

# *Repair Manual*

**SUPPLEMENT**



## **TOYOTA TIARA**

Rear Suspension & Parking Brake

**TOYOTA MOTOR SALES CO., LTD.**

## FOREWORD

This Rear Suspension and Parking Brake Repair Manual is published as a supplement to the Toyota Tiara Repair Manual.

In connection with the main operation and repair of the vehicle components outside of the Rear Suspension and Parking Brake the Toyota Tiara Repair Manual should be referred to.

This manual should be kept available on hand with the other Repair Manual for the conveniences of the personnel.

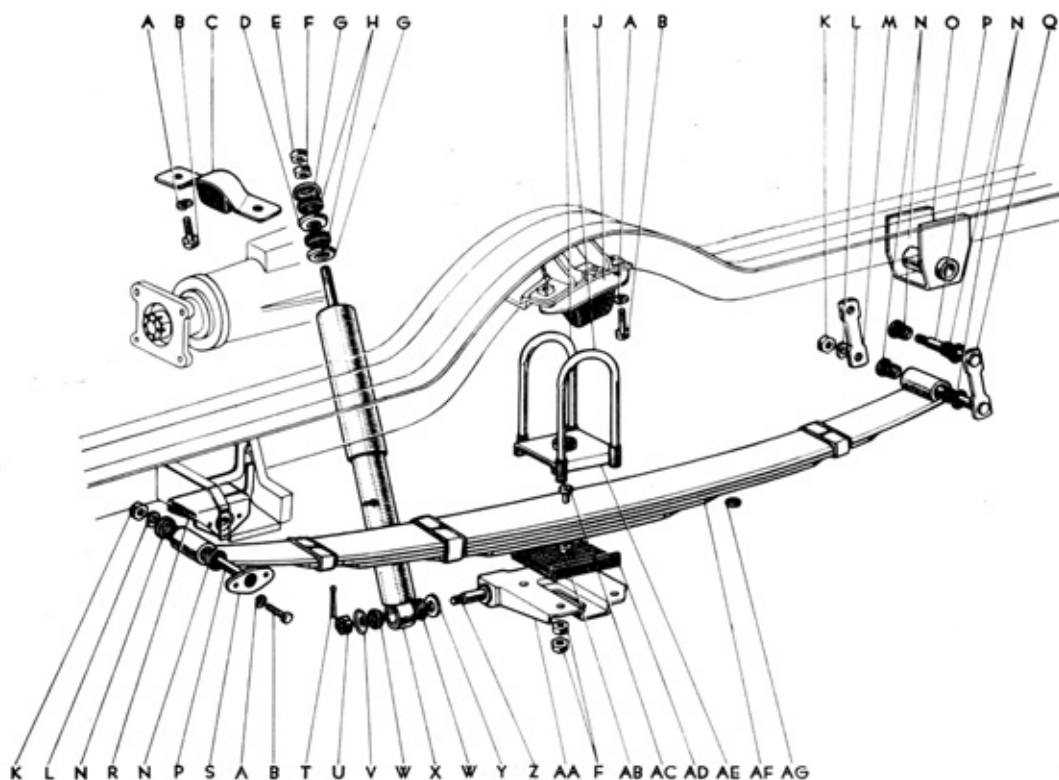


Fig. 1

- |  |   |
|--|---|
| A Spring washer                                | R Rear spring front hanger              |
| B Bolt   | S Spring support end pin                |
| C Differential carrier bumper complete         | T Cotter pin                            |
| D Shock absorber cushion rubber inner retainer | U Nut                                   |
| E Nut  | V Shock absorber pivot pin outer washer |
| F Nut  | W Shock absorber pivot bushing          |
| G Shock absorber cushion rubber outer retainer | X Rear shock absorber assembly          |
| H Shock absorber rubber cushion                | Y Shock absorber pivot pin inner washer |
| I Rear spring "U" bolt                         | Z Rear shock absorber lower pivot pin   |
| J Rear spring bumper complete                  | AA "U" bolt LH seat complete            |
| K Nut  | AB Nut                                  |
| L Spring washer                                | AC Rear spring center bolt              |
| M Rear spring shackle                          | AD Spring rubber pad                    |
| N Spring eye bushing                           | AE Spring rubber pad retainer           |
| O Rear spring rear hanger complete             | AF Rear spring complete                 |
| P Shackle pin                                  | AG Silencer                             |
| Q Rear spring shackle plate                    |   |

