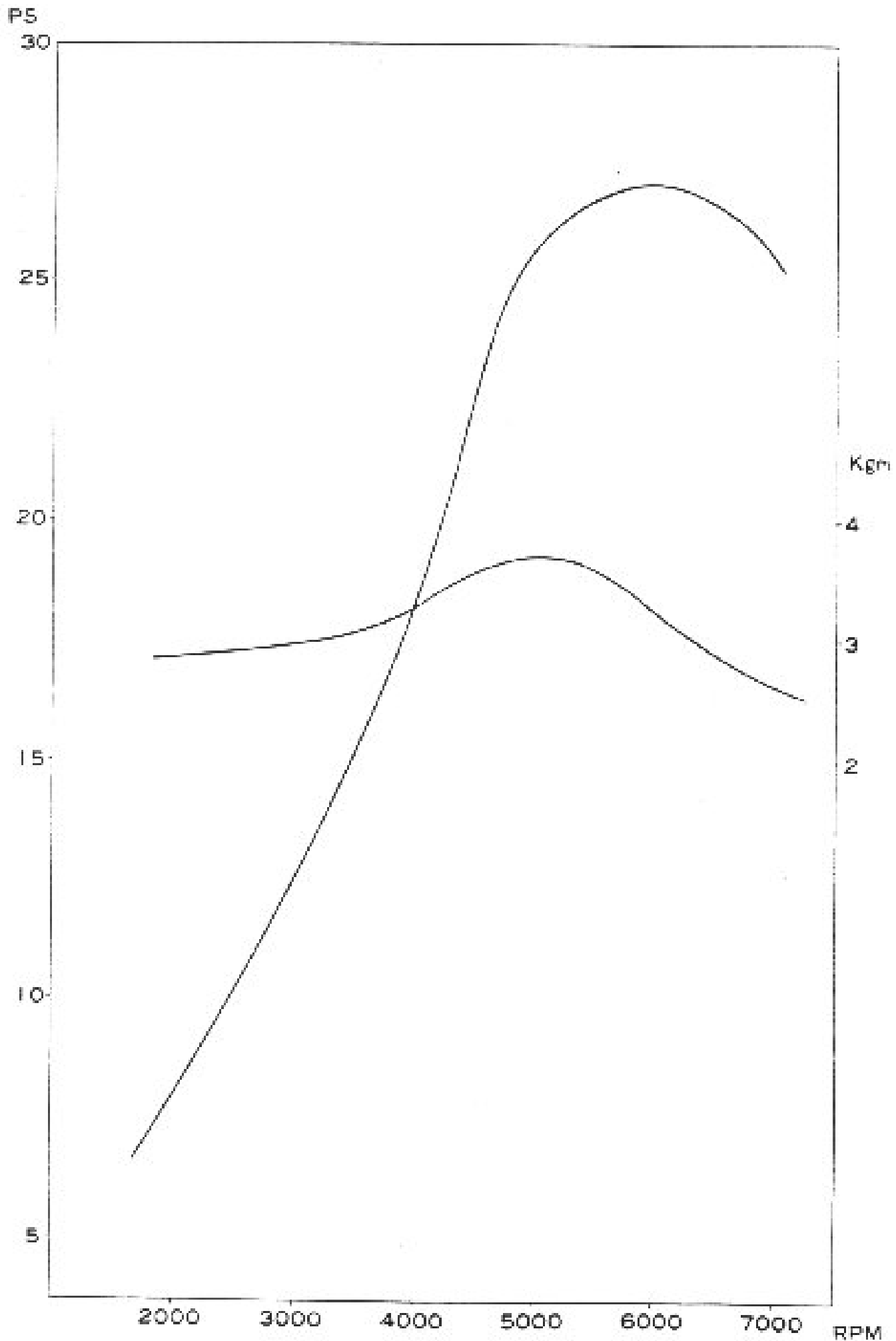


1-3. Engine performance curves



1-4. Vehicle performance curves

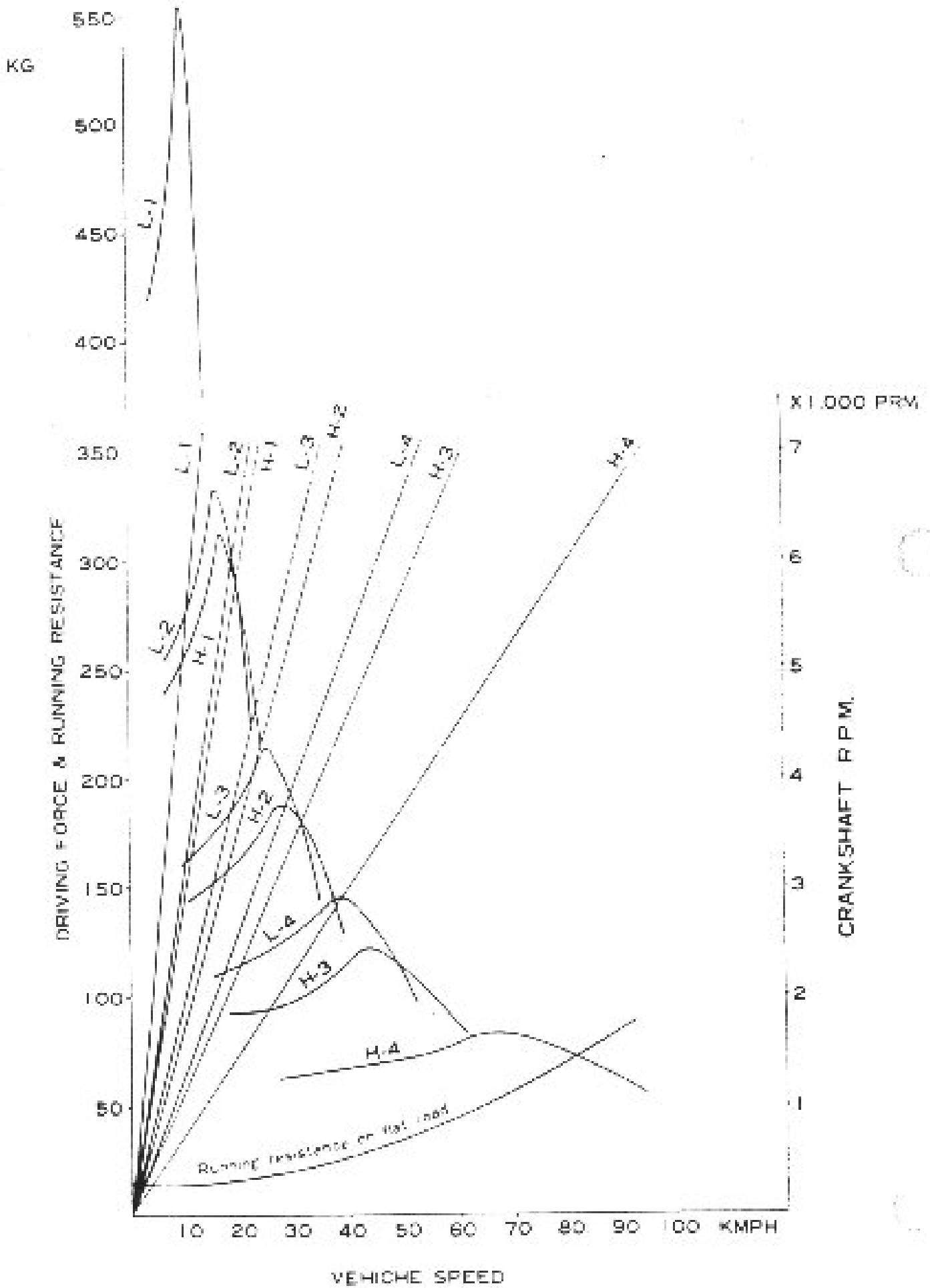


Fig. 1-5.

1-5. **Main specifications**

Type and model	Suzuki LJ10	
Vehicle weight	630 kg (1,388 lb)	
Seating capacity	2	
Maximum loading capacity	250 kg (551 lb)	
Gross vehicle weight	960 kg (2,116 lb)	
Overall length	2,995 mm (117.9 in)	
Overall width	1,295 mm (51.0 in)	
Overall height	1,670 mm (65.7 in)	
Internal size of cargo bed	Length	930 mm (36.6 in)
	Width	1,205 mm (47.4 in)
	Height	1,055 mm (41.5 in)
Distribution of load when not laden	Front wheels	325 kg (716 lb)
	Rear wheels	275 kg (606 lb)
Distribution of load when laden	Front wheels	365 kg (805 lb)
	Rear wheels	595 kg (1,312 lb)
Tread	Front wheels	1,090 mm (42.9 in)
	Rear wheels	1,100 mm (43.3 in)
Type	Bonnet	
Engine type	2 stroke, air-cooled gasoline engine	
Piston displacement	350 cc (21.9 cu in)	
Fuel	Gasoline	
Wheelbase	1,930 mm (76.0 in)	
Body rear overhang	520 mm (20.5 in)	
Body offset	55 mm (2.2 in)	
Maximum allowable inclination angle	Right	39°
	Left	39°
Tire size	Front wheels	6.00-16in-6PR
	Rear wheels	6.00-16in-6PR

\* The specifications subject to change without notice.

