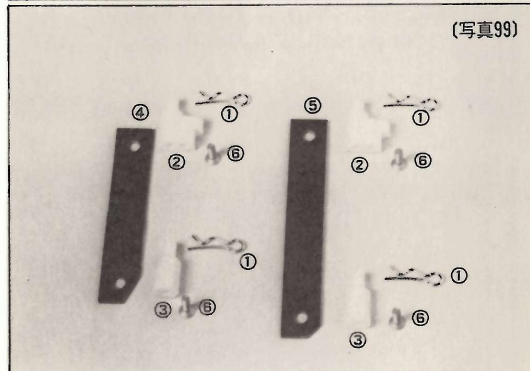
左右のステアリングブロックにスチールボールを取付ける



(写真98)

出来上がったステアリング部分は必ず軽く動くように調整の事

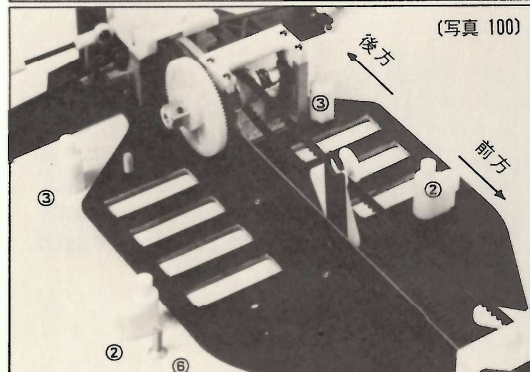
-98- Now press on (using pliers ok) the outer Plastic Ball Ends of the Tie Rods onto the [16] Steel Ball End of the Steering Block arms. Check for free steering movement left and right turn. If not free, check that [8] M3 Nut on top of the Counter Crank is not too tight.



(写真99)

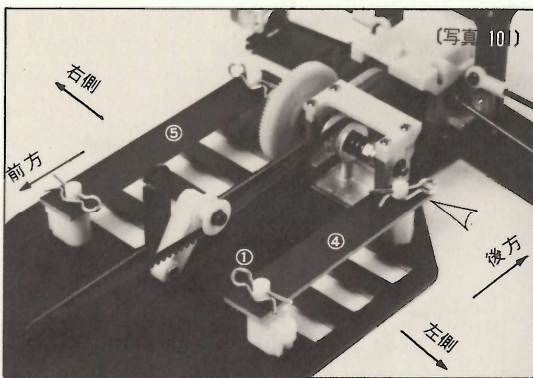
-99- Now open Bag No.14 and check its contents. Contents of Bag No.14

- (1) Hood Pin.....4
- (2) Battery Mount A.....2
- (3) Battery Mount B.....2
- (4) Battery Pressure Plate (L).....1
- (5) Battery Pressure Plate (R).....1
- (6) 8-32 Aluminum Flat Head Screw.....4

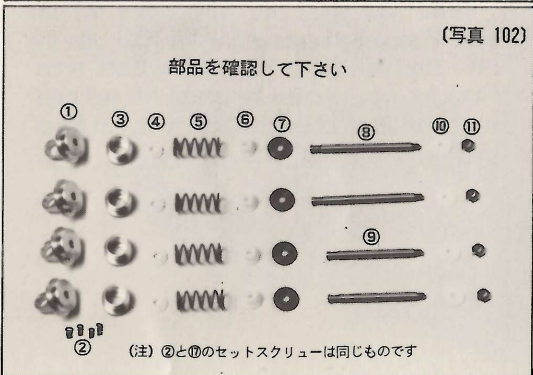


(写真100)

-100- Use the four [6] Flat Head Screws to install the [2] Front Battery Mounts A (with the antenna holder hole to the outside) and [3] Rear Battery Mounts B (with left rear Mount Hood Pin hole at a 45 degree forward to avoid Hood Pin hitting the Motor Mount). Also see Figure 101.



