

MFG: NAMCO AMERICA, INC  
NAME: BUMPER CARS  
TYPE: NON-KIDDIE

**Namco-America, Inc.**

# **Drift King**

Volume 1  
Operation Manual

Preliminary

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This equipment has been prepared and tested in accordance with ASTM Standards on Amusement Rides and Devices, sponsored by ASTM Committee F-24 (4th Ed. 1992, Publication Code Number 03-624092-47).

Drift King has been designed for safe operation when used as intended. Namco-America is not responsible for damages resulting from improper use.



## **IMPORTANT!**

**Read Precautions first before operating Drift King. Failure to do so may result in danger to personnel, damage to equipment, and potential liability to the Operator.**

### **1.0 Precautions**

**1.1 Read Volume 2 Guard Rail Installation Manual prior to operating the carts. Drift King requires special track surface preparation or damage to the casters may result.**

**1.2 Drift King is designed for attended (supervised) operation only. Track supervisors must be fully trained in the following:**

- How to secure the system against inadvertant startup
- How to safely load drivers and get ready for the start of a race
- How to safely start, monitor, and stop the race
- How to turn away unruly, intoxicated, or incompetent drivers
- What to do in an emergency

**1.3 Cart batteries are 12VDC nominal, connected in series to supply 24VDC. Make sure that when connecting batteries that the the terminal posts on opposing batteries are oriented towards the outside of the Cart. This will minimize the potential for damage should a metal object be dropped in accidentally.**

**1.4 Min/Max. individual battery voltage ranges from 9 to 13 Volts DC. Do not overvoltage the batteries. If erratic transmitter opertion is experienced, check the battery charge.**

**1.5 The following PLAYER RESTRICTIONS should be posted:**

- Minimum driver height: 4 ft. 6 inches.
- Maximum driver weight: 320 pounds.
- No drugs or alcohol.
- No pregnant women, heart or back problems.



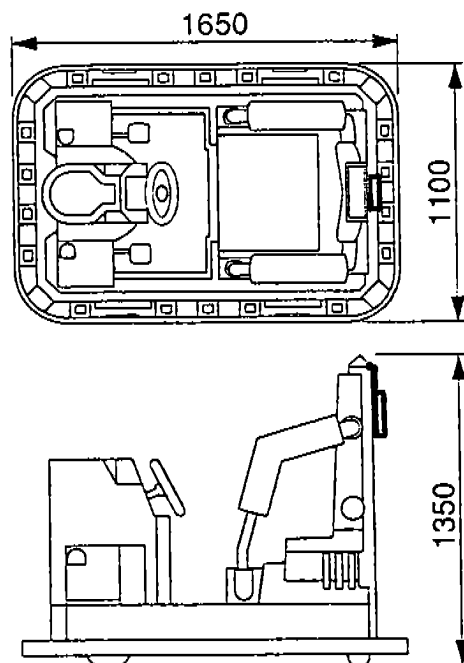
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## **2.0 Specifications**

Power supply:	Deep-cycle battery 12 V (2 batteries in series 24 V)
	Recommended battery: KEY STONE SOLID ENERGY 27-80 105 A
	172 mm (W) x 330 mm (D) x 243 mm (H)
Power consumption:	C 24 V 250 W
Dimensions:	100 mm (W) x 1650 mm (D) x 135 mm (H)



Weight:	Approx. 250 kg (with batteries)
Coin selector::	Can not be attached.

Maximum entry number: 8 carts

Accessories:	Operation manual (this manual) .....	1
	Battery cables .....	6
	Number stickers .....	1 set



1. These specifications are subject to change without prior notice.

**Remarks** If batteries other than the recommended batteries are used, make sure that they have terminals for screws. The terminal shapes differ for different batteries, so it is possible that the supplied cables could not be attached.



### **3.0 Control and Game Play**

#### **3.1 Controls**

The attendant is supplied with a remote transmitter unit which provides centralized start/stop control of the Carts.

To use the transmitter, connect it to a 120VAC three wire grounded outlet. Maximum range of the transmitter is 150 feet. The antenna must be fully extended.

The transmitter has 3 modes, selected by a single lever: ON 1 (idle); ON 2 (accelerator enabled); and STOP (lever forward). The control should be set to STOP or ON 1 whenever customers are standing or walking within the track area.

#### **3.2 Pre-Race Announcement**

The attendant should use the following procedure in preparation for a race. Namco recommends use of a Public Address system to help make the announcement.

1. Once the area has been cleared from the previous race, instruct the drivers to get seated.
2. Instruct the drivers to fasten their seat belts.
3. Instruct the drivers not to stand up during the race.
4. Instruct the drivers not to stand up in the carts nor stick their hands/feet out.
5. Instruct the drivers not to get out of the carts until instructed to do so.
6. Instruct the drivers not to drive recklessly.
7. Instruct the drivers that, should the cart become stuck, do not step on the accelerator. Wave to the attendant.

##### **3.2.2 Game Rules**

Following the safety instructions above, the attendant should proceed with an explanation of game rules:

1. The race duration is **n** laps around the circuit. (**n** is usually 5).
2. The TURBO button can be used for a burst of speed.
3. The pedal on the right is the accelerator. The pedal on the left is the brake.
4. The Cart's lap counter is decremented by one each time the Cart passes the start/finish line.



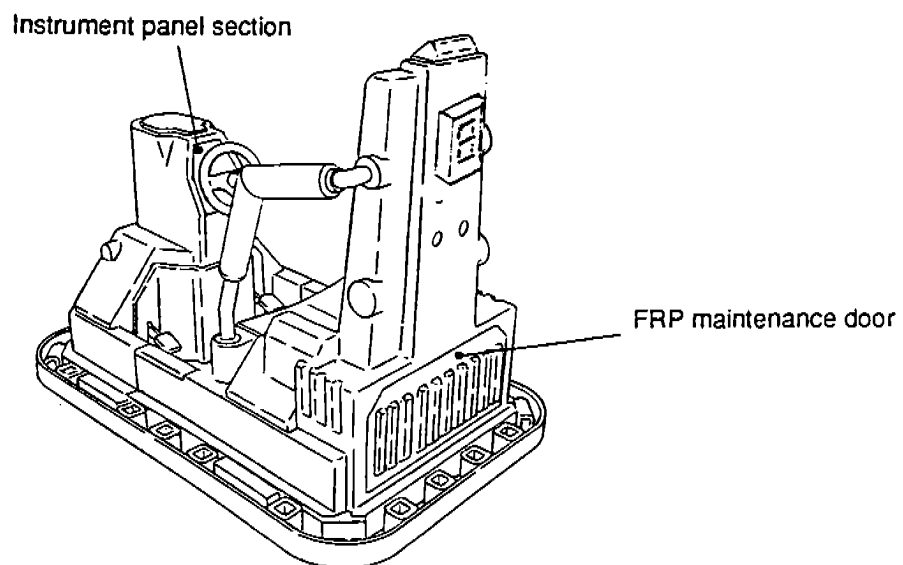
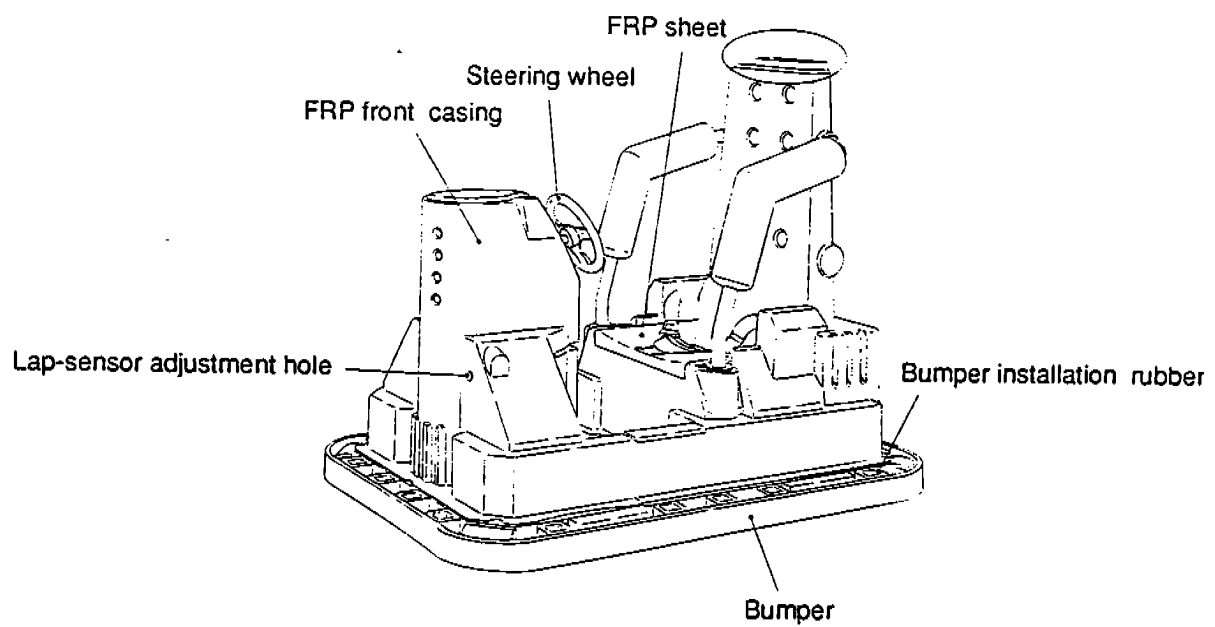
## **4.0 Lap Counting**

Each Drift King Cart is equipped with rear-mounted jumbo-sized 7-segment display showing remaining laps in the race. Remaining-lap status is determined by means of an on-board solid-state optical sensor operating in conjunction with a 4-foot wide reflective aluminum surface laminated to the track surface across the start/finish line. Each time the Cart passes over the start/finish line an on-board counter is decremented by one. After the last lap is completed the Cart stops automatically.

The number of laps to complete a race is settable via dip-switches located on the Cart's control PCB. (1 to 5 laps, or unlimited). A Cart-mounted electromechanical counter is incremented each time ON 2 is enabled.