## 1-6. Detailed specifications

### Dimensions

---

Ground clearance	235 mm (9.25 in)
Clearance between deck floor and ground	610 mm (24.0 in)
Body front overhang (excluding bumper)	515 mm (20.3 in)
Body rear overhang (excluding bumper)	520 mm (20.5 in)
Center of gravity in height	595 mm (23.4 in)

---

### Performance

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Maximum speed	80 km/h (50 mph)
Climbing ability	27.5°
Minimum turning radius	4.4 m (14.4 ft)
Braking distance	7 m (23 ft)/35 km/h (22 mph)

---

### Engine

---

Type	2 stroke
Cooling method	Air-cooled
No. of cylinders and arrangement	2-cylinder in line
Combustion chamber type	Cone
Bore x stroke	61 x 61.5 mm (2.40 x 2.42 in)
Piston displacement	359 cc (21.9 cu in)
Compression ratio	5.8
Compression pressure	9.5 kg/cm <sup>2</sup> (135 lb/in <sup>2</sup> )/1,000 rpm
Maximum output PS/rpm	27 ps/6000 rpm
Maximum torque	3.7 kg·m (26.8 lb-ft)/5000 rpm
Engine dimensions (Length x width x height)	482 x 515 x 334 mm (19.0 x 20.3 x 13.1 in)
Engine transmission unit weight	50 kg (110 lb)
Position of engine	On front axle
Piston type	Slipper
Piston material	Alsil
Number of piston rings	3
Exhaust port timing (opens at)	68°
Exhaust port timing (close at)	69°
Starting system	Starter generator

---

### Ignition system

---

Ignition method	Battery
Ignition timing (BTDC)	16°
Distributor	Contact point type
Spark plug	NGK B-7HZ
Spark plug gap	0.6~0.7 mm (0.024~0.028 in)

---

### Fuel system

---

Carburetor	one, HITACHI HAA30
Air cleaner	Resin processed fibrous tissue
Fuel pump	Diaphragm
Fuel tank capacity	26 ltr (6.9/5.7 gal, US/Imp)

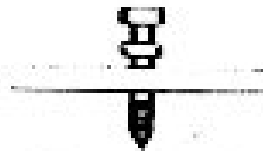
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## 1-7. Special tools

Special tools listed here are used to disassemble, assemble and perform other maintenance and service. These special tools make work easy which cannot be done simply with ordinary tools and also do not damage parts. It is recommended to provide these special tools as shop equipment.



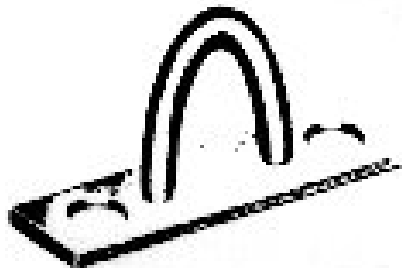
09922-75220  
Differential pre-load  
checking tool



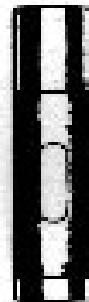
09923-05110  
Flywheel puller



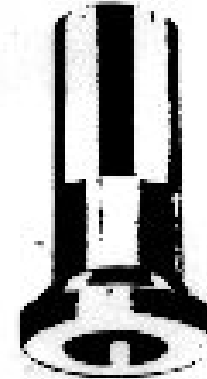
09922-85510  
Spring pin remover



09922-66010  
Rear axle shaft remover

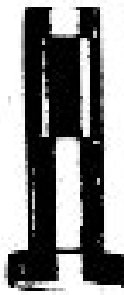


09913-80111  
Drive bevel pinion rear  
bearing inner race pressure  
fitting tool

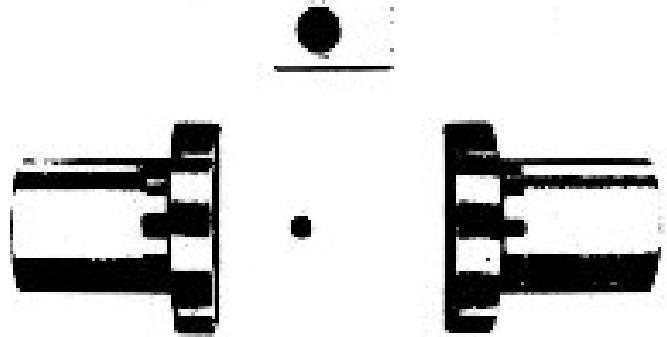


09913-76010  
Drive bevel pinion front  
bearing outer race pressure  
fitting tool

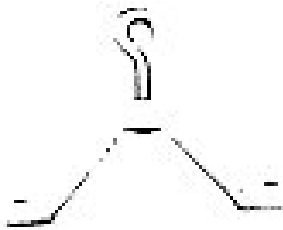
Fig. 1-6



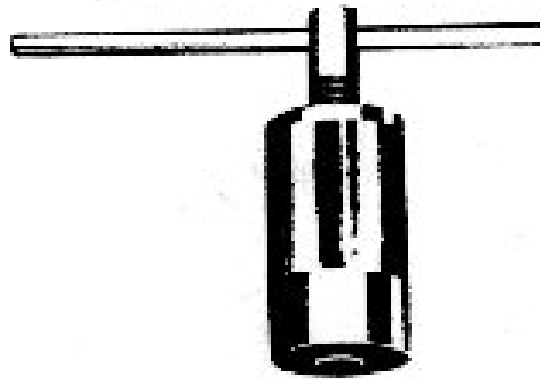
09913-85210  
Drive bevel pinion rear bearing  
race pressure fitting tool



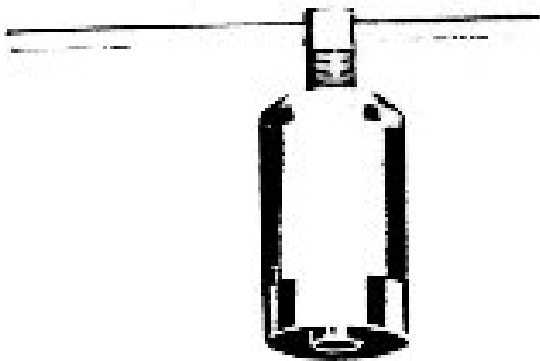
09922-76010  
Drive bevel pinion  
shim adjusting tool



09943-25511  
Front wheel hub remover



09927-55210  
Front shaft remover



09927-65127  
Transfer gear input  
shaft remover

Fig. 1-3.

## CHAPTER 2. REMOVAL AND INSTALLATION OF ENGINE AND TRANSMISSION

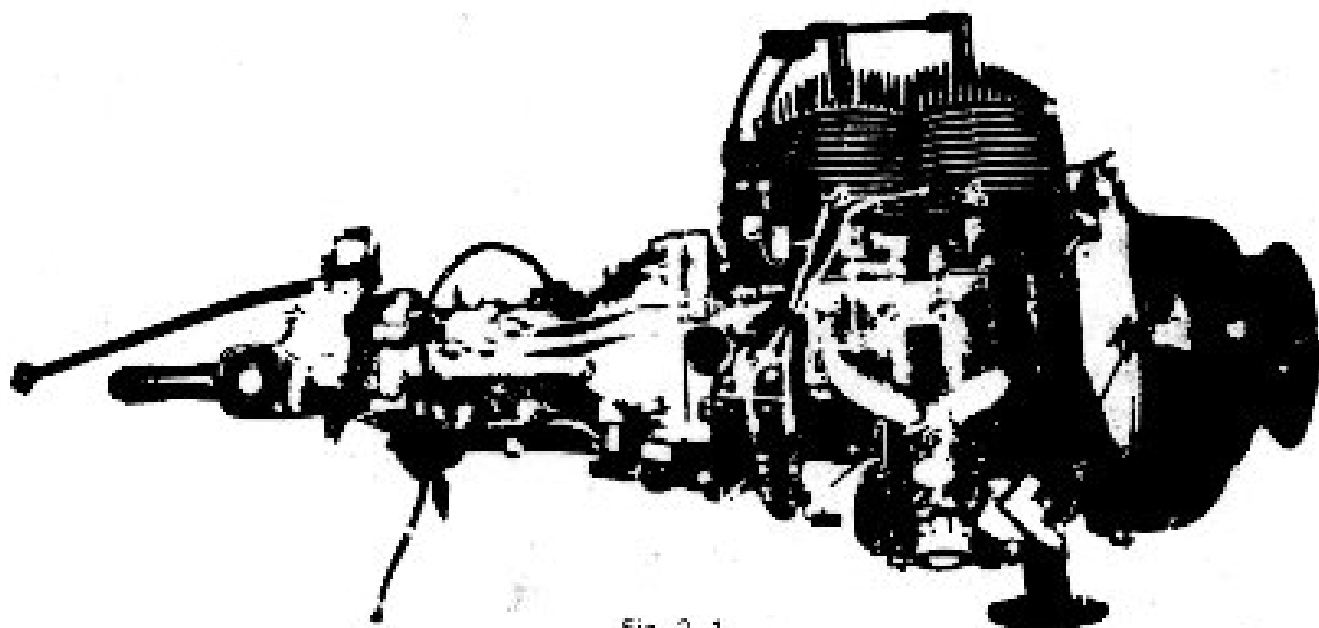


Fig. 2-1.