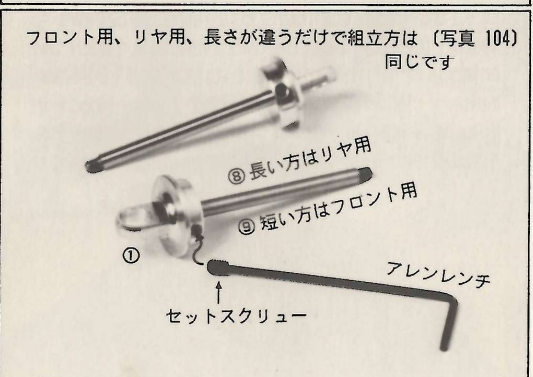
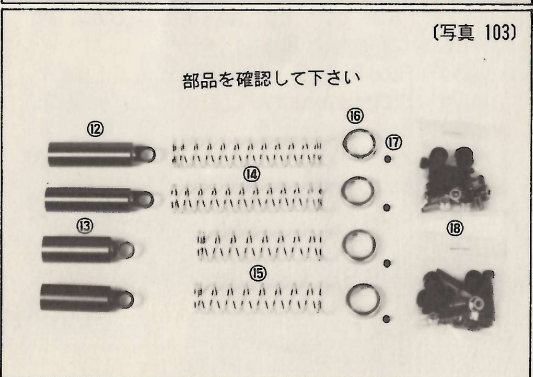
(写真 101)
-101- Install both Battery Pressure Plates on the Battery Mounts using the four Hood Pins. Check that the Left Rear Hood Pin does not hit the Motor Mount. Use strips of Servo Tape on the underside of the Plates as pads against the battery cells.



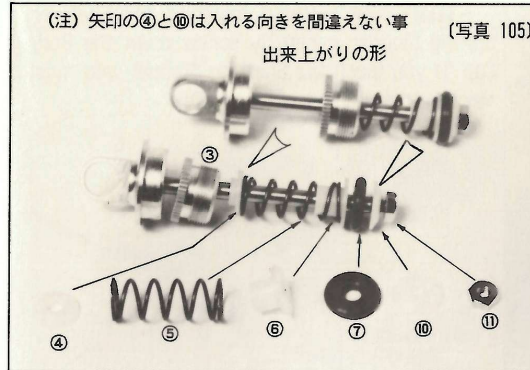
-102-103- Open Bag No.15 and check its contents.

- Contents of Bag No. 15
 (1) Spring Stoppers.....4 (2) Set Screws.....4
 (3) Body Cap.....4 (4) Outer Bushing...4
 (5) Inner Spring.....4 (6) Inner Bushing...4
 (7) Large O Ring.....4 (8) Shaft (Rear)....2
 (9) Shaft (Front).....2 (10) Piston.....4
 (11) Nut for Piston.....4 (12) Body (Rear)....2
 (13) Body (Front).....2 (14) Spring (Rear)...2
 (15) Spring (Front).....2 (16) Ring for Spring 4
 (17) Set Screw for Ring...4
 (18) Four sets of parts

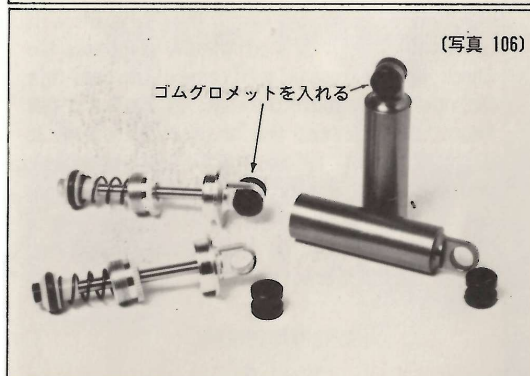
- Rubber Grommet.....8 Brass Tube8
 M3x20mm Screws...8 M3 Nylon Lock Nut ...4
 M3 Flanged Nut.....4 Flat Washer16



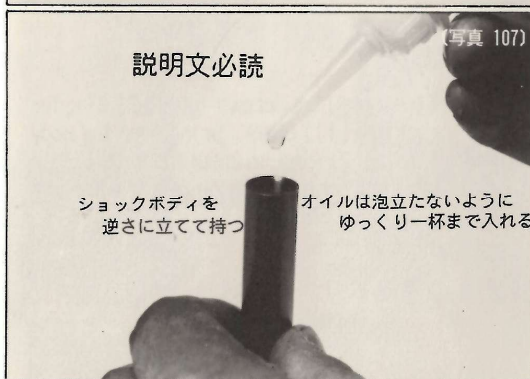
-104- Note that while there are Front (short) and Rear (long) Shocks, the method of assembly is the same. Use [2] Set Screws to lock on [1] Spring Stoppers onto [8 long] Rear Shafts and [9 short] Front Shafts (the non-threaded ends).



-105- First take each [6] Inner Bushing and remove material (bevel) as shown in Figure 105A. Install onto shaft from Figure 104, [3] Body Cap, [4] Outer Bushing, [5] Inner Spring, [6] Inner Bushing, [7] Large O Ring, [10] Piston (threaded), and lock down with [11] Nut for Piston. Assemble all four shock shafts.