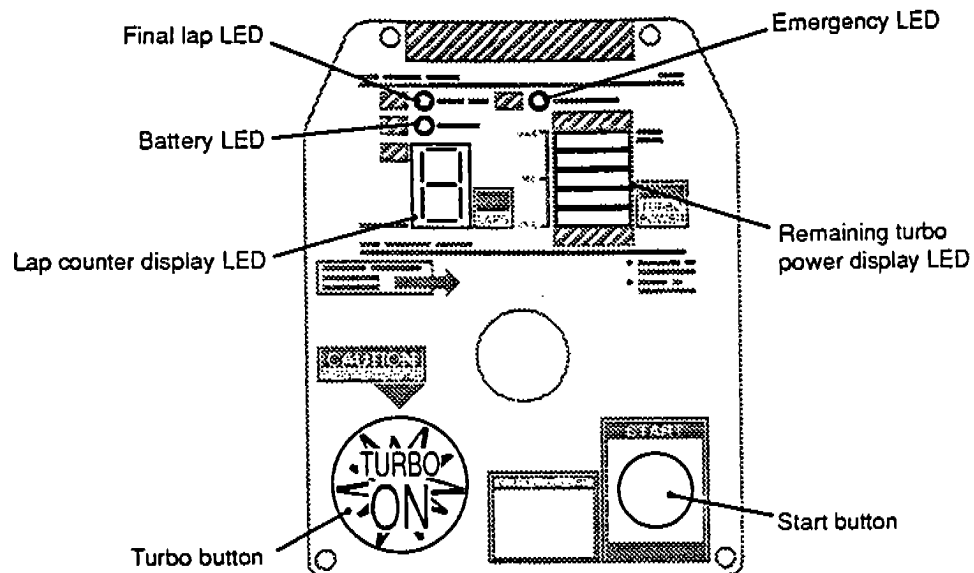


## 5.0 Cart Components

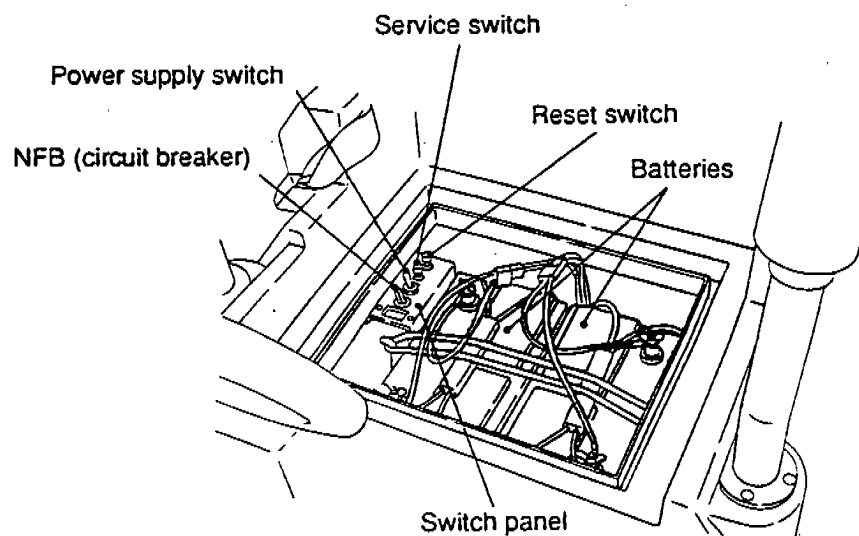




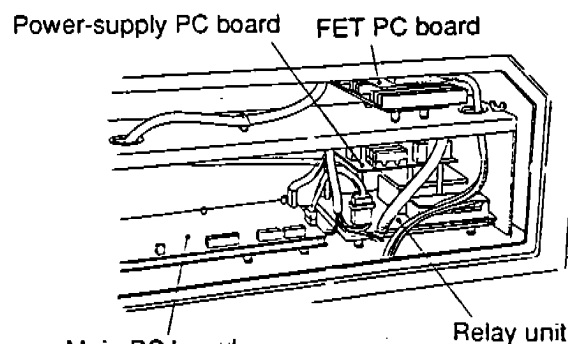
### Instrument Panel



### Battery Section



### PC boards



## 6.0 Battery Replacement



The batteries contain dilute sulfuric acid which could cause severe burns. When handling the batteries, be sure to wear safety glasses and protective gloves.

### Handling the Batteries and Battery Charger



- 1 Read carefully the Operation Manuals that are supplied with the batteries and battery charger.
2. Flammable gas is produced inside the battery charger. When charging the batteries, ventilate the room with a fan. Also, do not charge the batteries near fire.

### Before Replacing the Battery



In order to prevent damage to the electrical circuits and accidents due to electric shock, make sure the cart's power switch and NFB (circuit breaker) are OFF before replacing the batteries.

### Replacing the Batteries



- 1 When removing or installing the batteries on the cart, be careful not to pull any of the cart's wiring.
- 2 When placing the batteries on the cart, make sure that the battery terminals face outward. If the battery terminals face inward, they could short circuit.
- 3 Absolutely do not short the plus and minus terminals. If metal objects or object that conduct electricity touch the plus and minus terminals at the same time, it will cause a short, and could damage the batteries or even cause a fire.

### After Replacing the Batteries



Check to make sure that the terminal nuts are not loose. If the terminal nuts are loose, sparks could occur causing fire.

### Time for Replacing the Batteries

The cart can run for about 4 hours when using a fully charged battery (for KEY STONE SOLID ENERGY 27-80).

If the total voltage of the two batteries drops below 20.0 V even for a short time, the battery LED (yellow) on the cart's instrument panel begins to blink.

When the cart's battery LED is blinking, the batteries should be charged or replaced as soon as possible.

If the cart continues to run with the battery LED blinking, the blinking will stop and the LED will be ON constantly. The cart will no longer function properly.

## Replacing the Batteries

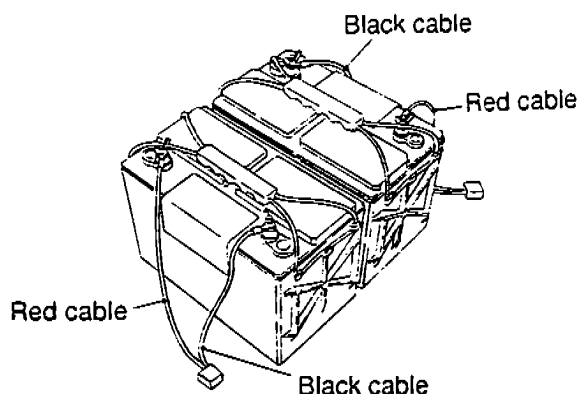


Before replacing the batteries, carefully read the section, "Notes on Handling the Batteries"

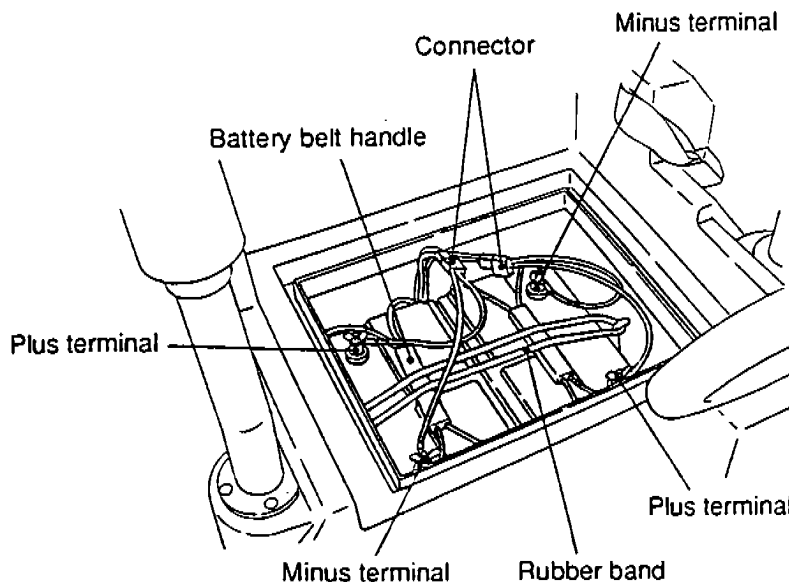
Both batteries should be replaced at the same time.

If the charge of the two batteries is different, it is possible that the proper voltage will not be supplied to the cart, or the amount of time that the cart can run will be extremely shortened.

- 1 Prepare two fully charged batteries. When doing this, make sure that the special cables are connected to the battery terminals correctly. The red cable should be connected to the plus terminal, and the black cable should be connected to the minus terminal.

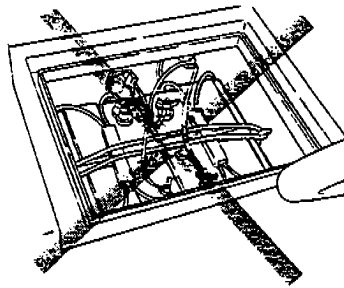


- 2 Remove the cart's FRP seat, and turn OFF the cart's power switch.
- 3 Disconnect the connectors of the two batteries on the cart.
- 4 Remove the rubber band which secures the batteries.
- 5 Hold the battery belt handle, and remove the batteries one at a time.





- 6** Place the two fully charged batteries in the battery holder so that the battery terminal face outward.
- 7** Secure the batteries with the rubber band, and connect the batteries and cart with the connectors.
- 8** After making sure that the batteries have been connected properly, turn ON the cart's power switch.



The battery terminals face inward.

- 9** Carry the batteries removed from the cart to the battery charging space and charge them.

## **7.0 Maintenance**

### **Removing the FRP Front Casing**

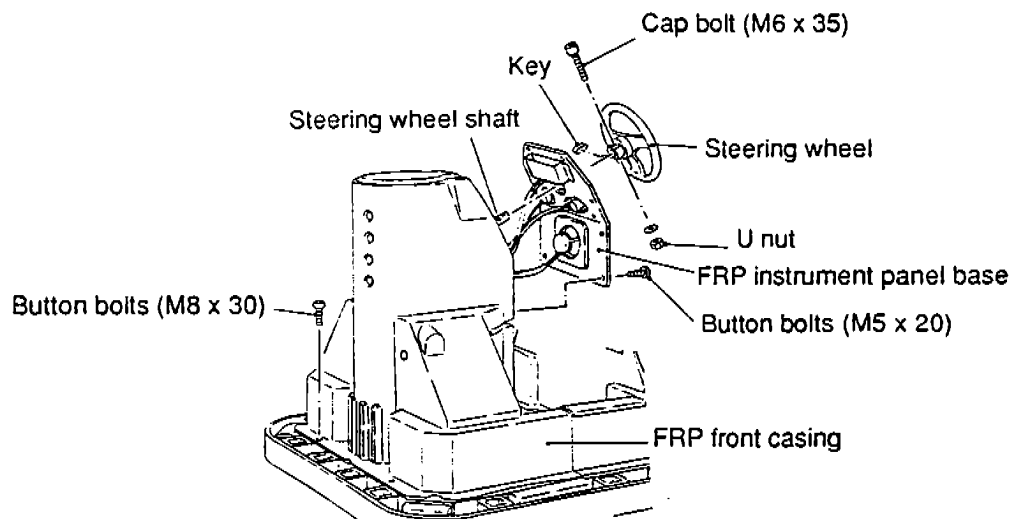


In order to prevent damage to the electrical circuits and accidents due to electric shock, make sure the cart's power switch is OFF before removing the FRP front casing.

- 1** Turn the steering wheel so that the "o" of the "Namco" logo is at the top.
- 2** Remove the U nut located behind the steering wheel, and remove the cap bolt (1 location).
- 3** Pull the steering wheel forward, and remove the key from the steering wheel shaft.
- 4** Remove the button bolts (8 locations) which secure the FRP instrument panel base.
- 5** Pull the FRP instrument panel base forward, and disconnect the connectors (3 locations) for the PC board, speaker and ground wire.
- 6** Remove the button bolts (6 locations) the secure the FRP front casing, and remove the FRP front casing.

### **Installing the Casing**

Install the casing by following the above steps in the reverse order (step **6** to step **2**).