### 2-1. General description

The model LJ10 is a 2-cycle air-cooled 2-cylinder reed valve engine featuring a sturdy construction, toughness and a long service life and is identical in design to the engine installed on the Suzuki Carry model L40.

The engine incorporates an aluminum cylinder block which is high in cooling efficiency to withstand severe operating conditions. The transmission is also identical in design to the unit employed in the model L40 except for the gear control mechanism.

The transmission has synchronized 4 forward gears and 1 reverse gear which are remotely controlled through a single gearshift rod. The gearshift lever is positioned on the center of the floor. The engine is supported on the front axle and the transmission unit is coupled with the transfer unit on the center part of the chassis by means of the propeller shaft.

The drive torque is carried from the transfer unit to the front and rear wheels by means of the propeller shafts.

The engine and transmission disassembly and reassembly procedures are omitted as they are basically equal to the engine and transmission disassembly and reassembly procedures for the engine of the model L40. The following paragraphs deal with the removal and installation procedures for the engine and transmission assembly.

### 2-2. Removal and installation

Removal and installation of the engine and transmission assembly becomes necessary only when servicing or replacing the crankshaft or when overhauling the transmission unit. The following paragraph introduces the procedure for removing the engine and transmission units independently as it is considered to be the easiest way of service operation:

#### 2-2-1. Removal and installation of engine assembly

- 1) Take out the four(4) screws fixing the engine hood hinges to the body and remove the engine hood.
- 2) Take out the six(6) 6mm bolts and remove the front grille.

- 3) Disconnect the fuel hose at the fuel pump and fasten the loose end of the fuel hose to the body (fuel tank side) to prevent leakage of fuel.
- 4) Disconnect the carburetor air pipe, choke cable and accelerator cable.
- 5) Disconnect the solenoid lead at the positive (+) terminal of the ignition coil.
- 6) Disconnect the engine oil hose at the intake port of the oil pump and fasten the loose end of the hose to the body to prevent leakage of oil from the oil tank.
- 7) Disconnect the starter motor and generator connections at the voltage regulator (installed on the dashboard in the cabin), withdraw the cords to the engine compartment and remove the cable clamps.
- 8) Disconnect the distributor negative lead (-) at the ignition coil terminal.
- 9) Pull out the high tension cord from the ignition coil.
- 10) Disconnect the exhaust flexible pipe at the exhaust manifold flange.
- 11) Take out the four (4) 10mm nuts fastening the engine crankcase with the transmission case.
- 12) Check to make sure that all the cables and wires are disconnected.
- 13) Remove the front engine mounting member from the engine mount rubber.

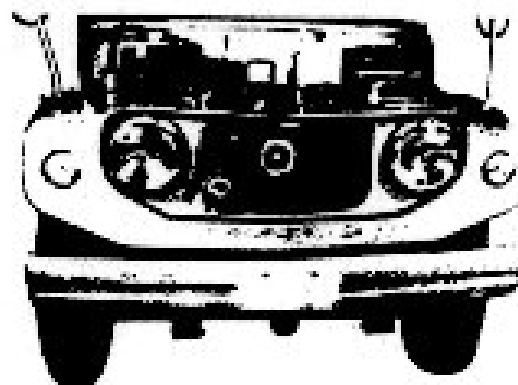


Fig. 2-2.

**Note.** Leaving the engine mounting rubbers on the body side will facilitate removal of the engine assembly. However, installing the engine mounting rubbers on the front engine mounting member will facilitate operations when installing the engine assembly in position.

- 14) Move the engine forward until it separates from the studs fastening the transmission case to the engine crankcase and then lift the engine off the position. The engine can be removed easily by hoisting with a chain hoist with a rope hooked to the engine unit.
  - Where the service operations are limited to the engine overhauling and removal of the transmission case is unnecessary, the front end of the transmission case may be held in horizontal position with a rope or a jack so that the transmission rear mounting rubbers are relieved of undue stress.

### 2-2-2. Removal and installation of transmission gearbox

- 1) Remove the engine assembly by following the removal procedures outlined in the foregoing paragraphs.
- 2) Disconnect the lead wires from the back-up light switch.
- 3) Disconnect the clutch wire at the clutch release lever.
- 4) Disconnect the gearshift rod at the gear control lever.
- 5) Work away the rubber boot covering the propeller shaft splines.
- 6) Take out the two (2) 8mm nuts from the transmission mounting rubber.
- 7) Move the transmission case forward and then lift it off the position.



## 2-3. Points to be noted when servicing

### (1) Carburetor

The engine comes equipped with a side-draft Solex type carburetor which differs from the carburetor for model L40 in the specifications. The starting system of the carburetor for model L40 is the starter plunger type while the carburetor for model LJ10 is the choke valve type.

	Main jet	Main air jet	Slow jet	Slow air jet	Pilot air adjusting screw	Value seat
L40 (MIKUNI)	φ110	φ120	φ48	φ120	Screw all way in and back out 2-3/4 turns	1.2'
LJ10 (HITACHI)	φ112	φ150	φ45	φ110	Screw all way in and back out 2-1/8 turns	1.2'

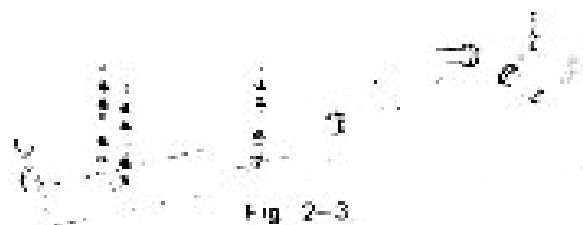


Fig. 2-3

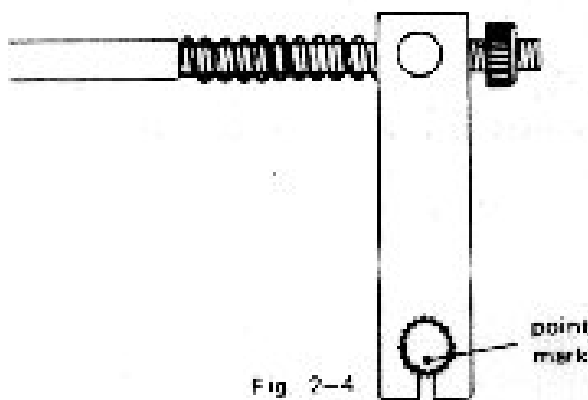


Fig. 2-4

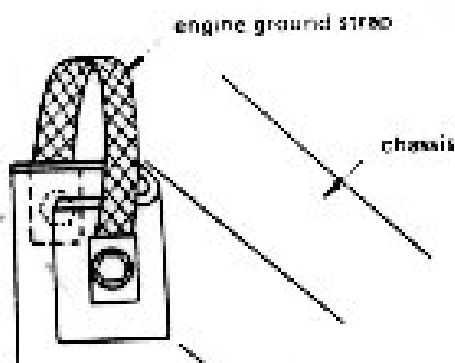


Fig. 2-5

### (2) Installation of primary and secondary mufflers

The primary and secondary mufflers are supported in position with the brackets A, B, C and D as shown in the Fig. 2-3 and to keep the flexible pipe free from distortion, position adjustment should be made at the points A, B, C and D when installing the mufflers.

### (3) Reassembly of clutch release lever and clutch release shaft

Connect the clutch release lever with the clutch release shaft so that the slit in the lever is correctly aligned with the point mark on the shaft as shown in the Fig. 2-4.

### (4) Installation of engine grounding strap

The engine grounding strap should be fastened to the chassis frame with the right side transmission mounting near the transmission unit as shown in the Fig. 2-5.

## 2-4. Service data

Spark plugs	NGK B-7HZ
Ignition timing	16±1° B.T.D.C. (1.30-1.67mm (0.051~0.066in) in terms of piston stroke)
Compression pressure	9.5kg/cm <sup>2</sup> (135 lb/in <sup>2</sup> )/1,000 rpm
Idling speed	800rpm
Air cleaner	Service at every 1,000km (600miles) when operated under very dusty conditions and at every 3,000km (2,000miles) when mainly operated on paved roads. Replace filter at every 15,000~20,000km (10,000~12,000miles) interval.
Fuel filter replacement	Replace at every 35,000~40,000km (20,000~25,000 miles) interval.
Cylinders	Bore: 61mm $\begin{matrix} +0.031 \\ -0.002 \end{matrix}$ (2.401in $\begin{matrix} +0.005 \\ -0.003 \end{matrix}$ ). Limit of wear: 0.05mm (0.0019in)
Pistons	61mm $\begin{matrix} +0.037 \\ -0.002 \end{matrix}$ (2.401in $\begin{matrix} +0.004 \\ -0.002 \end{matrix}$ ) when measured at the portion 20mm (0.787in) away from the lower end of the skirt. Piston clearance: 0.105~0.110mm (0.0041~0.0043in)
Oil pump delivery	2.3-3.1cc within 2 minutes when tested by operating the engine at 1,000±100 rpm. (oil pump control lever is set in such a position that full delivery can be obtained.)
Distributor	Point gap: 0.35~0.45mm (0.014~0.018 in) Dowel angle: 47°
Starter generator	Brush length: 20mm (0.787 in) Limit of wear: 13mm (0.512 in)
	Commutator diameter: 46mm (1.811 in) Limit of wear: 44mm (1.732 in)
Battery	12V 24AH
Transmission gear oil capacity	SAE # 90 0.8 l (0.85/0.70 qt, US/Imp)
Differential gear oil capacity	SAE # 90 0.8 l (0.85/0.70 qt, US/Imp)
Transfer case gear oil capacity	SAE # 90 0.7 l (0.74/0.62 qt, US/Imp)
Locating spring	Free length: 23mm (0.91 in) Limit of reduction in length: 21mm (0.83 in) (in common to all 3 springs)
Accelerator cable play	0-3mm (0-0.118 in) at the pedal travel