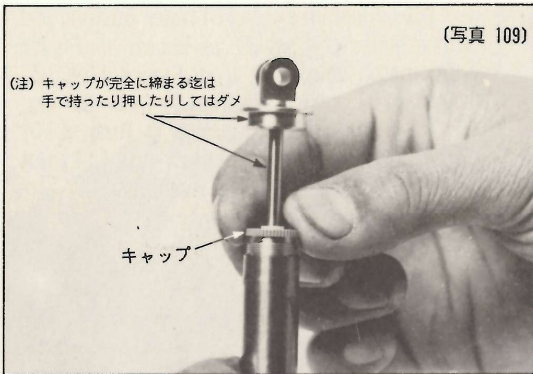
-106- Now install the [18] Rubber Grommets into both ends of all four Shocks.



-107- Pour shock oil in slowly and down the side of the shock to avoid making air bubbles, fill up to the threads (for Body Cap).



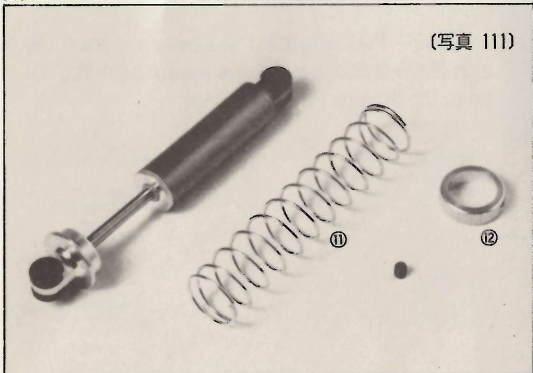
-108- You will need some rags or tissues to wipe excess oil, for this next step. Remember to match short and long shaft assemblies to short and long Shock Bodies. Stand the Shock on your bench, set the assembled inner shock parts into the oil filled Shock Body, keep the parts at an Angle to prevent trapping air bubbles.



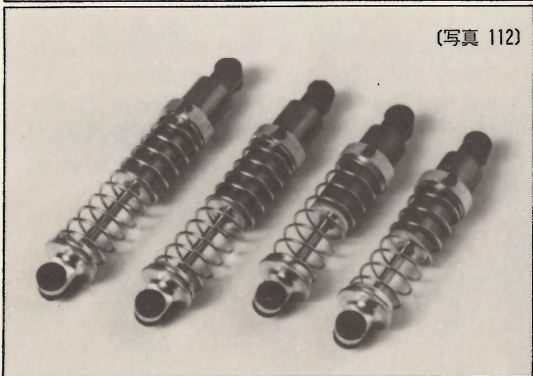
-109- Now without touching the Shaft or Spring Stopper carefully screw down the Body Cap. If you touch the Shaft or Stopper you must start over again from Figure 108.



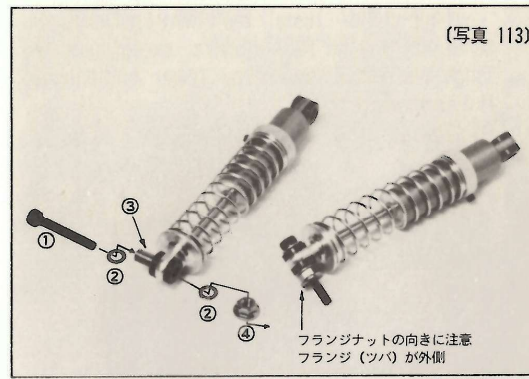
-110- Tighten the Cap fully (some oil will come out). Slowly and completely compress the Shock, again excess oil will come of the Cap, this Ok, now slowly move the shaft in and out a few times. These Shocks are of excellent design to expel excess oil automatically (self-bleeding), while keeping the proper amount of oil for optimum operation. Wipe off excess oil. Shocks should fully extend by themselves. Repeat for remaining three Shocks.



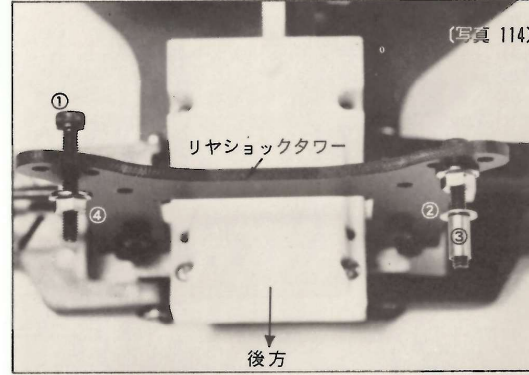
-111- Install Set Screws into [12] Ring for Spring, slid on [11] Shock Spring over the Body and set with [12] Ring, in about the middle of the Body. Use Long Springs on Rear Shocks and Short Springs on Front Shocks.