## Rear Spring—Removal

1. Raise the rear end of the car from floor with a hoist or jack, and place the frame on the stands.

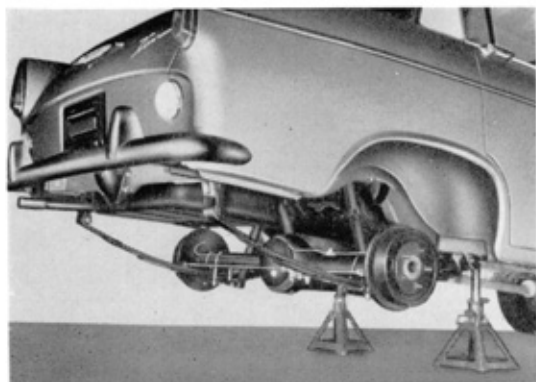


Fig. 2 Place Frame on stand

2. Disconnect lower end of shock absorber from the shock absorber lower pivot pin.



Fig. 3 Remove shock absorber

3. Remove the "U" bolt nuts, "U" bolts and "U" bolt seats, and the rear axle assembly with a jack, leave the rear axle assembly as is.

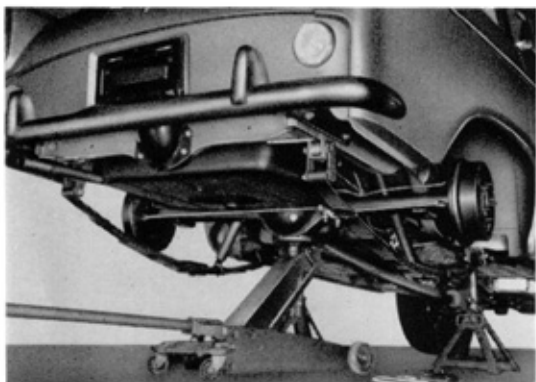


Fig. 4 Raise rear axle assembly

4. Remove the eye bolt, then remove the front end of the spring from the front hanger.



Fig. 5 Remove eye bolt

5. Remove the shackle from the rear hanger and the spring, then remove the spring from the car.

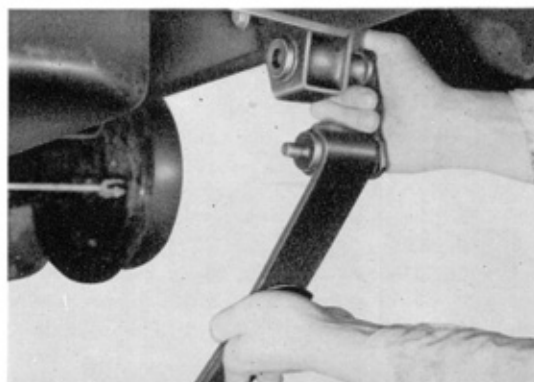


Fig. 6 Remove rear spring

## Rear Spring—Inspection & Repair

1. Check the rubber bushings, shackles, front and rear hangers, spring rubber pads and retainers for wear or damage. Replace the part(s) if necessary.
2. Check for broken spring leaves. Inspect spring leaf spacers between the leaves, and replace them if worn. The spring leaves must be clean, dry and free of oil before new spacers are installed.
3. Check "U" bolt for wear or damaged threads. Check the spring seats for distortion.

### Rear Spring—Installation

1. Install the spring eye bushing into the front end of the spring eye, then install the spring into the front hanger with eye bolt, and nut. Do not tighten the eye bolt nut firmly at this moment.