# CHAPTER 3. TRANSFER GEARBOX

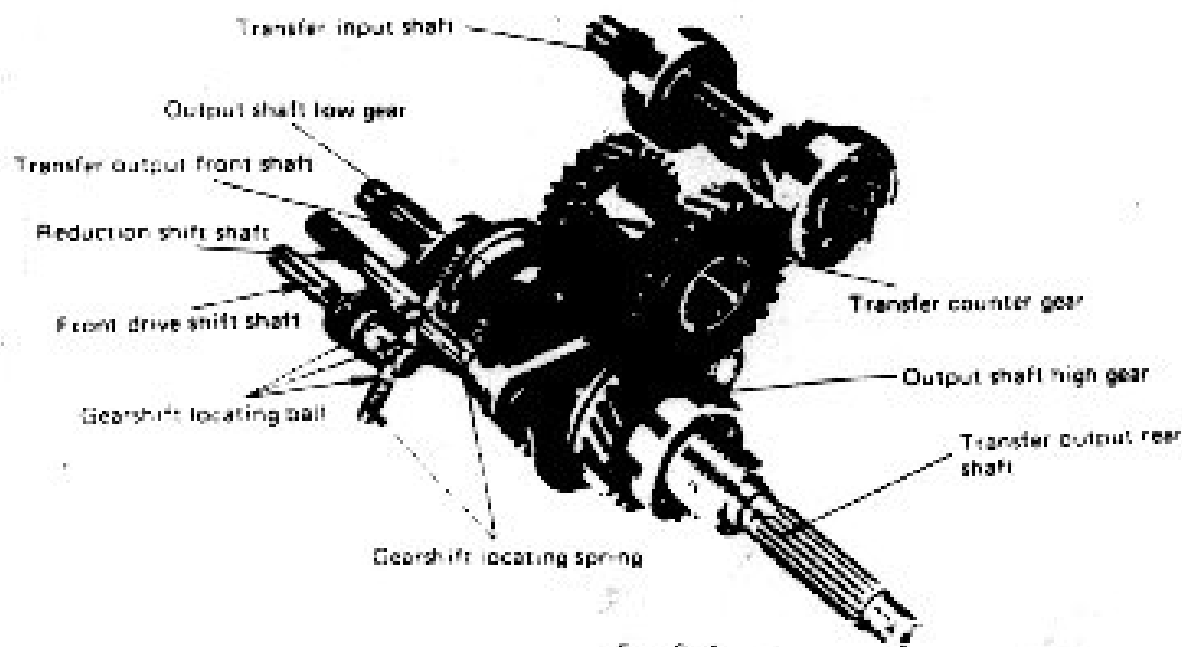


Fig. 3-1.

## 3-1. General description

The "Transfer gearing" is a term given to the auxiliary transmission adapted for carrying the drive torque to all the drive wheels. The transfer gear assembly installed on the Suzuki LJ10 consists of the 2-speed gear box and all-wheel drive system including 3-shaft parallel constant mesh gears. The 2-speed gear box permits selection of high and low speeds while the all-wheel drive system permits switching of rear wheel drive and all wheel drive.

Both the 2-speed gear box and all wheel drive system are controlled by means of a single transfer gear control lever positioned near the floor tunnel in the cabin.

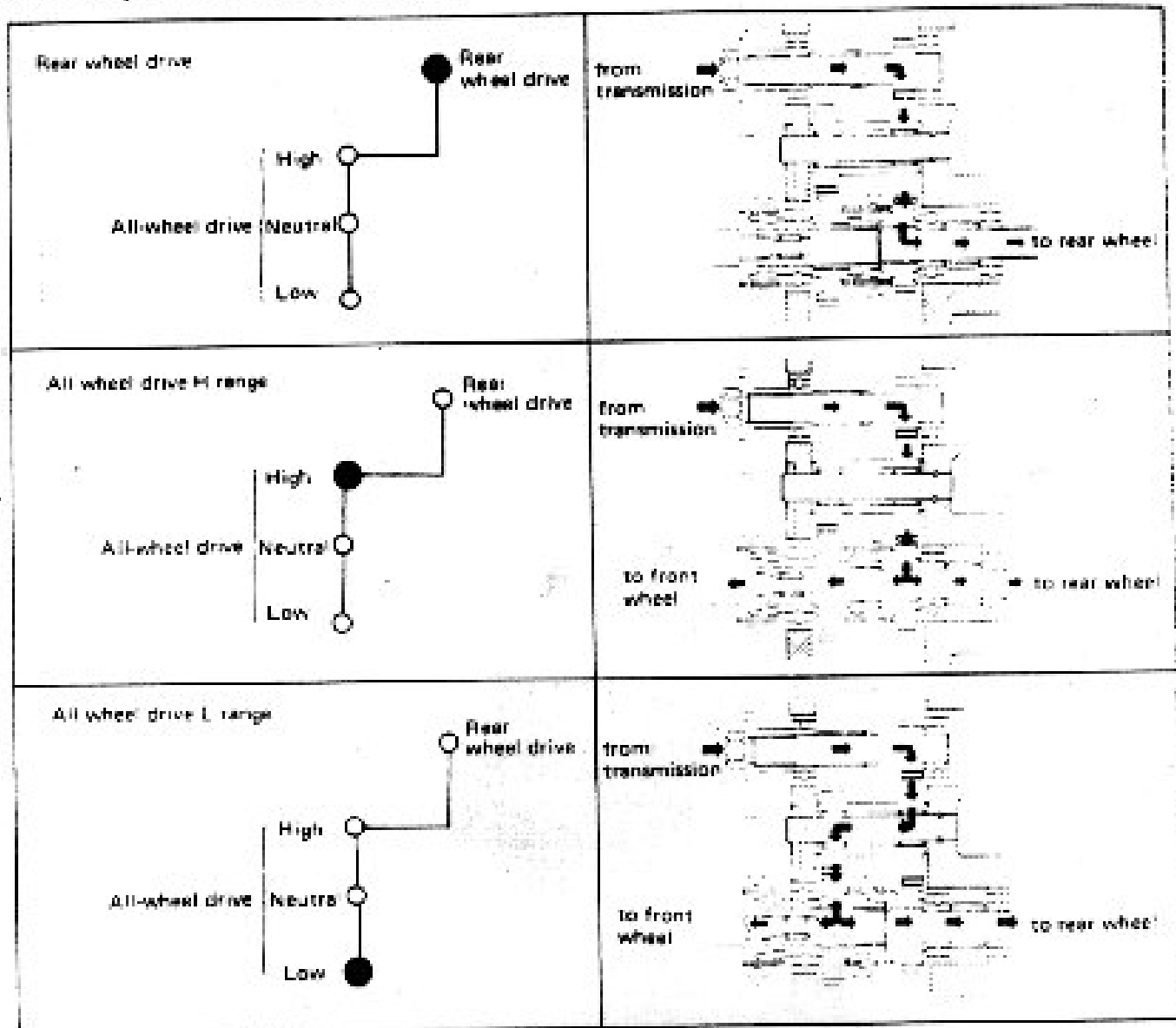
The transfer gear assembly has the constant-mesh gear arrangement just as in the case of the synchronized gear transmission unit with the synchronizer rings removed. For this reason, the transfer gear assembly can be serviced by following the conventional transmission service procedures.

## 3-2. Specifications of transfer gear assembly

	Gear ratio	Reduction ratio	Overall reduction ratio obtained when transfer gear box is shifted to H range	Overall reduction ratio obtained when transfer gear box is shifted to L range
Low	34/12	2.833	38.525	67.722
2nd	29/17	1.706	23.199	40.781
3rd	24/22	1.091	14.836	26.080
Top	-	1.000	9.713	17.075
Reverse	34/12	2.833	38.525	67.722
Primary reduction	26/20	1.400	-	-
Secondary reduction	34/6	5.667	-	-
Transfer gearbox H	29/14 x 24/29	1.714	-	-
Transfer gearbox L	26/14 x 32/22	3.013	-	-

Transfer gear oil capacity SAE S 90 0.7 / 10 74/0.62 qt. US / Impl

### 3-3. Operation of transfer gearing



### 3-4. Removal and installation of transfer gearbox



Fig. 3-2.

- 1) Remove the transfer gear control lever knob. The knob can be screwed out by turning it counter-clockwise.
- 2) Take out the cross-head screws (+) and remove the transfer gear box service hole cover.
- 3) Disconnect the three (3) propeller shafts at the universal joint flange by removing the bolts and nuts with the parking brake firmly applied to prevent turning of the propeller shaft.
- 4) Disconnect the parking brake cable and wire at the parking brake lever.
- 5) Disconnect the speedometer drive cable. (This is positioned at the rear of the parking brake back plate.)
- 6) Take out the four (4) bracket bolts attaching the transfer case to the chassis frame crossmember and remove the transfer case.