-112- Assembled Rear and Front Shocks.



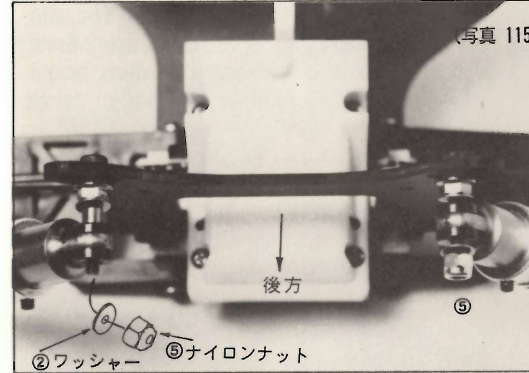
-113- Install into the Rubber Grommet of Spring Stopper, [1] Socket Head Screw, using [2] Washer and [3] Brass Spacer. Next tighten with [2] Washer and [4] Flanged Nut (flange facing outside). Repeat for remaining Shocks.



-114- Install upper shock mounts onto Rear Shock Tower (lowest hole), using [1] Socket Head Screw and [4] Flanged Nut, add [2] Washer, and [3] Brass Spacer.

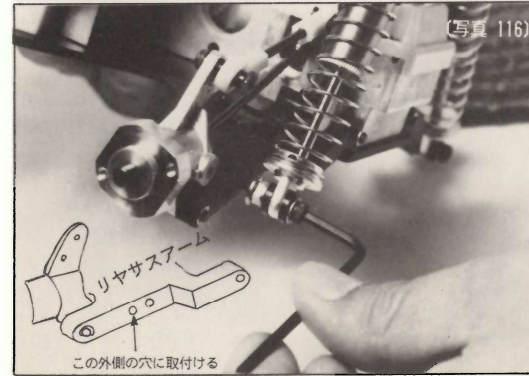
-115- Slide top Grommet of Rear Shock (long shock) over Brass Spacer, add [2] Washer and fasten securely with [5] Nylon Lock Nut.

-116- Install lower part of Shock to outside hole of the Rear Sus Arm as shown.

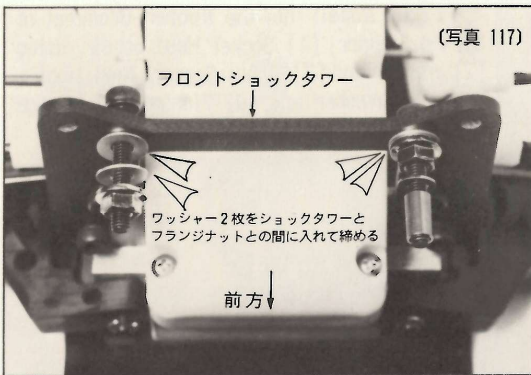


-115- Slide top Grommet of Rear Shock (long shock) over Brass Spacer, add [2] Washer and fasten securely with [5] Nylon Lock Nut.

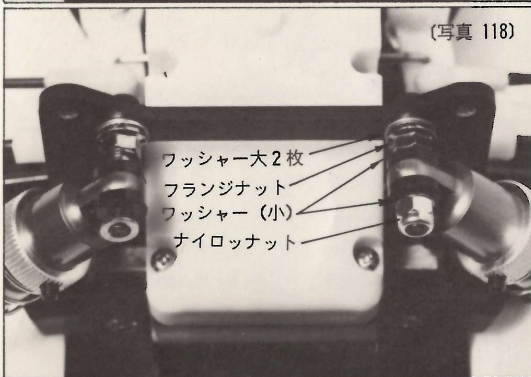
-116- Install lower part of Shock to outside hole of the Rear Sus Arm as shown.



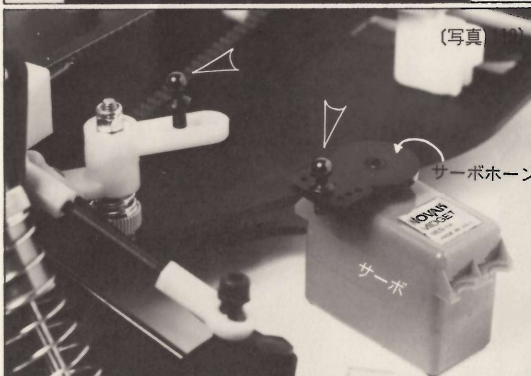
-116- Install lower part of Shock to outside hole of the Rear Sus Arm as shown.