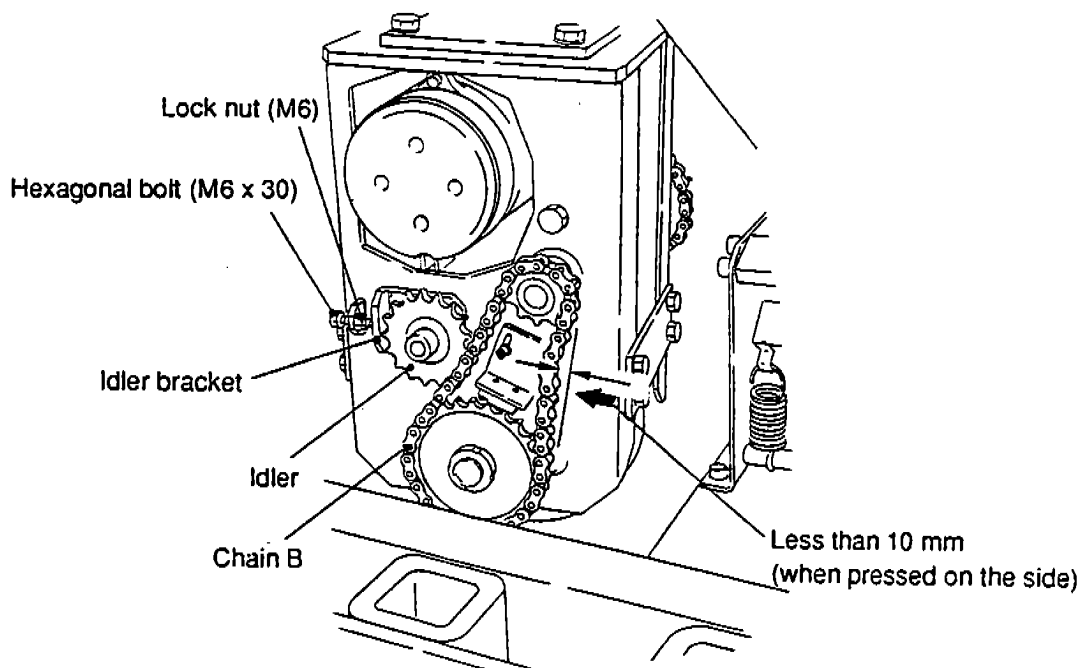


## Adjusting Chain B



To prevent the cart from moving unexpectedly, make sure the cart's power switch and NFB (circuit breaker) is OFF before starting to adjust chain B.

- 1 Remove the cart's FRP seat, and turn OFF the power switch and NFB (circuit breaker).
- 2 Remove the FRP front casing from the cart as described in "Removing the FRP Casing" (pg. 39).
- 3 Loosen the hexagonal bolts (2 locations) of the idler bracket.



- 4 Push the idler bracket in the direction of chain B until the slack of chain B when pressed on the side opposite of where the idler contacts it is less than 10 mm.
- 5 Tighten the two hexagonal bolts of the idler bracket.
- 6 Loosen the lock nut and tighten the cap bolt until it comes in contact with the idler bracket.
- 7 Tighten the lock nut. When doing this, if chain B comes in contact with the wiring of the speed sensor, adjust it as described in "Adjusting Chain B Using the Pillow Block" (pg. 41). If chain B does not come in contact with the wiring of the speed sensor, return the FRP front casing, instrument panel and steering wheel to their original positions as described in "Removing the FRP Front Casing" (pg. 39). Adjustment is now complete.

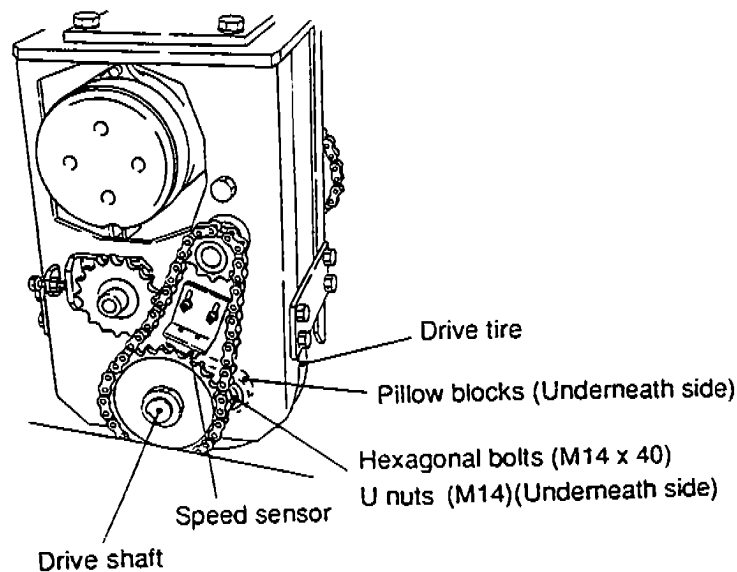
### Adjusting Chain B Using the Pillow Blocks



Safety shoes should be worn so that one's feet are not pinched by the cart.

When the idler adjustment is not adequate, adjustment should be performed by attaching the pillow blocks.

- 1 Prepare a base that is at least 60 mm high and that can support the weight of the cart.
  - Remarks
    - This base is to be place between the cart and the floor and used to raise the drive tire off the floor temporarily.
    - The weight of the cart is about 250 kg.
- 2 Raise the front of the cart, and place the base prepared in step 1 between the floor and the chassis, then lower the cart. When doing this, make sure that the auxiliary caster is not resting on the base.
- 3 Loosen the hexagonal bolts (4 locations) and U nuts (4 locations) which secure the pillow blocks (2 locations) of the drive shaft.



Remark The pillow blocks are secured by the hexagonal bolts and U nuts. When loosening or tightening the hexagonal bolts, hold the U nuts with a wrench.

- 4 Loosen the hexagonal bolts (2 locations) of the idler bracket.
- 5 With the drive shaft in the horizontal position, move it up and down, and adjust the tension of chain B until it does not come in contact with the speed sensor.
- 6 Turn the drive tire by hand and make sure that it turns smoothly.



- 7** Tighten the hexagonal bolts and U nuts that were loosened in step **3**, and remove the base supporting the cart.
- 8** Adjust the speed sensor as described in "Adjusting the Speed Sensor" (pg. 44).
- 9** Readjust the idler as described in steps **4** and **5** of "Adjusting Chain B" (pg. 40).
- 10** Return the FRP front casing, instrument panel and steering wheel to their original positions as described in "Removing the FRP Front Casing" (pg. 39).

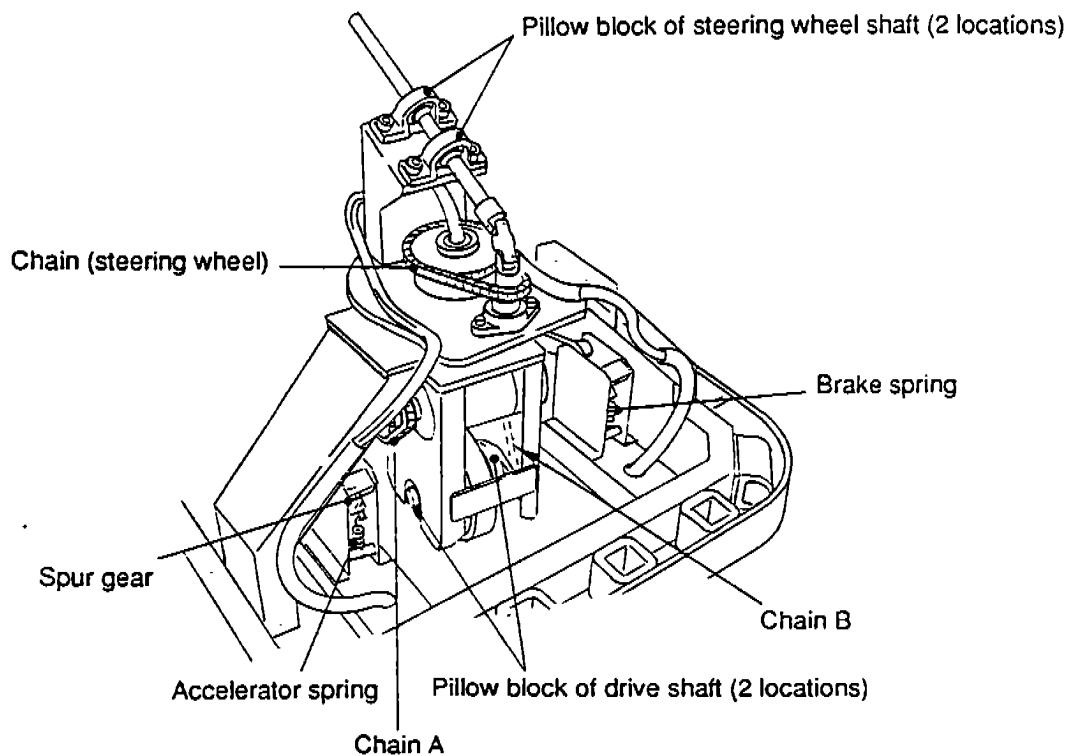


## Grease Lubrication of the Drive ASSY



To prevent the cart from moving unexpectedly, make sure the NFB (circuit breaker) is OFF before starting to lubricate the drive ASSY with grease.

- 1 Remove the cart's FRP seat, and turn OFF the power switch and NFB (circuit breaker).
- 2 Remove the FRP front casing from the cart as described in "Removing the FRP Front Casing" (pg. 39).
- 3 Lubricate the areas shown in the figure below with all-purpose, medium-grade grease No. 2.
- 4 Return the FRP front casing, instrument panel and steering wheel to their original positions.

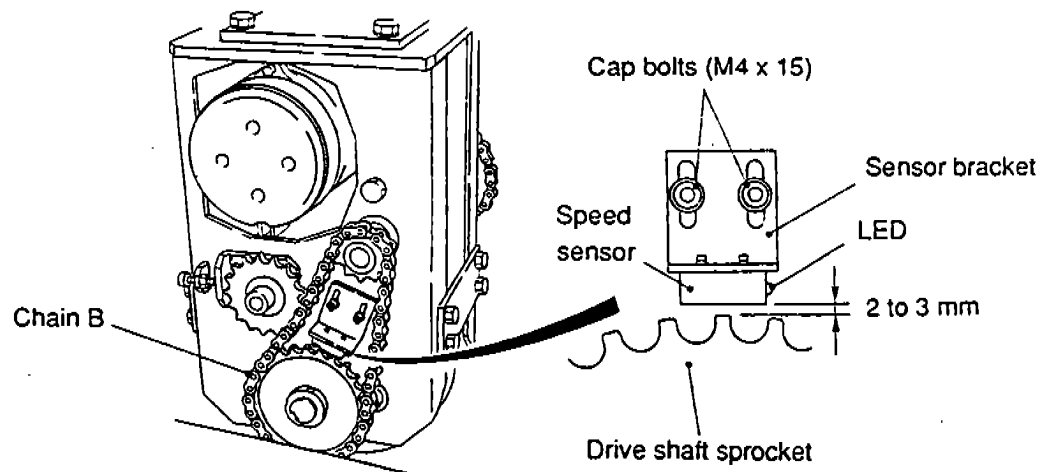


## Adjusting the Speed Sensor



To prevent the cart from moving unexpectedly, make sure the NFB (circuit breaker) is OFF before starting to adjust the speed sensor.