Universal joint flange yoke bolt tightening torque:

150~250 kg-cm  
(10.8~18.1 ft-lb)

### 3-5. Disassembly of transfer gearbox

The disassembly operation of the transfer gear box can be split into two (2) distinct groups which include gear shifting mechanism, counter shaft and output shaft disassembly operations, and the general disassembly procedure is dealt with in the following as disassembly of either of the counter shaft or the output shaft involves disassembly of the entire transfer case assembly.

1) Drain the transfer case. The transfer case is filled with 0.7 ltr (0.74/0.62 qt, US/Imp) of gear oil.



Fig. 3-3.

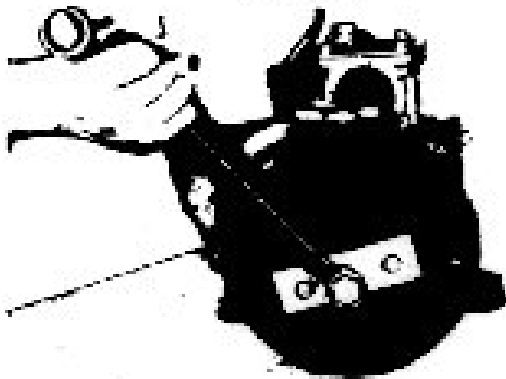


Fig. 3-4.



Fig. 3-5.



Fig. 3-6.

2) Hold the propeller shaft from turning by pulling the parking brake inner cable or by using a vise and disconnect the propeller shaft at the universal joint flange yoke.

3) Hold the parking brake drum from turning with the aid of the special tool (preload adjuster-09922-75220) and take out the parking brake setting nut as shown in the Fig. 3-3.

4) Remove the parking brake drum with the aid of the special tool (flywheel puller-09923-05110) as shown in the Fig. 3-4.

Parking brake drum set nut tightening torque:	900~1500 kg-cm (165.1~108.5 lb-ft)
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5) Take out the four (4) bolts fixing the parking brake back plate and remove the back plate assembly.

Parking brake back plate set bolt tightening torque (8')	180~280 kg-cm (13.0~20.3 lb-ft)
--	------------------------------------

6) Remove the speedometer driven gear as shown in the Fig. 3-5.

7) Remove the upper and lower transfer case covers.

8) Remove the transfer gear control lever assembly from the transfer gear front case in the following manner: Turn the gear control lever guide to the left while pushing it down as shown in the Fig. 3-6.

9) Take out the eight (8) 8mm nuts attaching the transfer gear front case and lightly tap the case with a wooden hammer.

The transfer gear output front shaft comes out with the transfer gear front case. Drive out the transfer gear output shaft from the outside, using a wooden hammer.

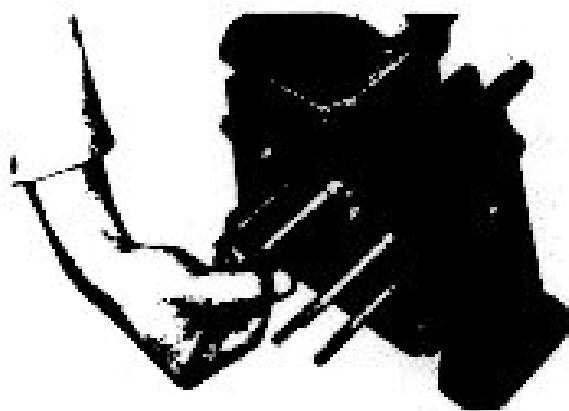


Fig. 3-12.

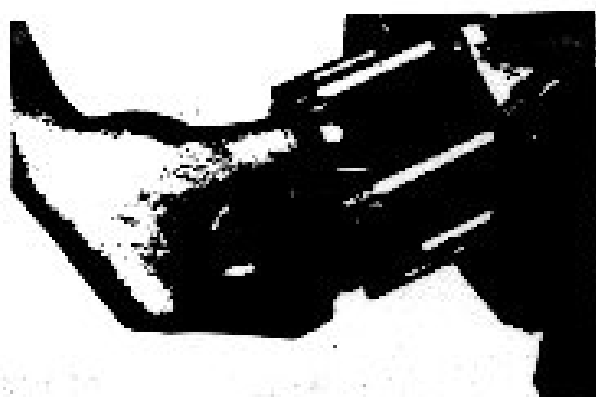


Fig. 3-13.

- 17) Pull out the front drive shift shaft and remove the gear shift locating ball.
- 18) Drive out the reduction shift fork spring pin from inside of the transfer case with the special tool (spring pin puller-09922-85810) and withdraw the reduction shift shaft as shown in the Fig. 3-12. When removing the reduction shift shaft, NEVER turn it, or the gear shift locating ball will be rolled into the slot in the reduction shift shaft wedging the shaft in position.

#### Removal of transfer output rear shaft

- 19) With a wooden hammer drive out the transfer output rear shaft toward the transfer front case by lightly tapping from the parking brake side. The output rear bearing bush and output shaft gears can be removed together with the output rear shaft as shown in the Fig. 3-13.

#### 3-6. Points to be noted when reassembling

- 1) When installing the transfer case cover, make sure to tighten the bolts and nuts to the specified torques in the sequence as shown in the Fig. 3-14 and Fig. 3-15.

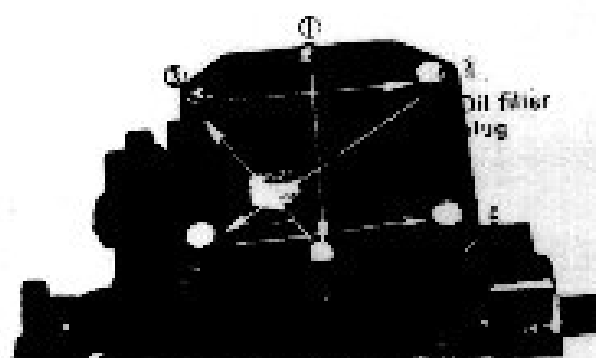


Fig. 3-14.

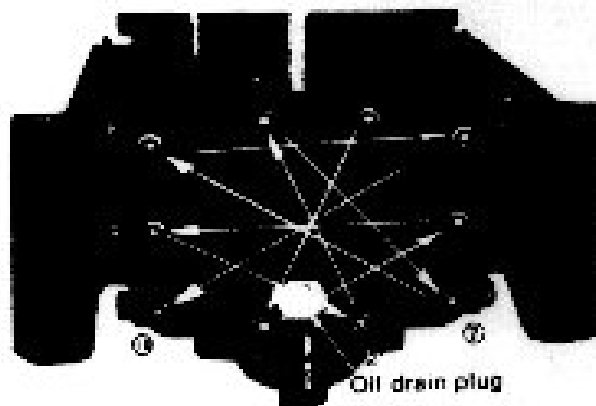


Fig. 3-15.

Transfer case cover set nut tightening torque: (6 #)	60~100 kg-cm (4.3~7.2 lb-ft)
Transfer case cover set bolt tightening torque: (6 #)	60~100 kg-cm (4.3~7.2 lb-ft)
Transfer case cover set bolt tightening torque: (8 #)	150~200 kg-cm (10.8~14.5 lb-ft)

Remove the transfer case filler plug to fill the transfer case with gear oil.

0.7 ltr (0.74/0.62 qt, US/Imp) of gear oil is required to fill the case to the specified level.

Transfer case gear oil capacity:	SAE #90 0.7 l (0.74/0.62 qt, US/Imp)
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Fig. 3-21.

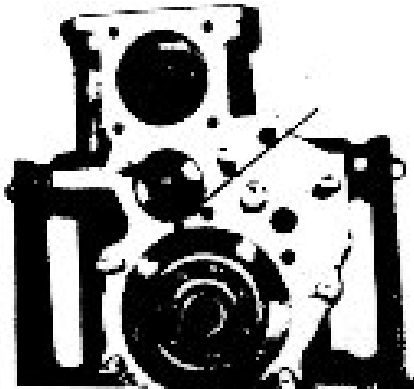


Fig. 3-22.

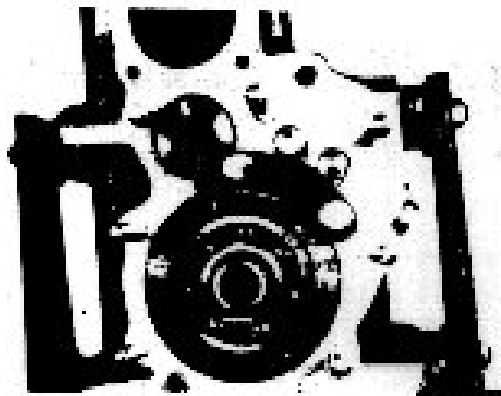


Fig. 3-23.