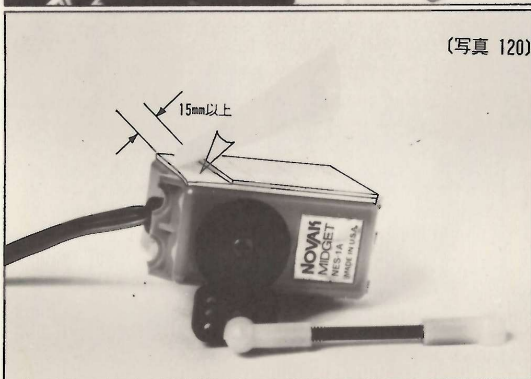
(写真 117)



(写真 118)



(写真 119)

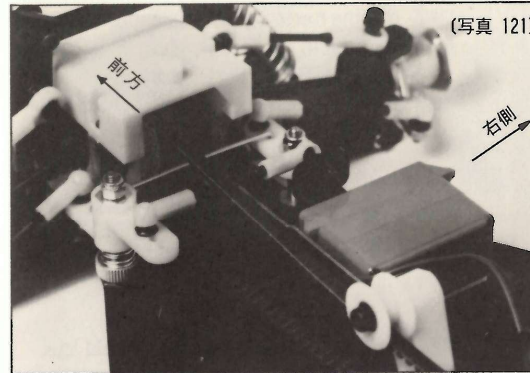


(写真 120)

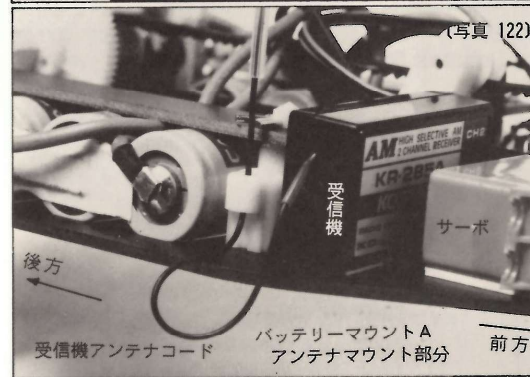
-117-118- Install the Front Shocks in the same way as the Rear Shocks, except use two large Washers between the Tower and Flanged Nut as shown.

-119- Attach the Tie Rod Steel Ball End onto Servo Saver Arm, and Servo Horn (use 2.6mm Drill Bit). It may be necessary to adjust height of Tie Rod by the height of the hole in Servo Horn.

-120- Attach one layer (full size), then a second layer (less about 15mm, to clear Backbone) of Servo Tape to bottom side of Servo. Attach the Servo Rod to Servo, align Servo (Center Servo Saver Arm, and Servo Horn), then mark Servo location on Chassis.



(写真 121)



(写真 122)



(写真 123)



(写真 124)

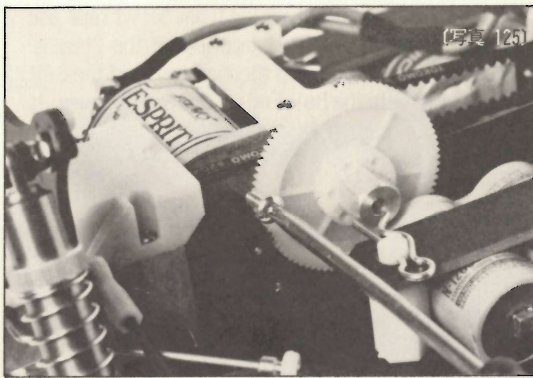
(注) ピニオンギヤ取付ネジはU.S.A.規格の4-40セットスクリューを使用必ず専用レンチを使う事

-121- Remove backing from Servo Tape and mount Servo to marked location on the Chassis. Locate Servo Saver Rod through inside of the Belt and push onto the Ball End on the Servo Saver. It may be necessary to make small length adjustments to Servo Rod.

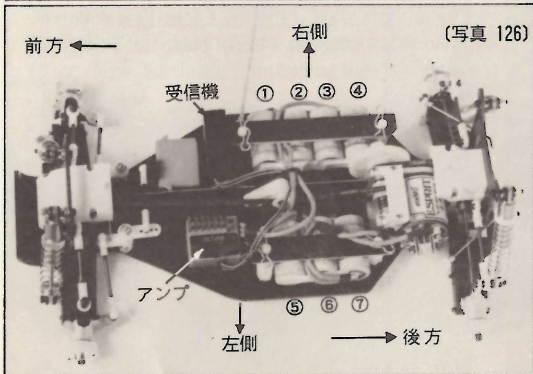
-122- Receiver Antenna Mounting. Receiver Antenna Wire goes up and through the bottom of the Front Battery Mount, the Tube will go in from the top.