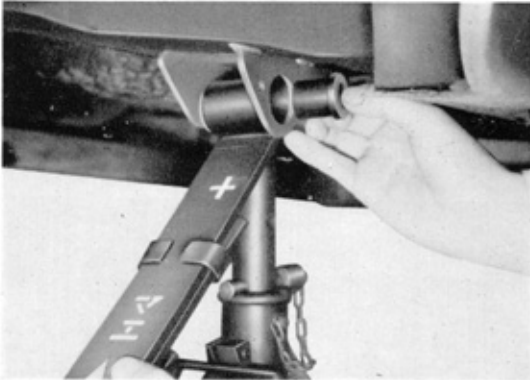


Fig. 7 Install eye bushing

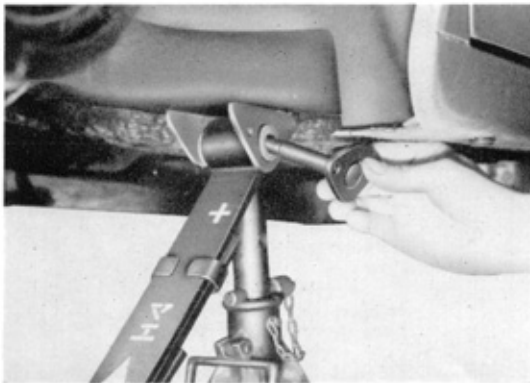


Fig. 8 Install eye bolt

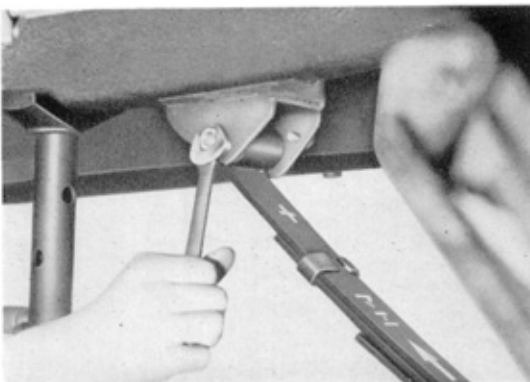


Fig. 9 Tighten eye bolt nut

2. Install the spring eye bushing into the rear end of spring eye and rear hanger

bracket, then install the shackle pin, and nut.

Do not tighten the shackle pin nut firmly at this moment.

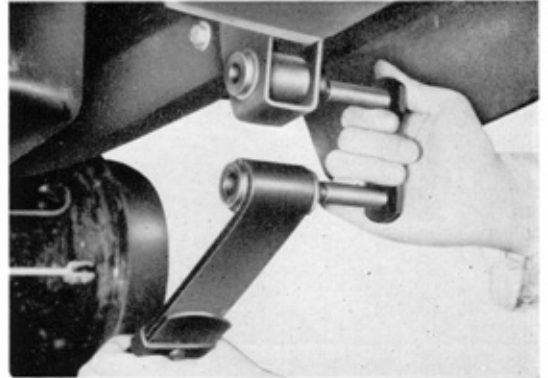


Fig. 10 Install shackle pin

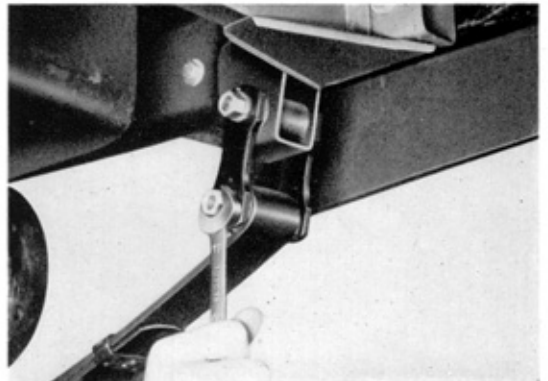


Fig. 11 Tighten shackle pin nut

3. Lower the rear axle assembly on the rear spring, then assemble the rear axle assembly to the rear spring with "U" bolts and "U" bolt nuts.