- 1** Remove the cart's FRP seat, and turn OFF the NFB (circuit breaker).
- 2** Remove the FRP front casing from the cart as described in section "Removing the FRP Front Casing" (pg. 39).
- 3** Loosen the cap bolts (2 locations) which secure the sensor bracket.
- 4** Move the sensor bracket so that there is a gap of about 2 to 3 mm between the detection surface of the speed sensor and the drive shaft sprocket.
- 5** Gently tighten the cap bolt that was loosened in step **2** so that minute adjustment is possible.
- 6** Remove the FRP seat, and turn ON the cart's power switch.
- 7** Move the cart by hand forward, backward, to the left and to the right so that the drive tires turn. When doing this, the speed sensor is normal if the speed sensor's LED goes ON only when the tip of a tooth passes the detection surface of the speed sensor. If there is no change in the LED display of the speed sensor, move the sensor bracket a little at a time until it becomes normal.
- 8** Tighten the cap bolts (2 locations) being careful that the wiring of the speed sensor does not come in contact with chain B.
- 9** Return the FRP front casing, instrument panel and steering wheel to their original positions as described in section "Removing the FRP Front Casing" (pg. 39).

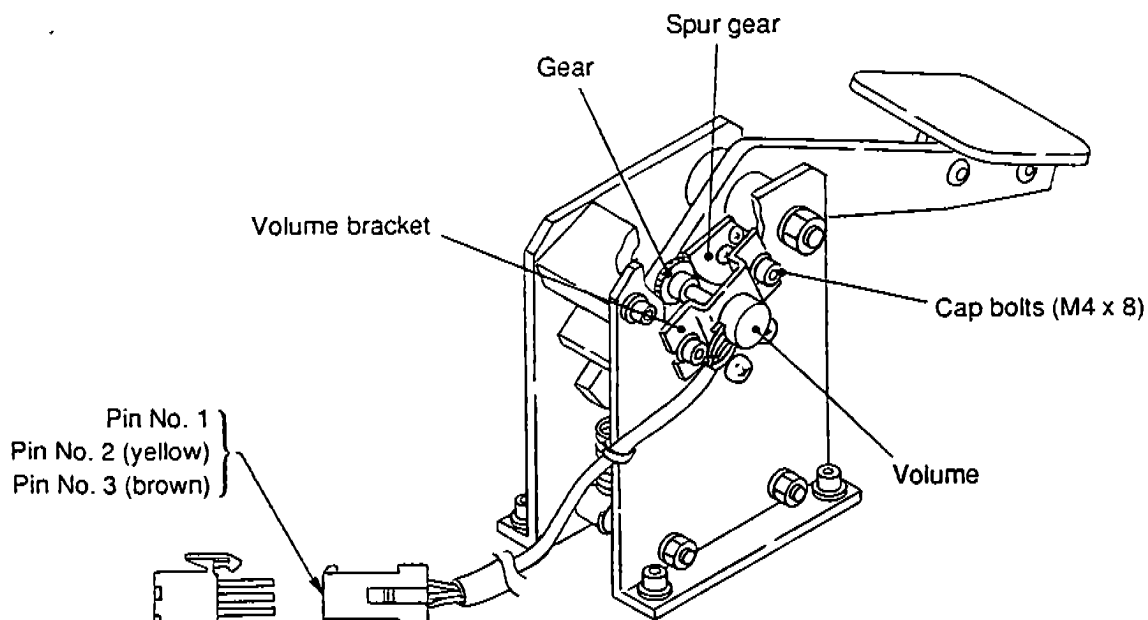


## Adjusting the Accelerator



1. To prevent the cart from moving unexpectedly, make sure the cart's power switch and NFB (circuit breaker) are OFF before starting to adjust the accelerator.
2. Be sure that the connector that is disconnected when adjusting the accelerator is connected again properly. An unconnector may cause inadvertent cart run because it has the same effect as the stepped accelerator pedal.

- 1 Remove the cart's FRP seat and turn OFF the cart's power switch and NFB (circuit breaker).
- 2 Remove the FRP front casing from the cart as described in "Removing the FRP Front Casing" (pg. 39).
- 3 Disconnect the wiring connector (1 location) of the accelerator ASSY.
- 4 Use a voltmeter to measure the resistance of pin No. 2 (yellow) and pin No. 3 (brown) of the connector on the volume side. If the resistance value is within the following ranges, then move on to step 7. If they are not within the following ranges, then go to step 5.
  - When not stepping on the accelerator:  $300\ \Omega (\pm 10\%)$
  - When stepping on the accelerator:  $1400\ \Omega (\pm 10\%)$
- 5 Remove the cap bolts (2 locations) that secure the volume bracket, and move the volume gear and spur gear one tooth.
- 6 Measure the resistance again as described in step 4 repeat step 5 until the value becomes normal.
- 7 Return the volume bracket to its original position, connect the wiring connector, and return the FRP front casing to its original position.



## Replacing the Bumper

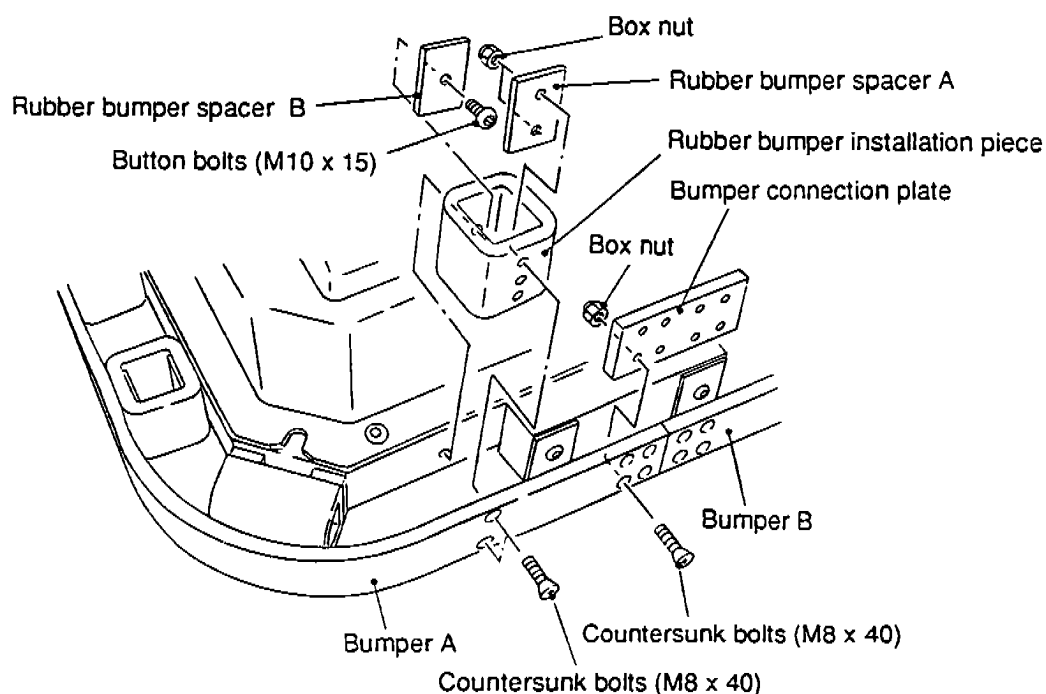


To prevent the cart from moving unexpectedly, make sure the cart's power switch and NFB (circuit breaker) are OFF before starting to replace the bumper.

Before starting work, check whether the bumper to be replace is bumper A (U-shaped bumper at the front or back of the cart) or bumper B (Straight bumper on the right or left of the cart).

### Removing the Bumper

- 1 Remove the cart's FRP seat, and turn OFF the power switch and NFB (circuit breaker).



- 2 Remove the countersunk bolts (A: 20 locations, B: 14 locations) which fasten the bumper (A or B) to the rubber bumper installation piece, and remove the rubber bumper spacer A.

**Remark** The bumper is secured using the countersunk bolts and box nuts. When loosening (tightening) the countersunk bolts, the box nuts should be held using a wrench.

- 3 Remove the bumper (A or B).

### Reinstalling the Bumper

Install the bumper by following the above procedure in the reverse order (step 3 to step 1).



### Replacing the Rubber Bumper Installation Piece

- 1** Remove the cart's bumper as described above in "Removing the Bumper".
- 2** Remove the button bolts (one location each) which fasten the rubber bumper installation piece, and remove the rubber bumper spacer B and the rubber bumper installation piece.
- 3** Fasten a new rubber bumper installation piece and the rubber bumper spacer B removed in step **2** with the button bolts.
- 4** Install the bumper to the cart.

## Preparing for Maintenance of the Chassis



1. When tilting the cart and returning it to its normal position, be sure the work is performed by at least 3 people to ensure safety.
2. Be sure to wear a helmet and safety shoes just in case of accident and the body gets caught between the cart and floor.

When inspecting the drive shaft, auxiliary caster and rolling caster located underneath the cart, the cart should be tilted as described below.

- 1 Remove the cart's FRP seat, and turn OFF the power switch and NFB (circuit breaker).
- 2 Remove the batteries from the cart as described in "Replacing the Batteries" (pg. 34).
- 3 Prepare a base that is 300 to 400 mm high and that can support the weight of the cart.

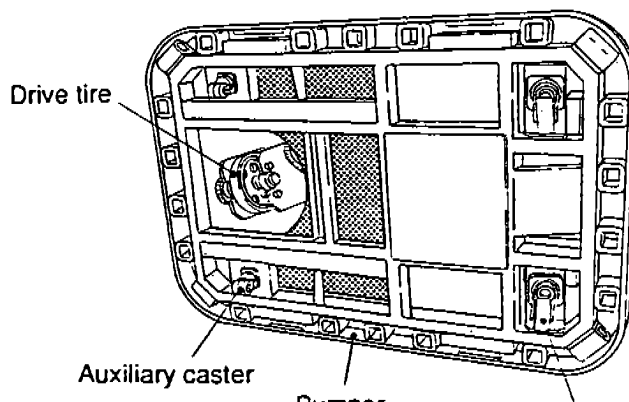
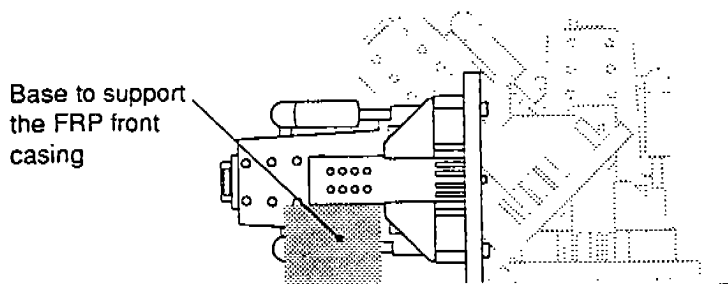
**Remarks**

- This base is for supporting the tilted cart.
- The weight of the cart is about 250 kg.

- 4 Place the base prepared in step 3 on the side of the FRP front casing of the cart.
- 5 On the opposite side of the base, at least three workers should lift on the bumper and slowly tilt the cart so that the cockpit section is supported by the base.