### 3-7. Inspection and adjustment

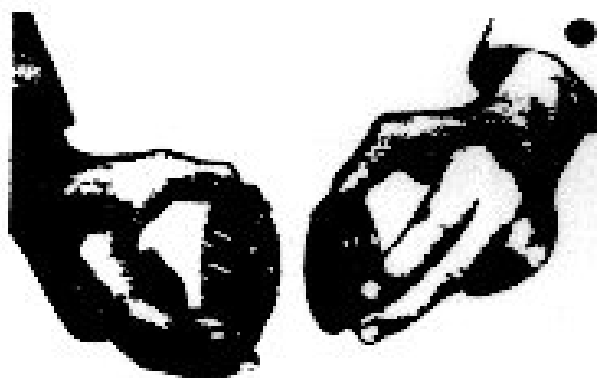


Fig. 3-24.

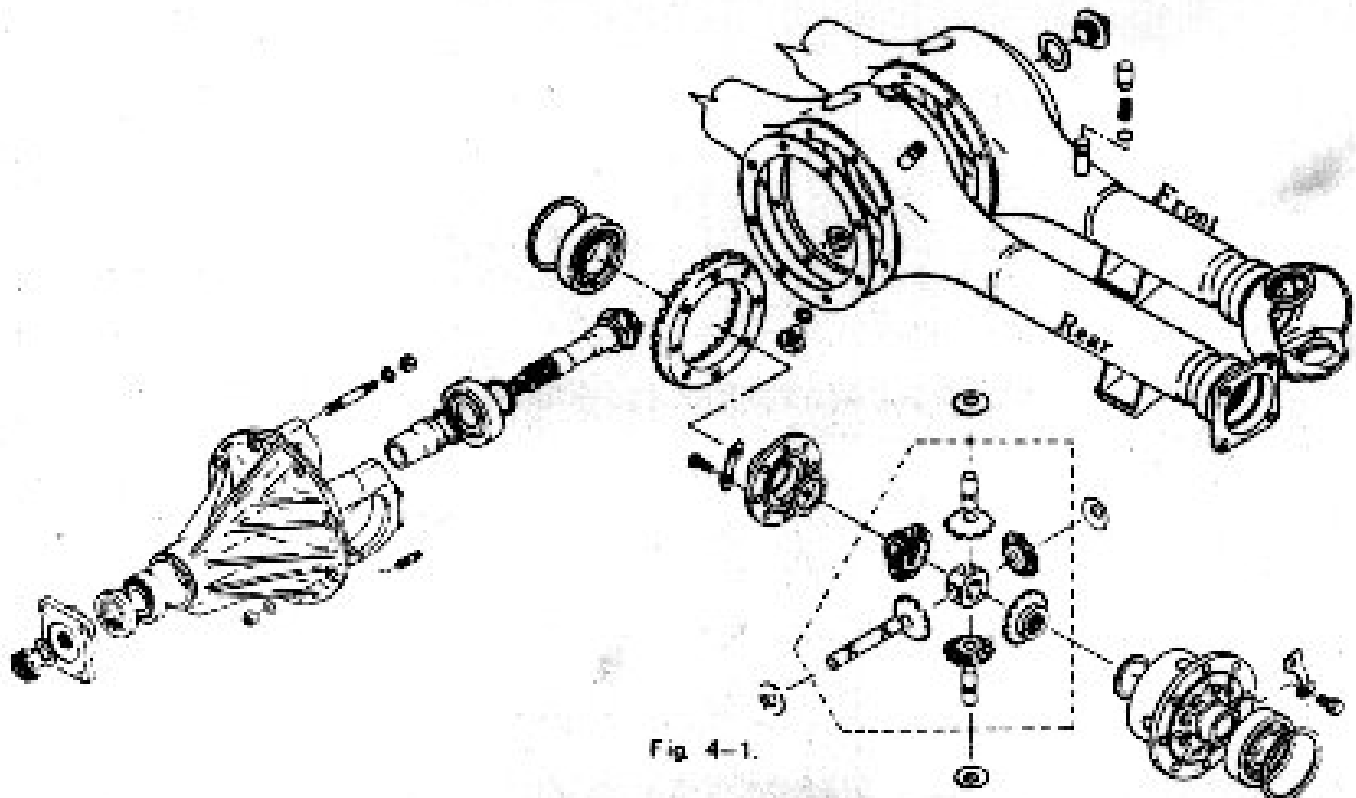
install the reduction shift fork so that the face with the longer boss is turned toward the low speed side. Also install the front drive shift fork so that the face with the longer boss is turned toward the transfer case side.

6) Make sure to have the output rear bearing bush stopper groove correctly aligned with the groove in the transfer case when installing the transfer output rear shaft as shown in the Fig. 3-22.

7) The gear shift fork shaft stop plate should be pressed hard against the shaft side before being fixed in position as it also serves to hold the output rear bearing bush, counter gear shaft and shift fork shaft from turning.

1) The transfer gear box is essentially a synchronized constant-mesh gear type transmission only with the synchronizer rings removed.

Therefore, the transmission inspection and adjustment procedures are directly applicable to the transfer case. In the course of inspection, check the gear teeth for abnormal condition, reduction clutch sleeve teeth and gear dog teeth for wear and damage. The transfer gear box is so designed that gear shifting should not be attempted while the vehicle is in motion. The vehicle should be brought to a complete stop before transfer gear shifting is made.



## 4-1. General description

The differential unit of the model LJ10 has the hypoid bevel gear arrangement with the center of the drive pinion offset below the center line of the bevel gear by 18mm (0.709 inch).

The differential unit employs four (4) each of side pinion to withstand severe operating conditions for which the vehicle is built. The differential gearbox consists of six (6) gears including two (2) side gears. The mounting distance measuring procedure, bearing preload adjustment and backlash adjustment procedures for the differential unit on model L40 are directly applicable to this differential unit. The differential assembly on the front axle and on the rear are exactly identical in design and construction.

## 4-2. Disassembly procedures

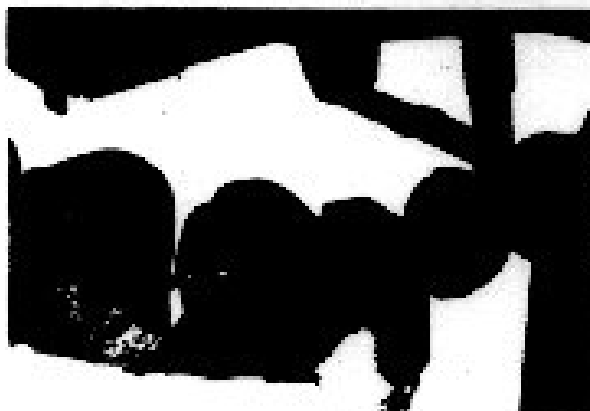


Fig. 4-2.

- 1) Jack up the vehicle and disconnect the propeller shaft at the cross joint flange yoke.
- 2) Take out the wheel nuts and remove the wheel.
- 3) Disconnect the brake pipe.  
**(Differential gearbox assembly on the front axle).**
- 4) Take out the four (4) each of bolts on the upper and lower parts of the king pin.
- 5) Take off the tie rod end from the steering knuckle by removing the cotter pin & bolt.
- 6) Take out the eight joint seal bolts and pull out the front axle shaft as shown in the Fig. 4-2.



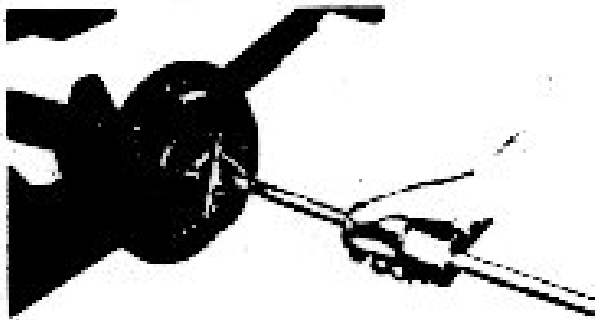


Fig. 4-3.

### 4-3. Inspection and servicing

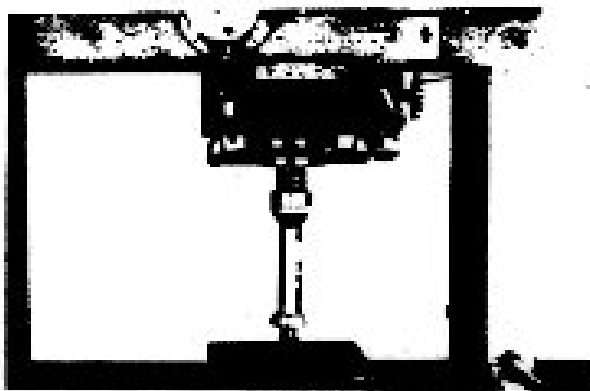


Fig. 4-4.