Torque Spec. "U" bolt nut ...3~4 m·kg  
(22~30 ft·lb)

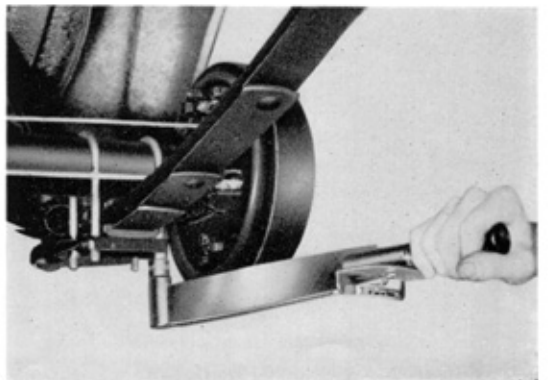


Fig. 12 Tighten "U" bolt nut

4. Install the lower end of the shock absorber to the shock absorber lower pivot pin then insert a new cotter pin into the nut.



Fig. 13 Install shock absorber

5. Lower the rear end of the car and rock the rear end of the car, then tighten the eye bolt nut and the shackle pin nuts as specified below.

**Torque Spec.**

Eye Bolt Nut...2.8~4.2m·kg(20~30 ft·lb)

Shackle Pin Nut .....2.8~4.2 m·kg  
(20~30 ft·lb)