### Return the Cart to Its Normal Position

At least three workers should tilt the cart back to its normal position. Place the batteries on the cart and turn ON the NFB (circuit breaker)



## Replacing the Drive Tire

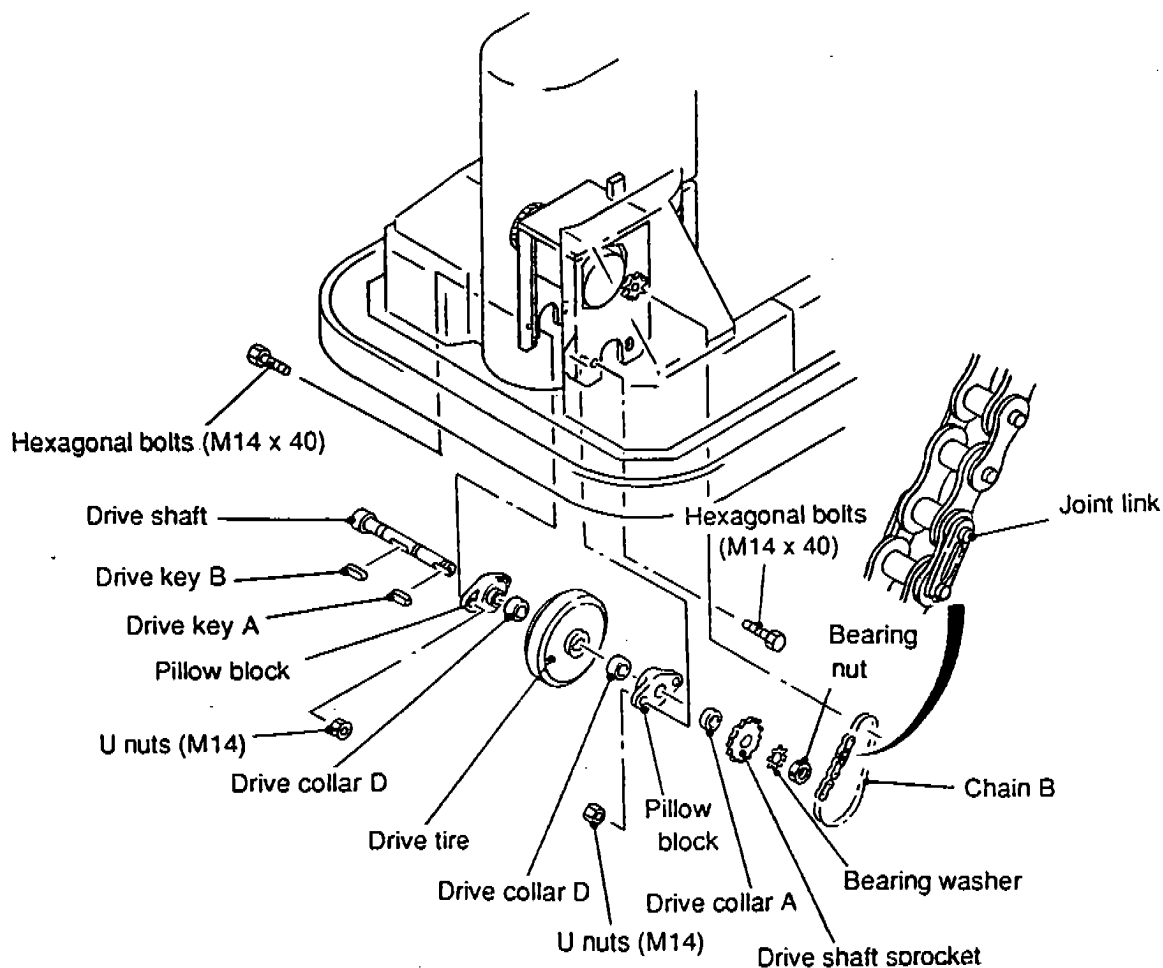


1. When tilting the cart and returning it to its normal position, be sure the work is performed by at least 3 people to ensure safety.
2. Be sure to wear a helmet and safety shoes just in case of accident and the body gets caught between the cart and floor.

As the rubber portion of the drive tire wears away, the number of times that the auxiliary caster touches the floor increases. When the condition is such that the auxiliary caster comes in contact with the floor, the drive tire should be replaced

**Remark** When a new drive tire is used, the auxiliary caster is about 7.5 mm off of the floor.

- 1 Tilt the cart as described in "Preparing for Maintenance of the Chassis" (pg. 48).
- 2 Remove the joint link of chain B, and remove chain B from the drive shaft sprocket.



- 3 Remove the hexagonal bolts (4 locations) and U nuts (4 locations) which the pillow blocks (two locations) of the drive shaft.

**Remark** The pillow blocks are secured with the hexagonal bolts and U nuts. When loosening (tightening) the hexagonal bolts, hold the U nuts with a wrench.

- 4** Remove the drive tire together with the pillow blocks.
- 5** Open the teeth of the bearing washer and remove the bearing nut and bearing washer.
- 6** Remove the drive shaft sprocket and drive key A from the drive shaft.
- 7** Remove the set screws (4 locations) (M6 x 7) which fasten the drive shaft to the pillow blocks.
- 8** Remove the pillow block on the screw side of the drive shaft, and drive collars A and D from the drive shaft.
- 9** Remove the drive tire from the drive shaft. If drive key B is still remaining on the drive tire side, then remove it, and place it in the key groove on the drive shaft.
- 10** Put a new drive tire in the drive ASSY by following the above procedure in reverse, and return the cart to its normal position.

### Maintaining the Auxiliary Caster

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1. When tilting the cart and returning it to its normal position, be sure the work is performed by at least 3 people to ensure safety.
  2. Be sure to wear a helmet and safety shoes just in case of accident and the body gets caught between the cart and floor.
- 

- 1** Tilt the cart as described in "Preparing for Maintenance of the Chassis" (pg. 48).
- 2** Check whether or not the rubber on the auxiliary caster is extremely worn. If it is worn, replace the auxiliary caster by following steps **7** and **8**.
- 3** Check whether or not the rubber of the auxiliary caster is cracked or deformed. If it is not normal, replace the auxiliary caster by following steps **7** and **8**.
- 4** Check whether or not the auxiliary caster is rickety or deformed. If it is not normal, replace the auxiliary caster by following steps **7** and **8**.
- 5** Check whether or not the bearing on the auxiliary caster is properly greased. If not, apply the entire bearing with all-purpose, medium-grade grease No. 2.
- 6** Check whether or not there is anything in the rotating portion of the auxiliary caster. If there is something in the rotating section, remove it.
- 7** If the auxiliary caster is to be replaced, remove the button bolts (4 locations) (M8 x 20) which hold the auxiliary caster. If the caster is not to be replaced go to step **9**.
- 8** Secure the new auxiliary caster with button bolts applied with lock tight (medium strength 242).
- 9** Return the tilted cart to its normal position.





## Maintaining the Rolling Caster



1. When tilting the cart and returning it to its normal position, be sure the work is performed by at least 3 people to ensure safety.
2. Be sure to wear a helmet and safety shoes just in case of accident and the body gets caught between the cart and floor.

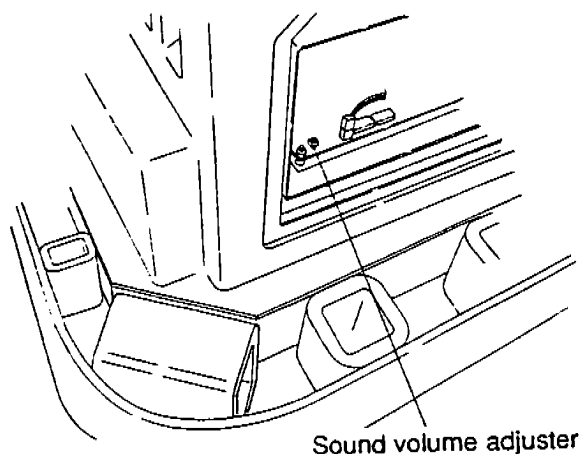
- 1 Tilt the cart as described in "Preparing for Maintenance of the Chassis" (pg. 48).
- 2 Check whether or not the rubber on the rolling caster is 5 mm or more. If it is less than 5 mm, replace the wheel by following step [7].  
**Remark** The thickness of the rubber on a new wheel is about 10 mm.
- 3 Check whether or not the rubber of the rolling caster is cracked or deformed. If it is not normal, replace the wheel by following step [7].
- 4 Check whether or not the rolling caster is rickety or deformed. If it is not normal, replace the rolling caster by following steps [8] and [9].
- 5 Check whether or not the bearing on the rolling caster is properly greased. If not, apply the entire bearing with all-purpose, medium-grade grease No. 2.
- 6 Check whether or not there is anything in the rotating portion of the rolling caster. If there is something in the rotating section, remove it.
- 7 If the wheel of the rolling caster is to be replaced, remove the wheel shaft which holds the wheel, and replace the wheel with a new one. When doing this, if the wheel shaft is cracked or deformed, replace the rolling caster by following step [8]. If the wheel is not to be replaced, go to step [10].
- 8 If the rolling caster is to be replaced, remove the hexagonal bolt (4 locations) (M10 x 25) which fasten the rolling caster. If the rolling caster is not to be replaced, go to step [10].
- 9 Fasten the new rolling caster with hexagonal bolts that are applied with lock tight (medium strength 242).
- 10 Return the tilted cart to its normal position.

## Adjusting the Volume of the Cart Sounds



To prevent the cart from moving unexpectedly, be sure to turn OFF the NFB (circuit breaker) before starting to adjust the cart sound.

- 1 Remove the cart's FRP seat, and turn OFF the NFB (circuit breaker).
- 2 Remove the button bolts (10 locations) which hold the FRP maintenance door on the back of the cart, and remove the FRP maintenance door.
- 3 Turn ON the cart's power switch.
- 4 Press the service switch and reset switch on the switch panel at the same time. The test mode is set.
- 5 Press the turbo button and start button on the instrument panel simultaneously two times. Stage No. 3 of the test mode is set, and the engines idling sound can be heard from the speaker.
- 6 Use a slotted screwdriver to turn the sound volume adjuster on the main PC board and adjust the sound to a suitable level.  
**Remark** When the sound volume adjuster is turned clockwise, the volume increases.
- 7 Return the FRP maintenance door.
- 8 Turn ON the NFB (circuit breaker) and return the FRP seat.





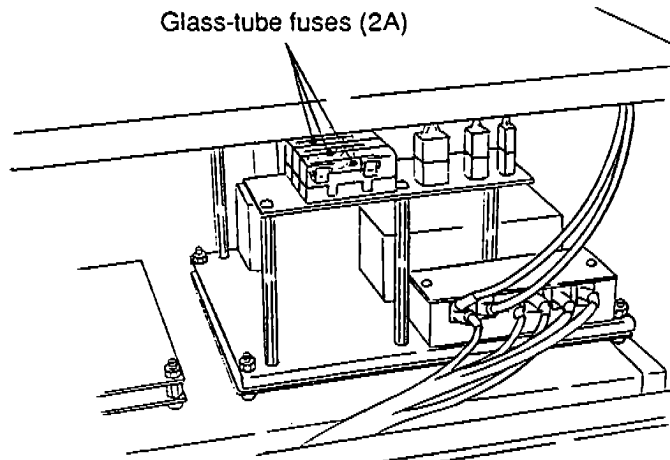
## Replacing the Cart Fuses



To prevent damage to the electrical circuits and to prevent accidents due to electric shock, be sure to turn OFF the cart's power switch before starting to replace the fuse.