-123- Route all wiring crossing over the Belt through the Wire Harness Hanger.

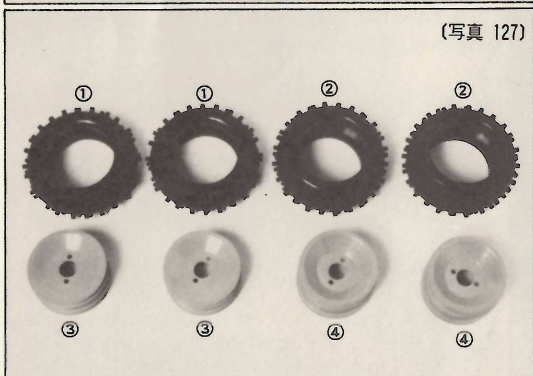
-124- After completing Radio and Electronic Speed Controller installation (refer to Figure 126), take the Pinion, 4-40 Set Screw, and 4-40 Allen Wrench from Bag No.16. Install Pinion to the Motor with the 4-40 Set Screw.



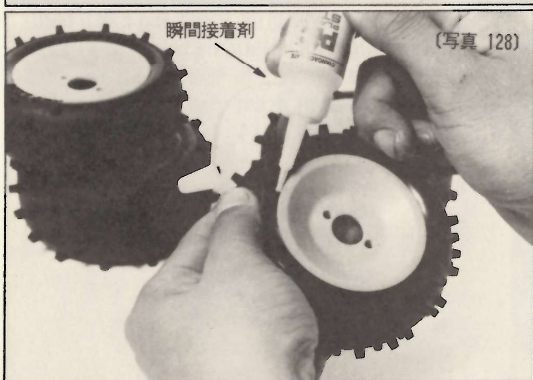
-125- Use the Button Head M3x8mm Screws (Bag No.16) to mount the Motor, make sure they don't touch the Belt. Adjust gear mesh to minimum clearance without binding (check all the way around the Main Gear).



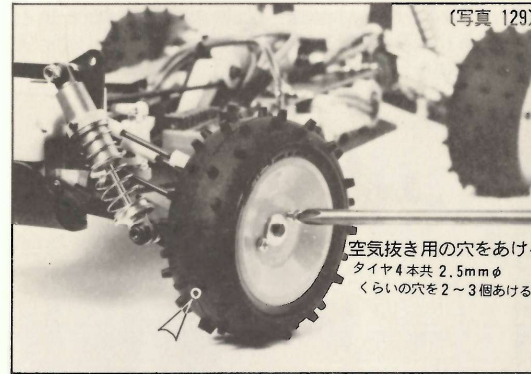
-126- Your nearly completed car should look like this. A six cell car will use one less cell on the right side. Note locations of Receiver and Electronic Speed Controller.



- 127- Tires and Wheels
- (1) Front Tire (Narrow).....2
 - (2) Rear Tire (Wide).....2
 - (3) Front Wheel (Narrow).....2
 - (4) Rear Wheel (Wide).....2



-128- Make three 2.5mm air holes (120 degrees apart) in all the Tires (by pinching the sides to make the center come to a point, like folding a piece of paper in half, use some small wire cutter pliers and make a diamond shaped hole, with two cuts). Next install Tires on Wheels (pull tires over wheels), run a bead of Instant Adhesive where Tire and Wheel meet, on both sides.



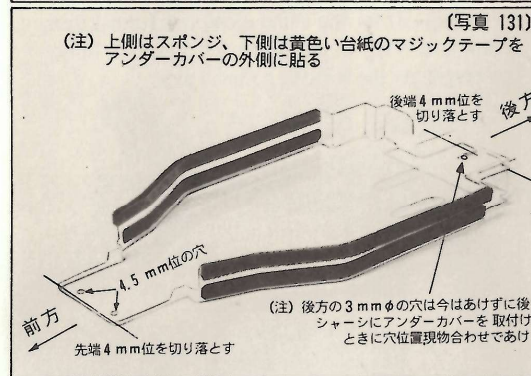
(写真 129)
空気抜き用の穴をあける
タイヤ4本共 2.5mmφ
くらいの穴を2~3個あける