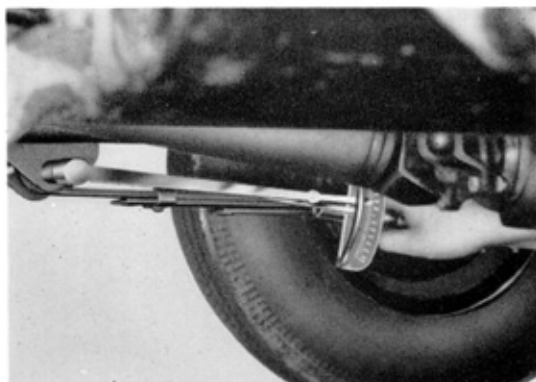


Fig. 14 Tighten eye bolt nut

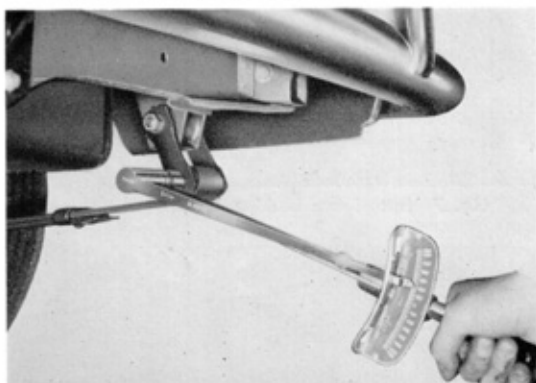


Fig. 15 Tighten shackle pin nut

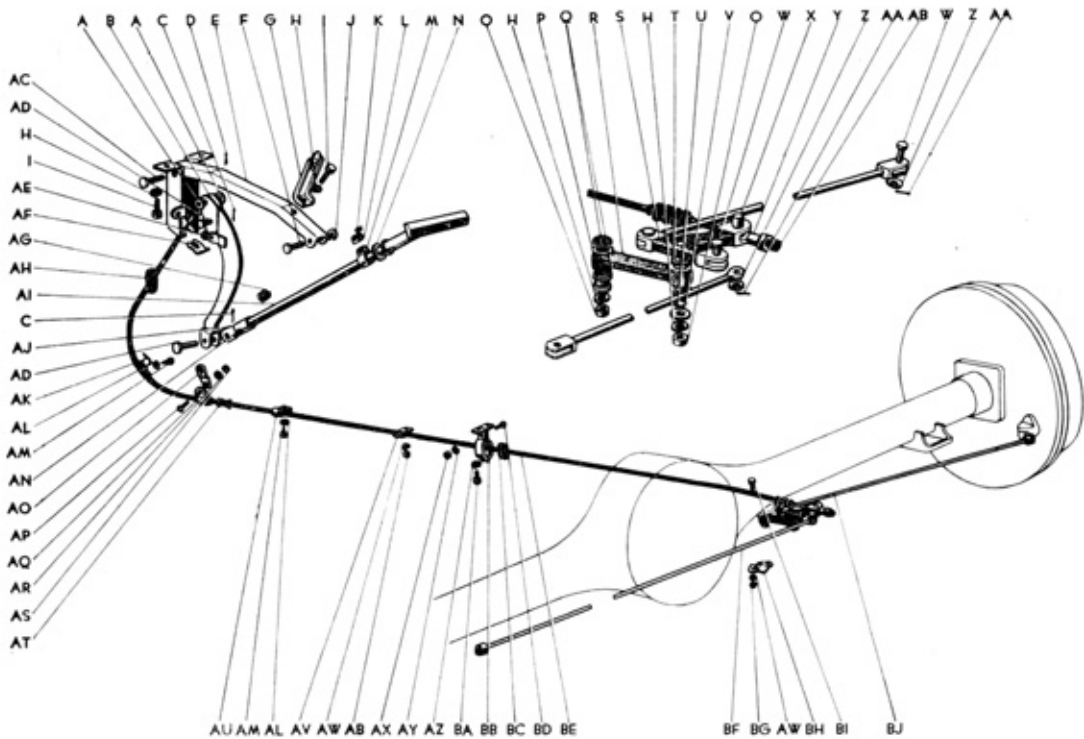


Fig. 16

- |    |  |    |  |
|----|--|----|--|
| A  | Parking brake lever pin spacer               | AG | Parking brake plunger spring                       |
| B  | Parking brake lever complete                 | AH | Parking brake flexible tube grommet                |
| C  | Cotter pin                                   | AI | Parking brake plunger complete                     |
| D  | Cotter pin                                   | AJ | Parking brake plunger sleeve                       |
| E  | Parking brake plunger complete               | AK | Parking brake flexible tube & brake pipe           |
| F  | Parking brake latch pivot pin                | AL | Plate washer                                       |
| G  | Parking brake set plate                      | AM | Tapping screw                                      |
| H  | Spring washer                                | AN | Parking brake plunger pin                          |
| I  | Bolt   | AO | Parking brake flexible wire upper clamp            |
| J  | "C" washer                                   | AP | Screw  |
| K  | Parking brake latch plate                    | AQ | Parking brake flexible wire lower clamp            |
| L  | Parking brake latch                          | AR | Spring washer                                      |
| M  | Parking brake plunger guide                  | AS | Nut  |
| N  | Parking brake plunger washer                 | AT | Parking brake flexible wire lower clamp bushing    |
| O  | Nut  | AU | Parking brake flexible wire No.2 clamp             |
| P  | Parking brake bell crank link bushing washer | AV | Parking brake flexible tube rear clamp             |
| Q  | Parking brake bell crank link bushing        | AW | Spring washer                                      |
| R  | Parking brake bell crank link                | AX | Nut  |
| S  | Parking brake bell crank complete            | AY | Spring washer                                      |
| T  | Bell crank pivot pin bushing                 | AZ | Spring washer                                      |
| U  | Bell crank pivot pin bushing dust cover      | BA | Bolt   |
| V  | Plate washer                                 | BB | Parking brake flexible tube support plate complete |
| W  | Parking brake pull rod pin                   | BC | Parking brake flexible tube support bushing        |
| X  | Parking brake flexible wire pivot pin        | BD | Screw  |
| Y  | Parking brake flexible wire adjusting nut    | BE | Parking brake flexible wire assembly               |
| Z  | Parking brake pull rod washer                | BF | Parking brake pull LH rod complete                 |
| AA | Cotter pin                                   | BG | Nut  |
| AB | Nut  | BH | Parking brake flexible tube complete               |
| AC | Parking brake lever pin                      | BI | Bolt   |
| AD | Flexible wire pivot pin                      | BJ | Parking brake pull RH rod complete                 |
| AE | Parking brake lever rubber cushion           |    |  |
| AF | Parking brake flexible clip                  |    |  |

## Parking Brake—Removal

1. Raise the car from floor with a hoist or jack, then remove the wheels.

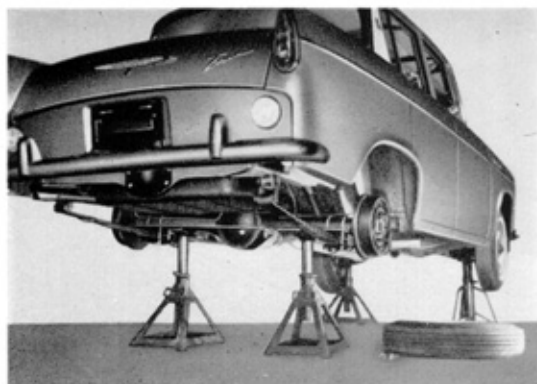


Fig. 17 Place car on stand

2. Remove the flexible wire pivot pin, clip, clamps, and parking brake flexible wire adjusting nut, then remove the flexible wire assembly.