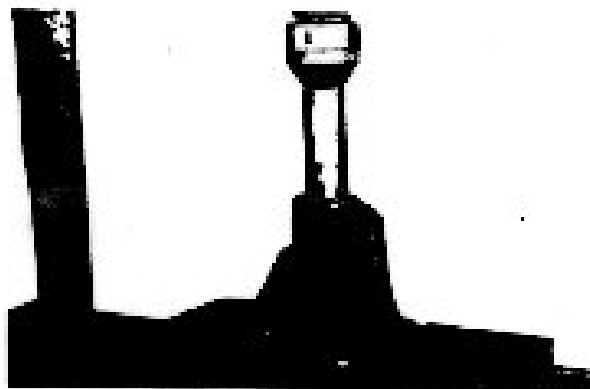
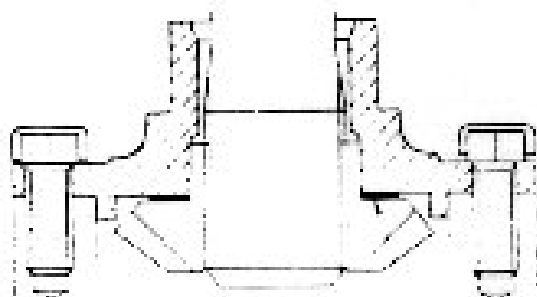


Fig. 4-5.



Differential side gear thrust washer

Fig. 4-6.

### (Differential gearbox assembly on the rear axle)

- 7) Remove the brake drum.
- 8) Take out the four (4) bolts retaining the back plate.
- 9) Install the special tool (rear axle shaft puller-09922-66010) in position as shown in the Fig. 4-3 and drive out the shaft with the aid of a sliding hammer.
- 10) Withdraw the right and left axle shafts and then remove the differential carrier assembly.

#### (1) Drive bevel pinions

Check the drive bevel pinions for a sign of abnormal tooth contact. Also check the face of the pinions in contact with the front and rear bearings for wear and other abnormal conditions and replace the parts as necessary.

- 1) Installation of the front and rear bearing inner races necessitates the use of the special tool (09913-80111) as shown in the Fig. 4-4.
- 2) Reassembly of the front and rear bearing outer races into the differential carrier necessitates the use of the special tools respectively as shown in the Fig. 4-5. (For front bearing-09913-76010, for rear bearing-09913-85210). When reassembling the outer race into the differential carrier, exercise care to avoid inclination of the outer race in position, or bearing seizure, abnormal noise and abnormal wear will result.

#### (2) Differential side gear backlash adjustment

Adjust the differential side gear backlash with the side gear thrust washers so that the backlash becomes 0.1-0.2mm (0.004-0.008in) when the differential case R is installed and bolts tightened to 140-160kg-cm (10.7-11.6lb-ft) torque.

Differential side gear backlash	0.1~0.2mm (0.004~0.008in)
Differential side gear thrust washers	0.5~0.8mm (0.02~0.03in)
Differential case R tightening torque	140~160 kg-cm (10.1~11.6 lb-ft)

## CHAPTER 5. FRONT WHEEL DRIVE SYSTEM

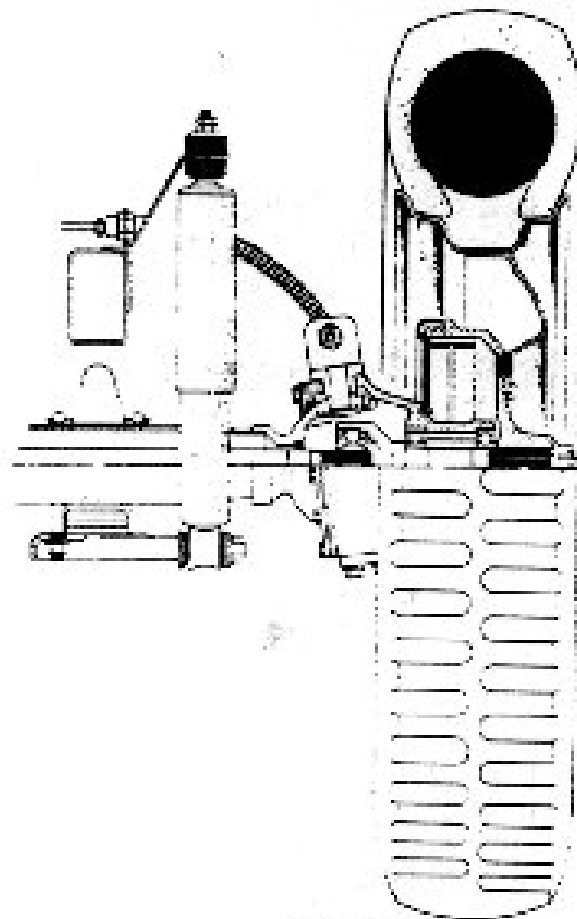


Fig. 5-1.

### 5-1. General description

As the Suzuki LJ10 is a four-wheel drive vehicle, the front wheels are not only made to steer the vehicle but also to carry traction power to the ground. Accordingly, the front axle shafts with the conventional cross-shaft universal joint will fail to carry the drive torque to the wheels smoothly. For this reason, the front axle shafts are fitted with a Bir-field constant velocity joint which is adaptable to greater angular variations and gives longer service life.

The steering knuckle encases the joint to provide maximum protection against dirt, grit and other foreign matters. The end of each knuckle is sealed with the oil seal and felt gasket.

The steering knuckle and front axle housing are connected with the king pins of the conventional design and the taper roller bearings.

### 5-2. Disassembly procedure



Fig. 5-2.

- 1) Turn loose the wheel nuts and jack up the front end of the vehicle and remove the wheel.
- 2) Disconnect the brake pipe and tie-rod end. The tie-rod end can be removed by tapping the knuckle arm with a copper hammer.
- 3) Take out the cotter pin from the front hub nut and remove the hub nut and then pull out the brake drum with the aid of the special tool-wheel hub puller Q9943-35511 as shown in the Fig. 5-2 and sliding hammer.

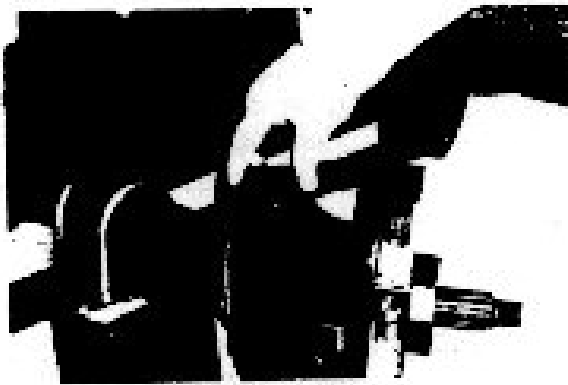


Fig. 5-3.

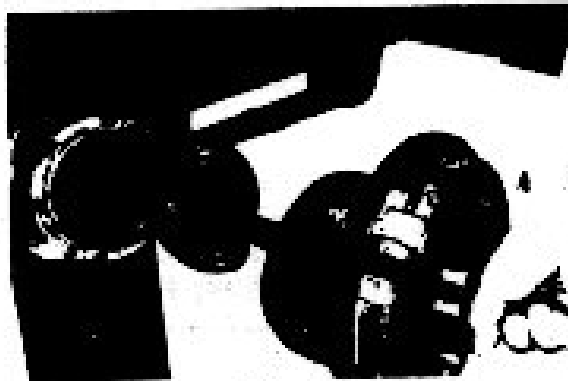


Fig. 5-4.

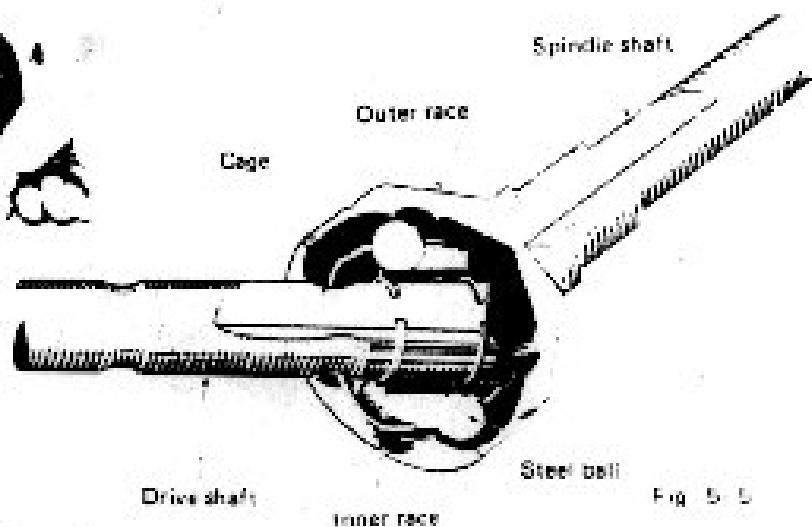


Fig. 5-5

### 5-3. Inspection and adjustment

#### (1) Front axle shaft

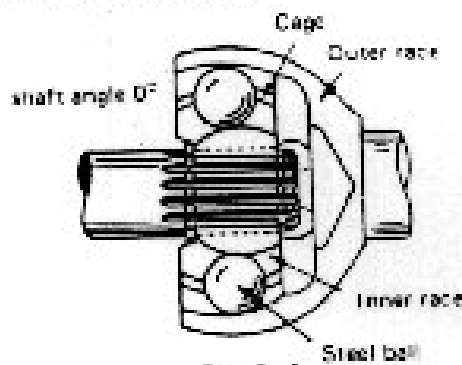


Fig. 5-6

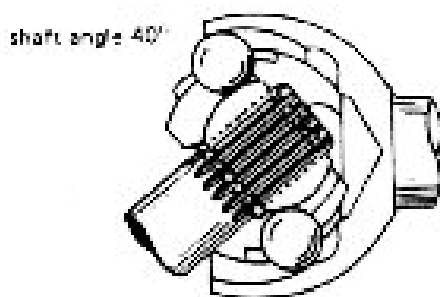


Fig. 5-7.