(写真 130)
3枚ともハサミで半分の幅に切る

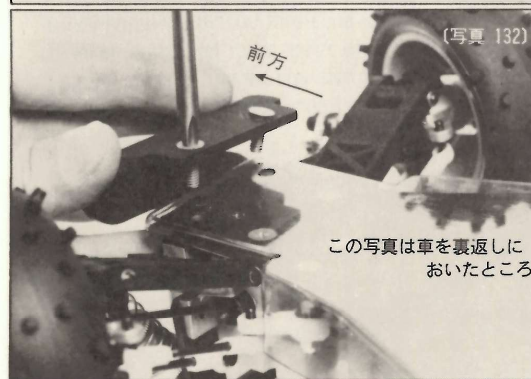
-129- From Bag No.8 use the M3x8mm Button Head Screws to attach the Wheel/Tires to the Hubs.

-130- Take the Foam Tape (Seal) and Velcro Tape Blue and Yellow (Body Mounting) and cut them in half. Set aside the Blue Velco strips (for Body).



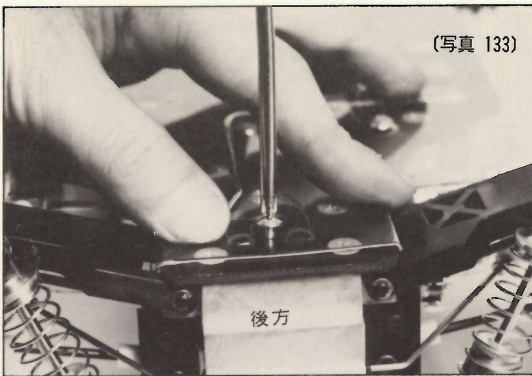
(写真 131)
(注) 上側はスポンジ、下側は黄色い台紙のマジックテープをアンダーカバーの外側に貼る

-131- Trim the Under Cover along the Trim Lines. Trim off 4mm from the Front and Rear edges. Open up the two 4.5mm holes in front for Bumper mounting. Don't open the 3mm hole at the rear at this time. Attach the Foam Tape on the outside top edges, on both sides of the Under Cover. Attach the Yellow Velcro Tape near the bottom edges on both sides.



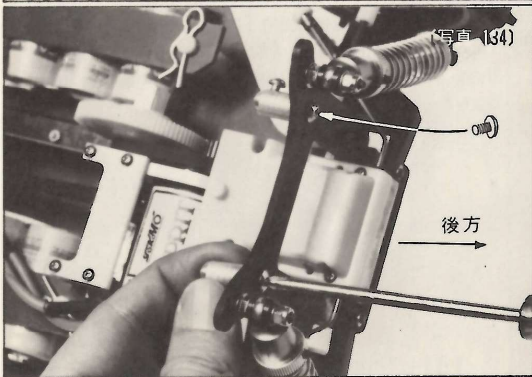
(写真 132)
この写真は車を裏返しにおいたところ

-132- Take out the rear M3 Screw for the Motor Mount (see Figure 133). Clamp down the Under Cover with the Front Bumper, using two 8-32 Screws.



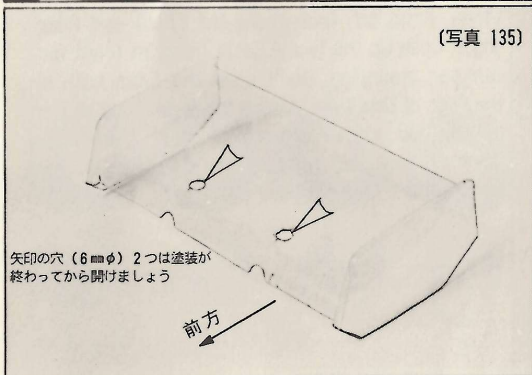
(写真 133)

-133- Now you can locate exactly where to make the 3mm hole in the Cover, reinstall the M3 Screw.



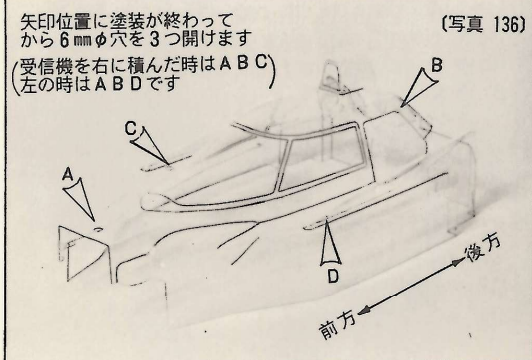
(写真 134)

-134- Open Bag No.17. Install the Wing Mounts to the front of the Rear Shock Tower, using two M3x8mm Screws.