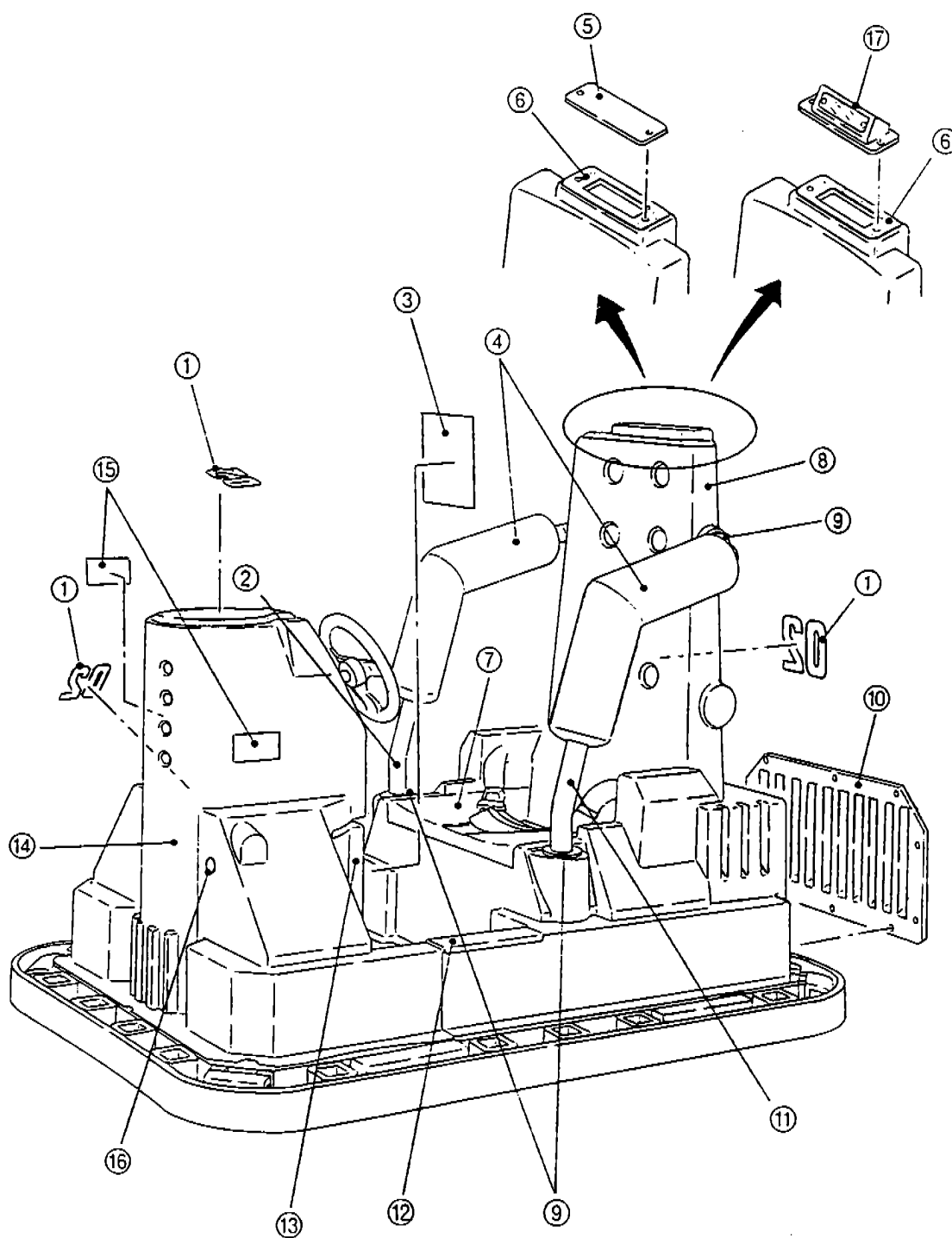
When the power switch is turned ON and the display on the instrument panel does not change, try turning ON the power switch again. If the display still does not change, replace the fuse (2A).

- 1 Remove the cart's FRP seat, and turn OFF the power switch.
- 2 Remove the button bolts (10 locations) which secure the FRP maintenance door on the back of the cart, and remove the FRP maintenance door.
- 3 Replace the glass-tube fuses (2A) (3 fuses) on the power-supply PC board with new ones.
- 4 Install the FRP maintenance door, turn ON the power switch and return the FRP seat.





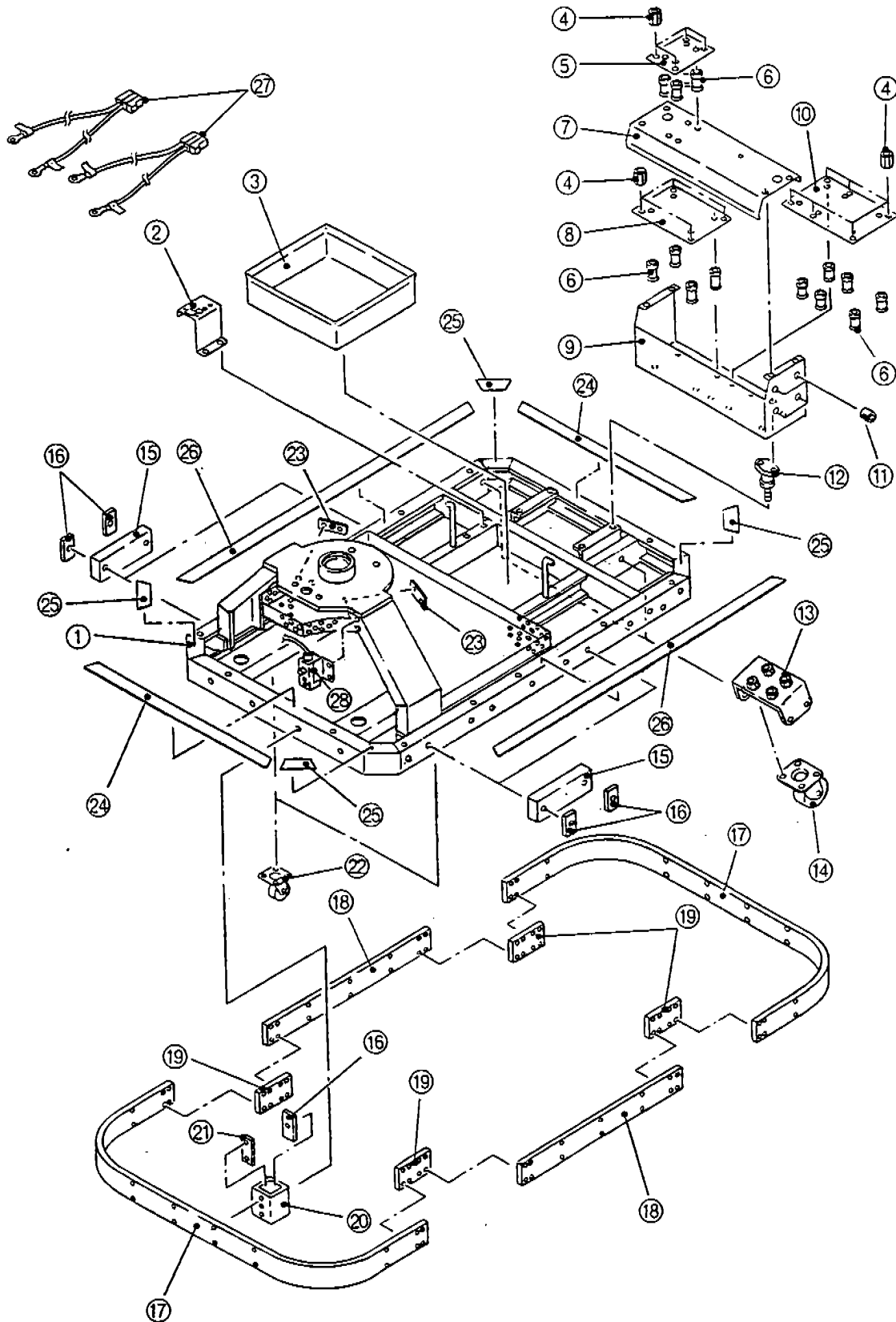
## FRP ASSY



No.	Name	Quantity	[Model No.]	[Part No.]
1	Number stickers	1set		332-626
2	Pipe guard R	1		332-618
3	Warning sticker	1		332-624
4	Protector	2		332-619
5	Cover plate	1		332-634
6	Rubber link plate	1		332-633
7	FRP seat	1		332-614
8	FRP rear casing	1		332-613
9	Pipe installation plate A	4		332-623
10	FRP maintenance door	1		332-615
11	Pipe guard L	1		332-617
12	Step guard	2		332-620
13	FRP front cover	1		332-612
14	FRP front casing	1		332-611
15	Logo sticker	3		332-625
16	Hole cap	1		305-364
17	Link ASSY (Linked system accessory)	1		—