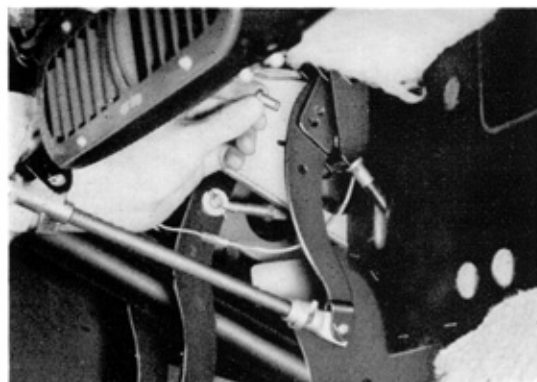


Fig. 18 Remove pivot pin



Fig. 19 Remove clip

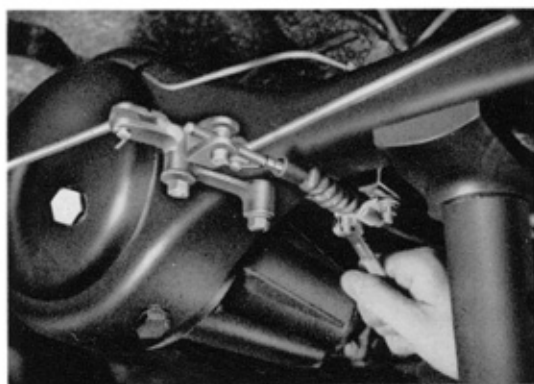


Fig. 20 Remove clamp

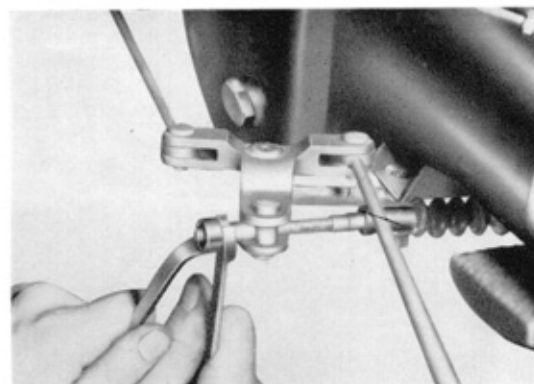


Fig. 21 Remove adjusting nut

3. Remove the parking brake pull rod pin at parking brake equalizer side and at parking brake extension lever side, then remove the parking brake pull rod.

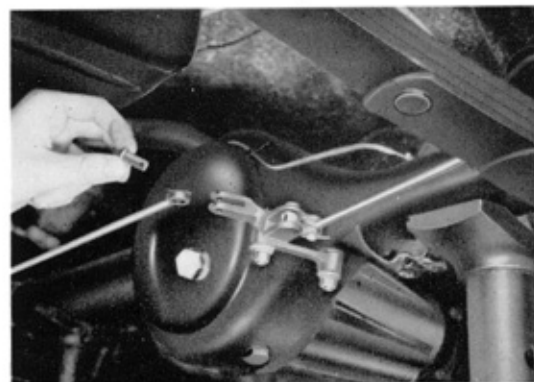


Fig. 22 Remove pull rod pin



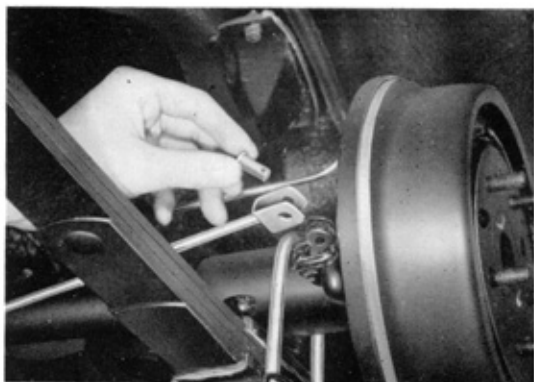


Fig. 23 Remove pull rod pin

4. Remove the parking brake equalizer.



Fig. 24 Remove equalizer

5. Remove the drum, brake shoes and parking brake extension lever bracket set bolts, then remove the parking brake extension lever bracket.