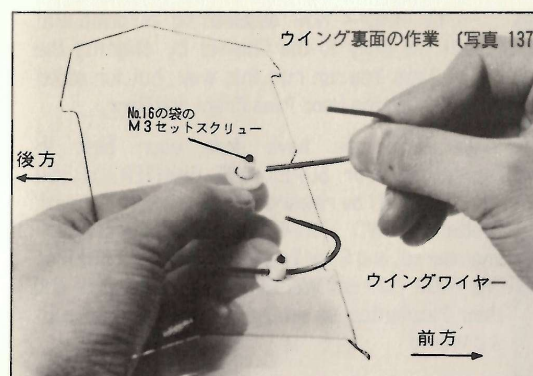
(写真 135)

矢印の穴 (6mmφ) 2つは塗装が終わってから開けましょう

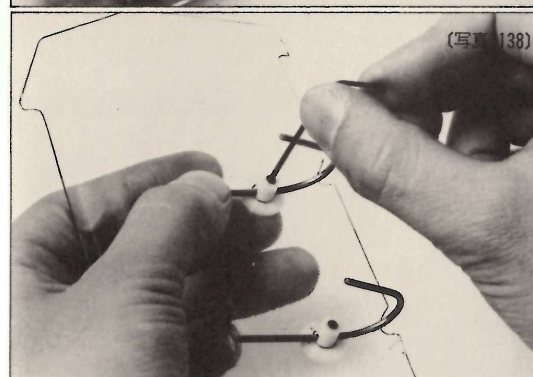


(写真 136)

-136- Mask and Paint your Body using Paint for Polycarbonate. After paint has dried, trim it along the Trim Lines and carefully drill (6mm) out the Front and Rear Holes for mounting (A & B). Drill out Hole C or D for Antenna Tube.



ウイング裏面の作業 (写真 137)



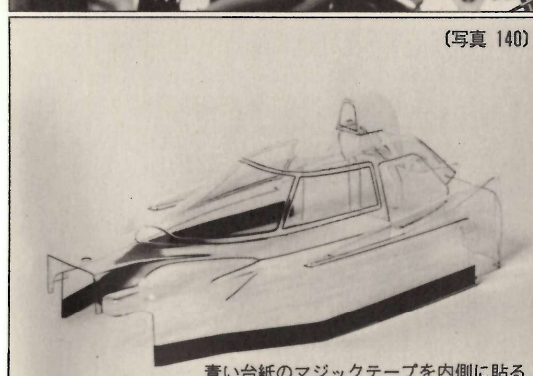
(写真 138)

-137-138- Take your Wing (paint dried) and make the two holes for the Holders. Push the Plastic Wing Holders (Bag No.11) in from the top. Push in the Wing Wires and lock them with two M3x6mm Set Screws (Bag No.17).



(写真 139)

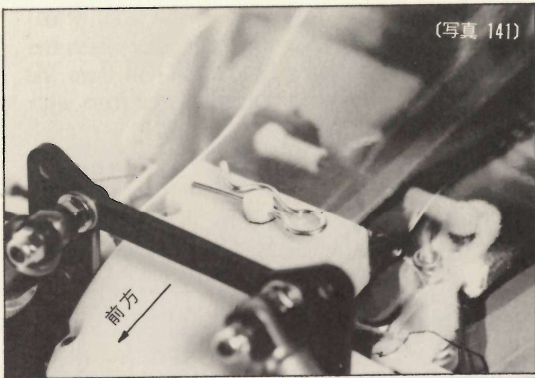
-139- Install the Wing using the two M3x5mm Screws from Bag No.17.



(写真 140)

-140- Install the Blue Velcro Tape along the bottom inside edge of your Body.

青い台紙のマジックテープを内側に貼る



(写真 141)

-141-142- Now assembling is complete! Install the Body to the Chassis by aligning the Velcro Tape. You can run this way, but for added security use the Hood Pins Front and Rear.

We hope you have done your best in assembling your SUPER DOG FIGHTER, if you have, you will be rewarded with one of the finest handling 4WD Off-Road R/C Cars ever engineered, and Race Track Refined, by THREE of The FOUR current World Champion Drivers and their Mechanics, on all the Major Race Tracks in the World.



(写真 142)

SOKMO
WORLD WINNER R. C. MODEL RACING CAR BY YOKOMO LTD. TOKYO