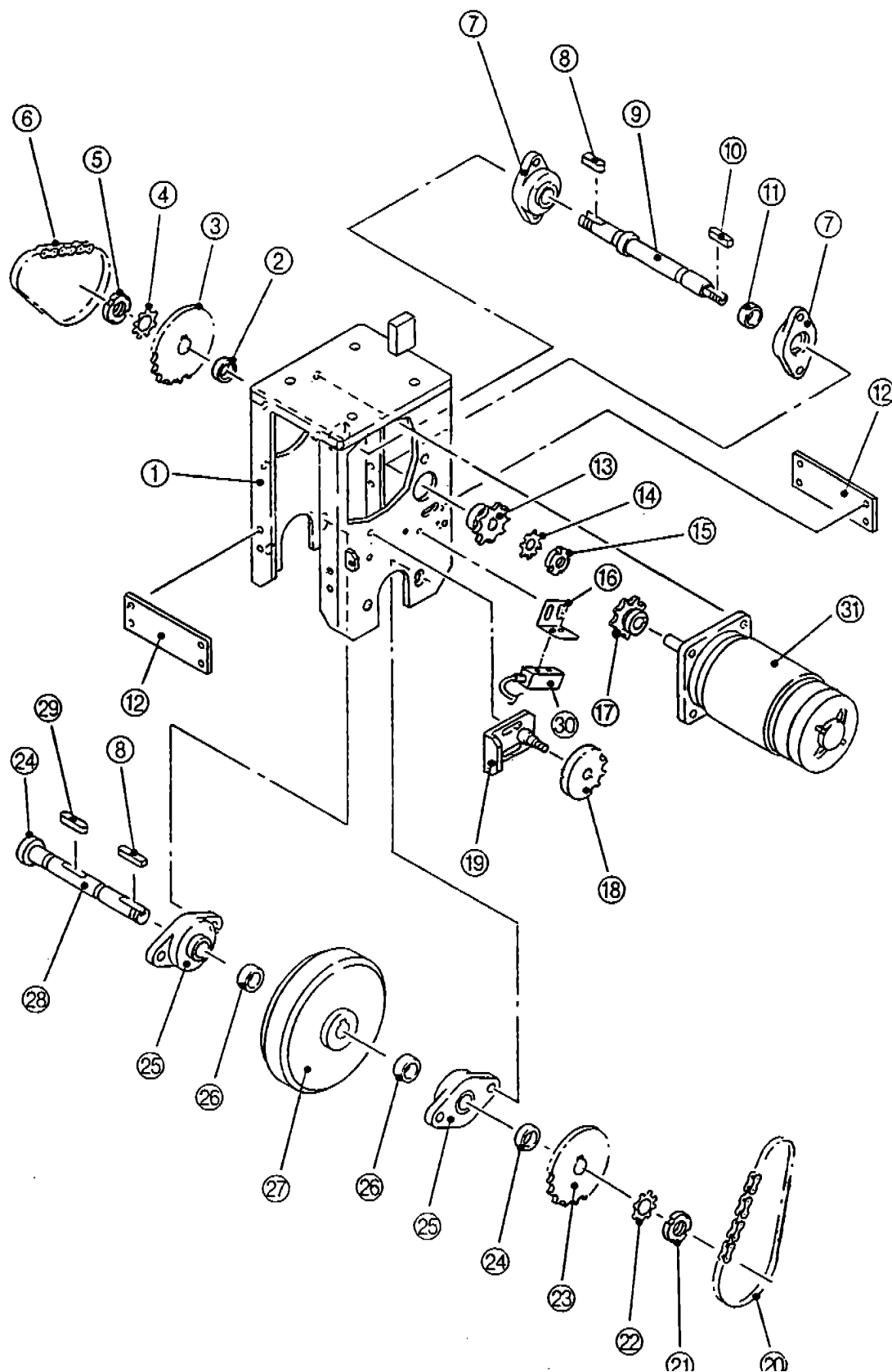
## Chassis ASSY





No.	Name	Quantity	[Model No.]	[Part No.]
1	Chassis	1		332-111
2	Switch panel	1		332-125
3	Battery holder	1		332-123
4	Supporter	14	BSU-510 (Kameda)	106-023
5	Mounting plate C	1		332-815
6	Vibration-proof rubber support A	14	KA-12 (Kurashiki)	106-021
7	Box cover	1		332-812
8	Mounting plate B	1		332-814
9	Box	1		332-811
10	Mounting plate A	1		332-813
11	Clamp tight	4	KT-5 (Kurashiki)	235-029
12	Vibration-proof rubber support B	4	KB-30 (Kurashiki)	106-022
13	Caster installation plate	2		332-112
14	Rolling caster	2	RJM-100 (Gold caster)	102-062
15	Rubber bumper support	4		332-119
16	Rubber bumper spacer B	26		332-118
17	Bumper A	2		332-113
18	Bumper B	2		332-114
19	Bumper connection plate	4		332-115
20	Rubber bumper installation fixture	22		332-116
21	Rubber bumper spacer A	22		332-117
22	Auxiliary caster	2	550P-N2-50 (Hammer caster)	258-181
23	Stopper plate	2		332-126
24	Rubber chassis plate B	2		332-128
25	Rubber chassis plate C	2		332-129
26	Rubber chassis plate A	2		332-127
27	Battery cable	2		332-001
28	Lap sensor cable ASSY	1		332-131

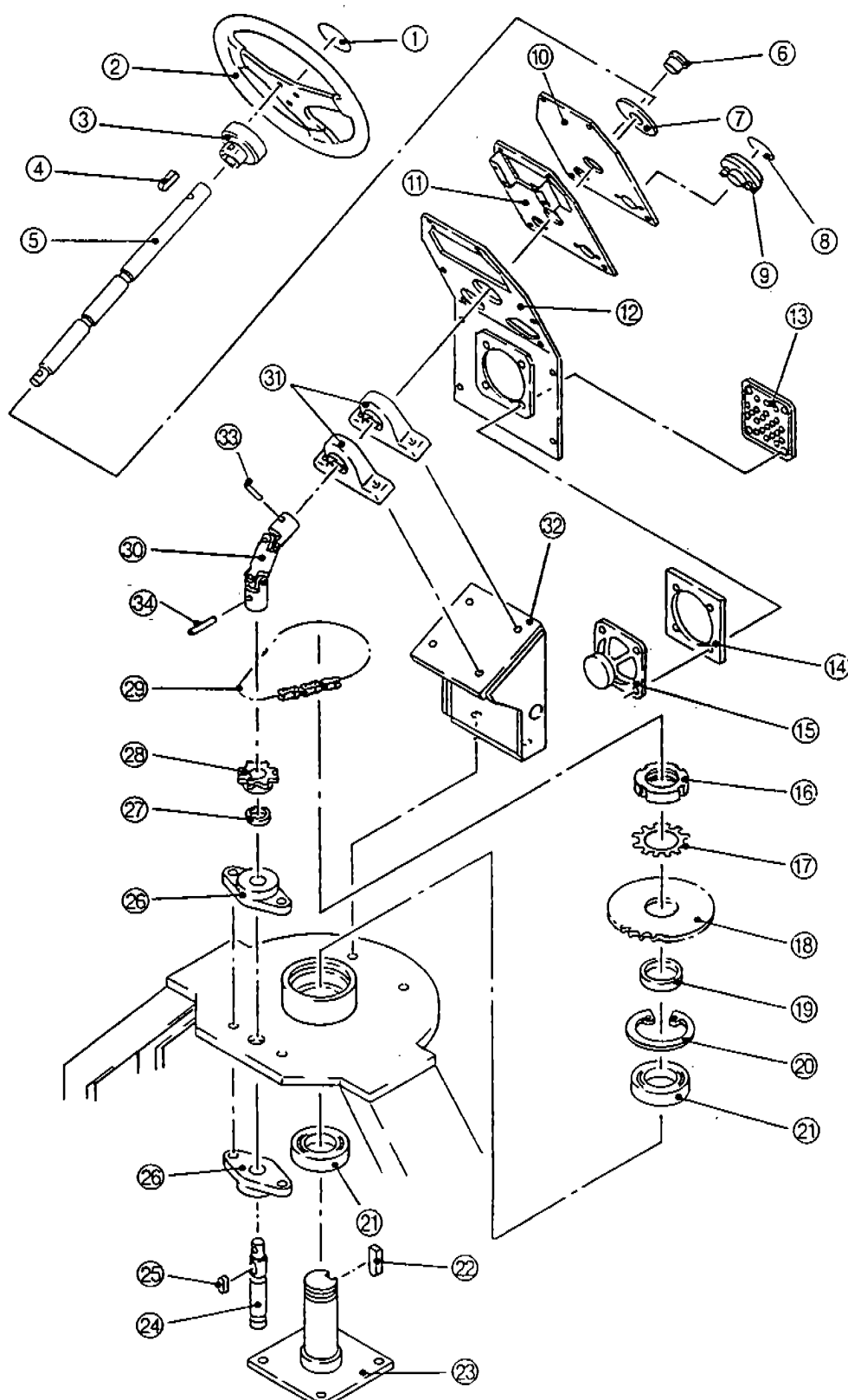
## Drive ASSY





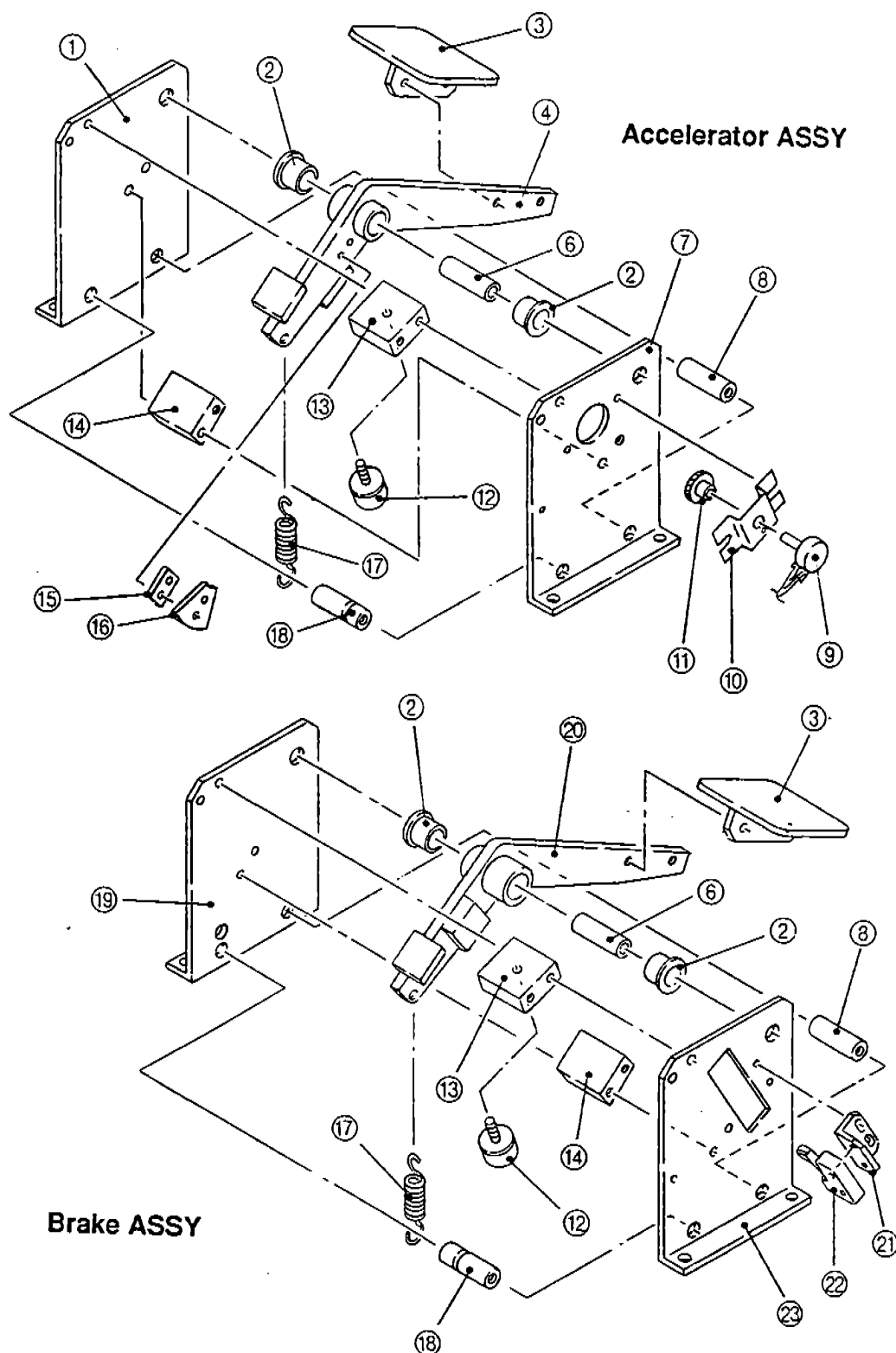
No.	Name	Quantity	[Model No.]	[Part No.]
1	Drive frame	1		332-211
2	Drive collar C	1		332-221
3	Sub-shaft sprocket B	1		332-215
4	Bearing washer	1	AW 04	—
5	Bearing nut	1	AN 04	—
6	Chain A	27links	RS40 (JL+OL)	108-011
7	Pillow block	2	UCFL 204	103-020
8	Drive key A	1		332-226
9	Drive sub-shaft	1		332-218
10	Drive key C	1		332-228
11	Drive collar B	1		332-220
12	Drive frame fixture	2		332-225
13	Sub-shaft sprocket A	1		332-214
14	Bearing washer	1	AW 03	—
15	Bearing nut	1	AN 03	—
16	Sensor bracket	1		332-212
17	Motor sprocket	1		332-213
18	Idler	1	SIS 417	107-021
19	Idler bracket	1		332-223
20	Chain B	44 links	RS40(JL)	108-012
21	Bearing nut	1	AN 05	—
22	Bearing washer	1	AW 05	—
23	Drive shaft sprocket	1		332-216
24	Drive collar A	2		332-219
25	Pillow block	2	UCFL 205	103-013
26	Drive collar D	2		332-222
27	Drive tire	1	EMG400LC	102-063
28	Drive shaft	1		332-217
29	Drive key B	1		332-227
30	Speed sensor cable ASSY	1		332-130
31	Motor	1	P8-4025E	005-159