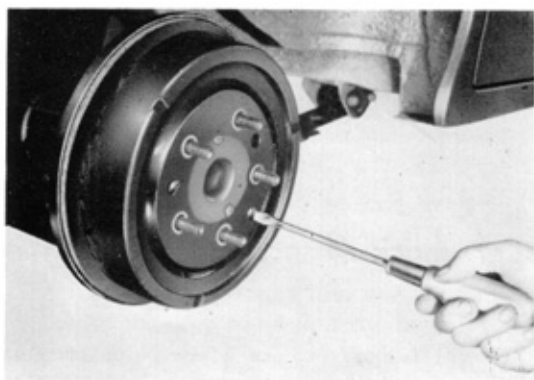


Fig. 25 Remove brake drum set screws

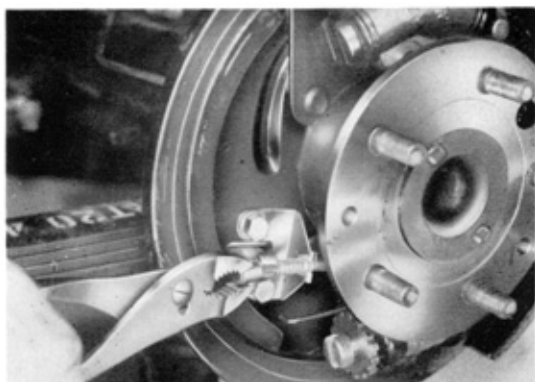


Fig. 26 Remove rear brake wire

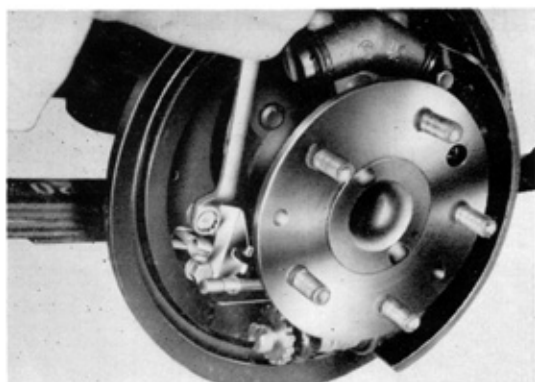


Fig. 27 Remove lever bracket bolts

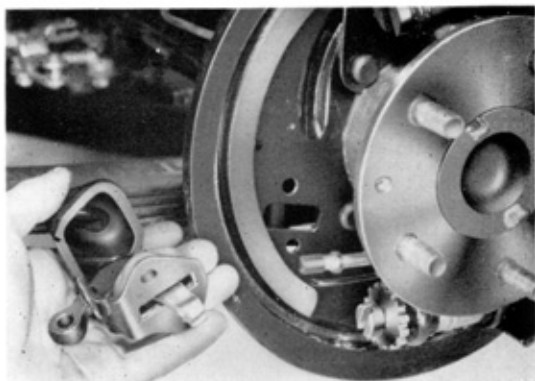


Fig. 28 Remove extension lever bracket

### Inspection

1. Inspect the parking brake flexible wire for damage or wear. Replace the parking brake flexible wire if necessary.
2. Inspect the parking brake indicator lamp switch for smooth operation. Replace if necessary.