## Steering Wheel ASSY



No.	Name	Quantity	[Model No.]	[Part No.]
1	Name plate	1		229-025
2	Steering wheel	1		229-024
3	Steering wheel boss	1		332-314
4	Steering wheel shaft key	1		332-321
5	Steering wheel shaft	1		332-312
6	Lighted push button	1	IPB-SC-RL-R	000-094
7	Steering wheel shaft plate	1		332-712
8	Turbo sticker	1		331-117
9	Lighted push button	1	IPB-LC-BL-N	000-240
10	Acrylic instrument panel cover	1		332-713
11	Instrument panel	1		332-711
12	FRP instrument panel base	1		332-616
13	Speaker cover	1		332-621
14	Spacer	1		332-622
15	Speaker	1	8Ω10W (Electric parts)	006-079
16	Bearing nut	1	AN 09	—
17	Bearing washer	1	AW 09	—
18	Drive sprocket	1		332-317
19	Steering wheel collar B	1		332-316
20	Hole retaining ring	1	C 85	—
21	Bearing	2	6209 ZZ	103-029
22	Main shaft key	1		332-322
23	Main shaft	1		332-319
24	Steering wheel sub-shaft	1		332-313
25	Steering wheel sub-shaft key	1		332-321
26	Pillow block	2	UCFL 204	103-020
27	Steering wheel collar A	1		332-315
28	Steering wheel sprocket	1		332-318
29	Chain	44 links	RS40(JL)	108-012
30	Universal joint	1	HJD 16	107-019
31	Pillow block	2	UCP 204	103-038
32	Steering wheel bracket	1		332-311
33	Shear pin	1	for universal joint HJD16	107-018
34	Strong pin	1	for universal joint HJD16	107-020

## Accelerator/Brake ASSY



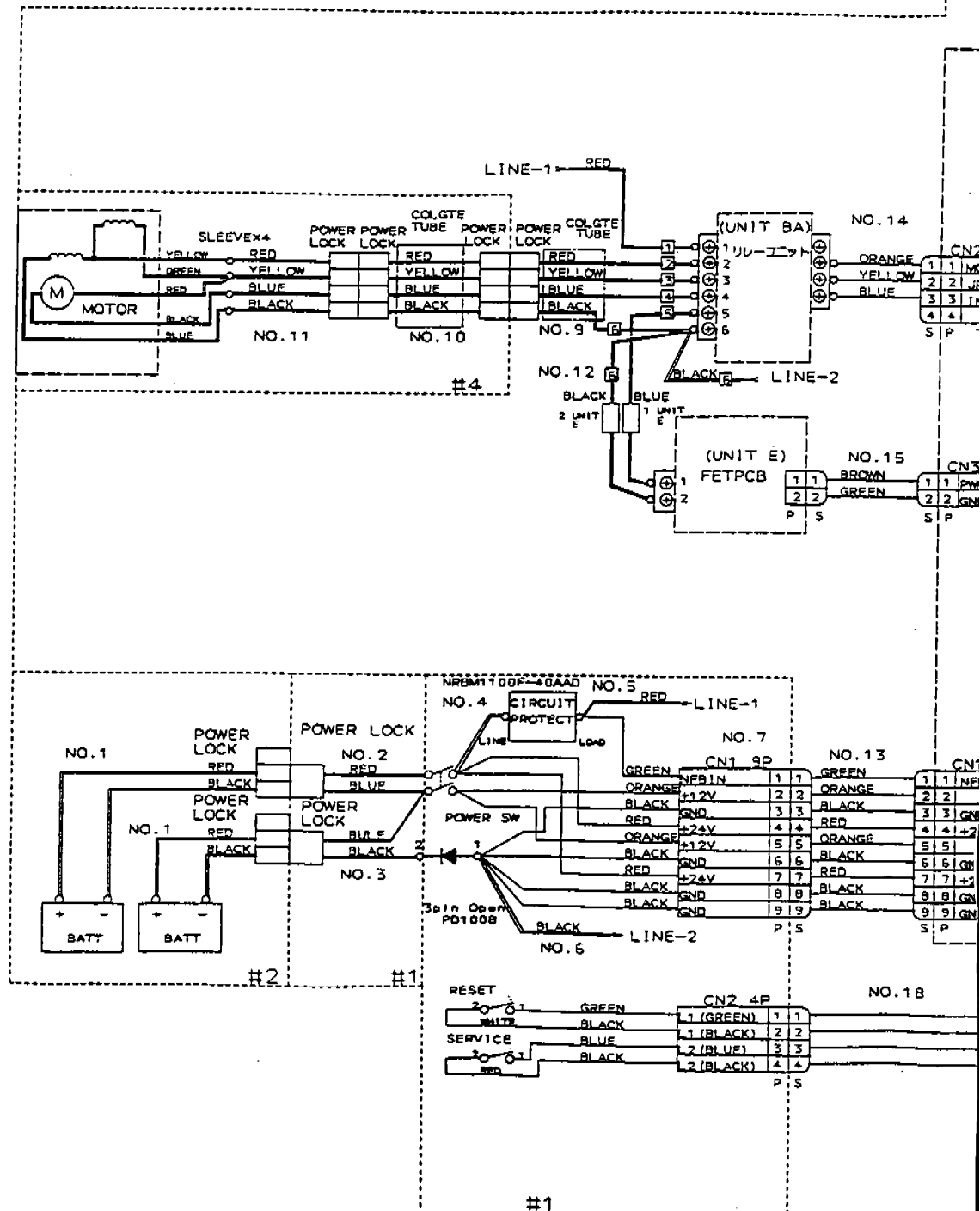
No.	Name	Quantity	[Model No.]	[Part No.]
1	Accelerator casing A	1		332-411
2	Bushing	4	BM1812F26FB (NDC)	104-038
3	Pedal	2		332-414
4	Accelerator arm	1		332-413
5	—	—	—	—
6	Collar A	2		332-420
7	Accelerator casing B	1		332-412
8	Collar B	2		332-421
9	Volume	1	E5KΩ (Electric parts)	008-006
10	Volume bracket	1		332-417
11	Gear	1	S75B 26B+0306	108-010
12	Rubber stopper	2		332-424
13	Stopper A	2		332-415
14	Stopper B	2		332-416
15	Spacer	1		332-423
16	Spur gear	1		332-418
17	Accelerator, brake spring	2		332-425
18	Collar C	2		332-422
19	Brake casing A	1		332-511
20	Brake arm	1		332-513
21	Limit bracket	1		332-514
22	Limit switch	1	Z-15GW2-B (OMRON)	000-239
23	Brake casing B	1		332-512

# WIRING DIAGRAM

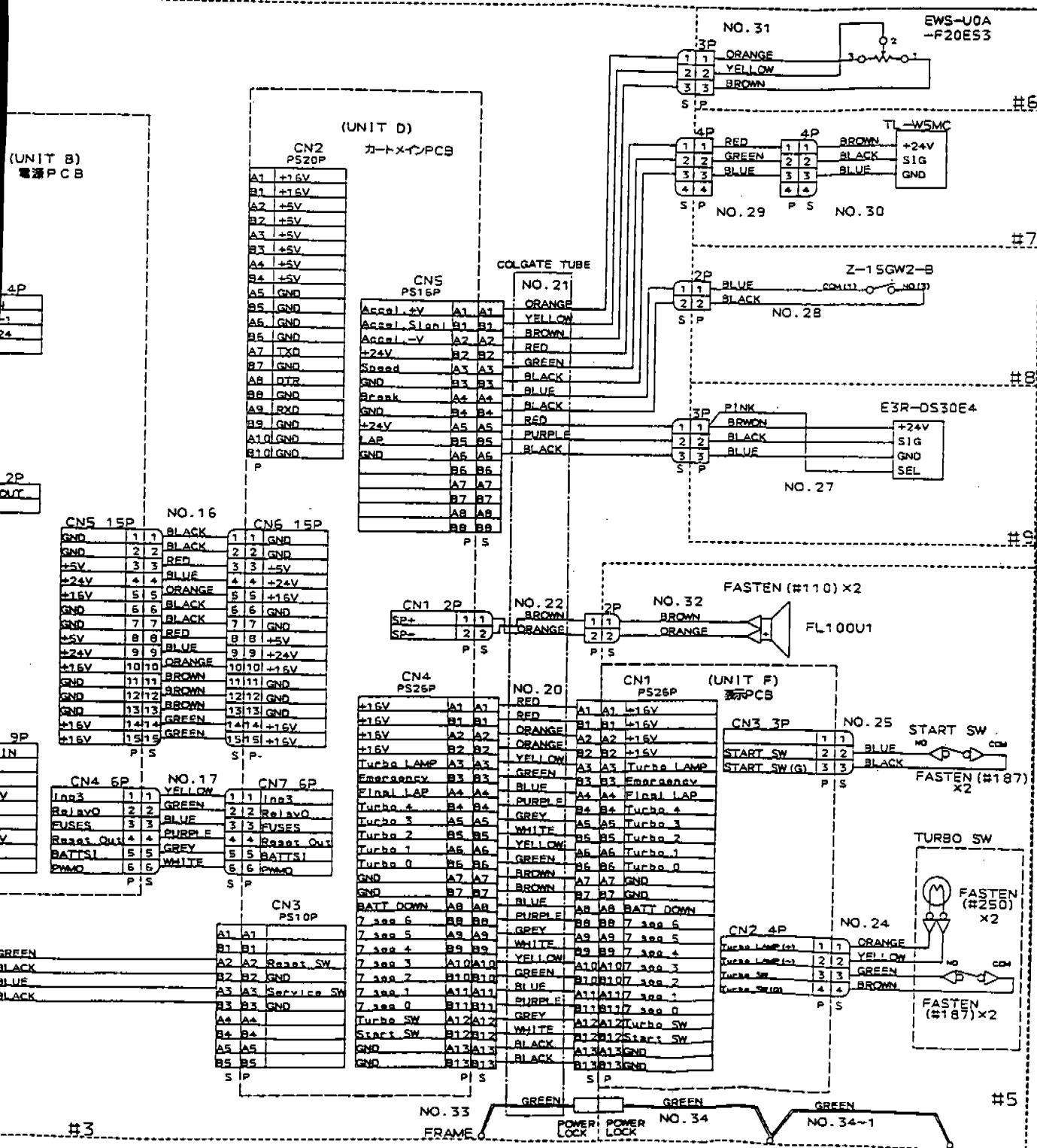
Cart

- AWG12 cable
- AWG22 cable
- |   |   |
|---|---|
| 1 | 1 |
| 2 | 2 |

 AMP Mini Universal  
MATENLOK Connectors



- #1: SWITCH PLATE ASSY
- #2: BATTERY ASSY
- #3: CONTROL BOX ASSY
- #4: MOTOR ASSY
- #5: INPANE ASSY
- #6: AC
- #7: SP
- #8: BR
- #9: LA



CELE VR ASSY  
 REED SENSOR ASSY  
 TAKE SWITCH ASSY  
 P SENSOR ASSY