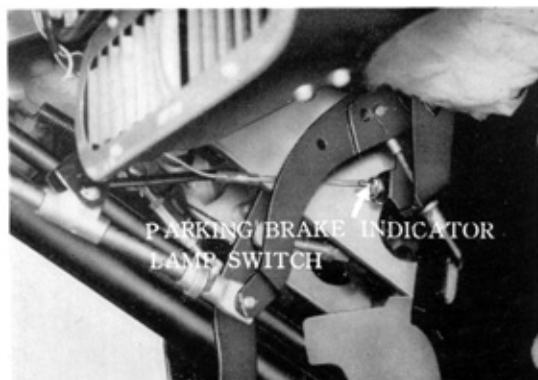


Fig. 29

### Parking Brake—Adjustment

Parking brake adjustment can be performed with the parking brake flexible wire adjusting nut.

The brake plunger should be from 6 to 9 notches.

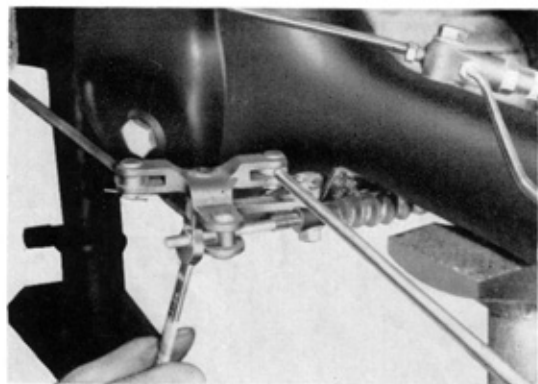


Fig. 30 Adjust parking brake

#### Note:

1. Before parking brake adjustment, foot brake should be adjusted correctly.
2. Brake shoe should return to its original position when parking brake plunger is fully released.

### Rear Shock Absorber—Removal

1. Remove the cotter pin and nut from the pivot pin on the "U" bolt seat at the lower end of the shock absorber and disconnect lower eye from the pivot pin.

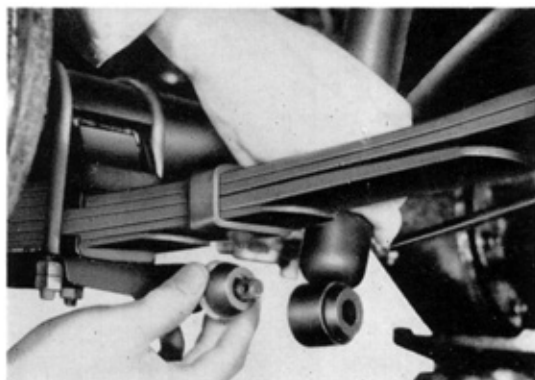


Fig. 31 Remove lower end of shock absorber

2. Remove the rear seat cushion and back cushion from the car, then remove the upper end of the shock absorber from rear absorber cross sill.

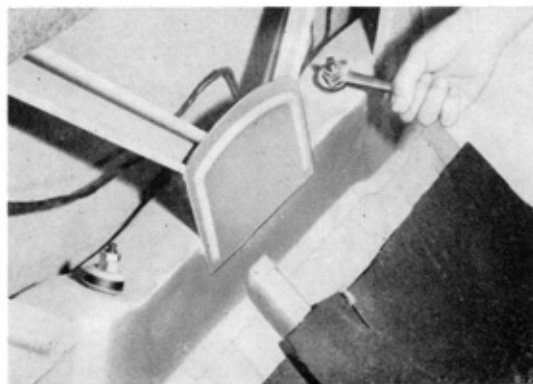


Fig. 32 Remove upper end of shock absorber

### Inspection

1. Inspect bushing for damage or wear. Replace the bushing if necessary.
2. Pull and push the shock absorber quickly with the hands, if no resistance the shock absorber is defective and must be replaced.
3. Replace the shock absorber if noisy or leaking oil.

### Rear Shock Absorber—Installation

Install the rear shock absorber following the removal procedure in reverse order.

**Note:** Always replace with new cotter pins.

Prepared by

TOYOTA MOTOR SALER CO., LTD.

EXPORT-TECHNICAL DIVISION

HARUHI PLANT

Haruhi-mura, Nishikasugai-gun, Aichi Pref., Japan

1 9 6 3

PRINTED IN JAPAN

—Printed by Ishidataseisha printing Co., LTD.—