- 4) Take out the eight (8) 6mm joint seal bolts and remove the oil seal cover, felt gasket and oil seal carefully.
- 5) Take out the four (4) king pin bolts and remove the upper and lower king pins as shown in the Fig. 5-3. When removing the king pins, note the thickness and number of adjusting shims fitted behind the king pins.
- 6) Withdraw the front axle shaft together with the associated parts as shown in the Fig. 5-4.

#### 1) Construction and function

The joint consists principally of the outer race, inner race, cage and balls as illustrated in the Fig. 5-5. When the joint angle varies, the inner race moves just as the ball bearing ensuring smooth transmission of the drive torque. When the joint rotates, the six (6) balls become locked in position, carrying the drive torque from the drive shaft, inner race and balls to the outer race.

The advantage of the constant velocity joint is such that when the joint angle varies, the balls roll along the shaft, due to geometrical relationship between the inner race and outer race, in the distance corresponding to a half of the varying angle, thereby maintaining constant velocity characteristic. The constant velocity joint features small mechanical loss and excellent durability.

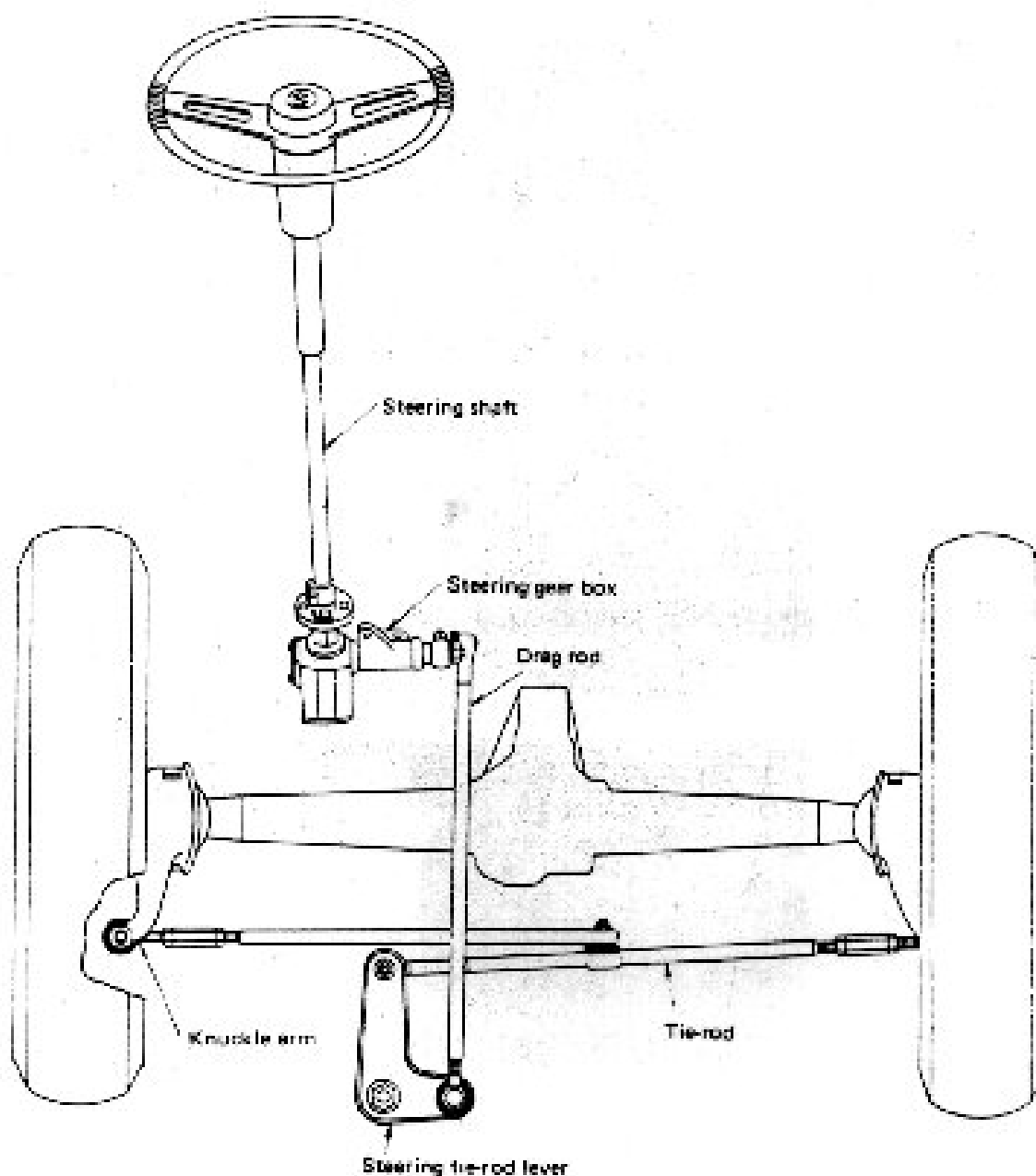


Fig 6-1.

## 6-1. General description

The steering system consists of the steering wheel, steering gear box, pitman arm, drag rod, steering tie rod lever, tie-rod, knuckle arm, etc. The steering system adopts the ball-screw type steering gear which requires less steering effort, provides an excellent durability and smooth self-returning action.

The steering tie-rod lever is owing to its arrangement positioned on the left side end. The drag rod, steering tie-rod lever and tie-rod are linked with a ball joint which has a high resistance to wear. The steering system service procedures are omitted as they are equal to the model L40 service procedures and only important points are described below.

**(Specifications)**

Gear type	Ball-screw type	Steering angle (outer)	28°
Gear ratio	15.4 : 1	Steering wheel diameter	380 mm (14.96 in)
Steering angle (inner)	33°	Turning radius	4,400 mm (14.435 ft)

**6-2. Inspection and servicing**

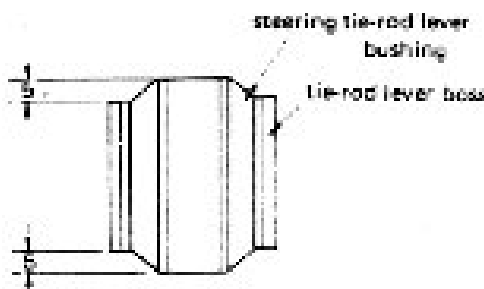


Fig. 6-2.

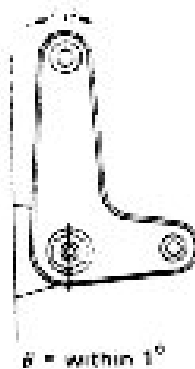


Fig. 6-3.



Fig. 6-4.

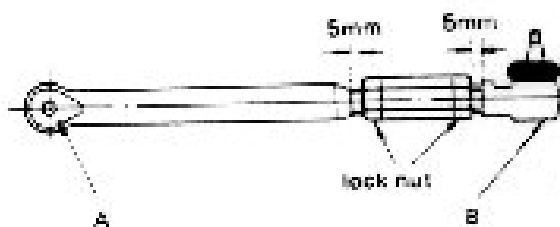


Fig. 6-5.

1) Installation of steering tie-rod lever bushing

Press the steering tie-rod lever bushing into the tie-rod lever boss so that the upper and lower projections are set equally to 5mm (0.2in) as shown in the Fig. 6-2.

2) Installation of steering tie-rod lever

Install the steering tie-rod lever so that misalignment between the straight line in line with the center of the chassis frame and the center line of the steering tie-rod lever is held within 1° as shown in the Fig. 6-3.

Steering tie-rod lever nut tightening torque      500~900 kg-cm  
(36.2~65.1 ft-lb)

3) Installation of left side tie-rod assembly

Tighten the tie-rod end lock nut so that the faces A and B of the sockets at the tie-rod ends are in parallel as illustrated in the Fig. 6-4. When securely tightened, the lock nuts should be well centered leaving the threaded portion of 5mm (0.2in) at each side.

4) Installation of right side tie-rod assembly

Tighten the tie-rod end lock nut so that the faces A and B of the sockets at the tie-rod ends are in perpendicular as illustrated in the Fig. 6-5. When securely tightened, the lock nuts should be well centered leaving the threaded portion of 5mm (0.2in) at each side.

### 6-3. Front wheel alignment

Only the toe-in is adjustable and camber and caster can not be adjusted as they are so designed and built into the vehicle.

The following points should be checked before inspecting the front wheel alignment.

- 1) Check to be sure the vehicle is parked on a level ground.
- 2) Check to be sure the vehicle is not loaded.
- 3) Check and adjust tire pressure.

Front and rear tires 1.1 kg/cm<sup>2</sup> (15.6 lb/in<sup>2</sup>)

- 4) Check tread on tires for a sign of abnormal wear.
- 5) Check to see if the body is inclined.

Failure to check the above points will result in poor adjustment of front wheel alignment.



Fig. 6-6.

- 1) Measurement and adjustment of toe-in  
Check the toe-in with a toe-in gauge and if the measurement deviates from the standard value (2-6mm), make necessary adjustment by turning the right and left side tie-rods.

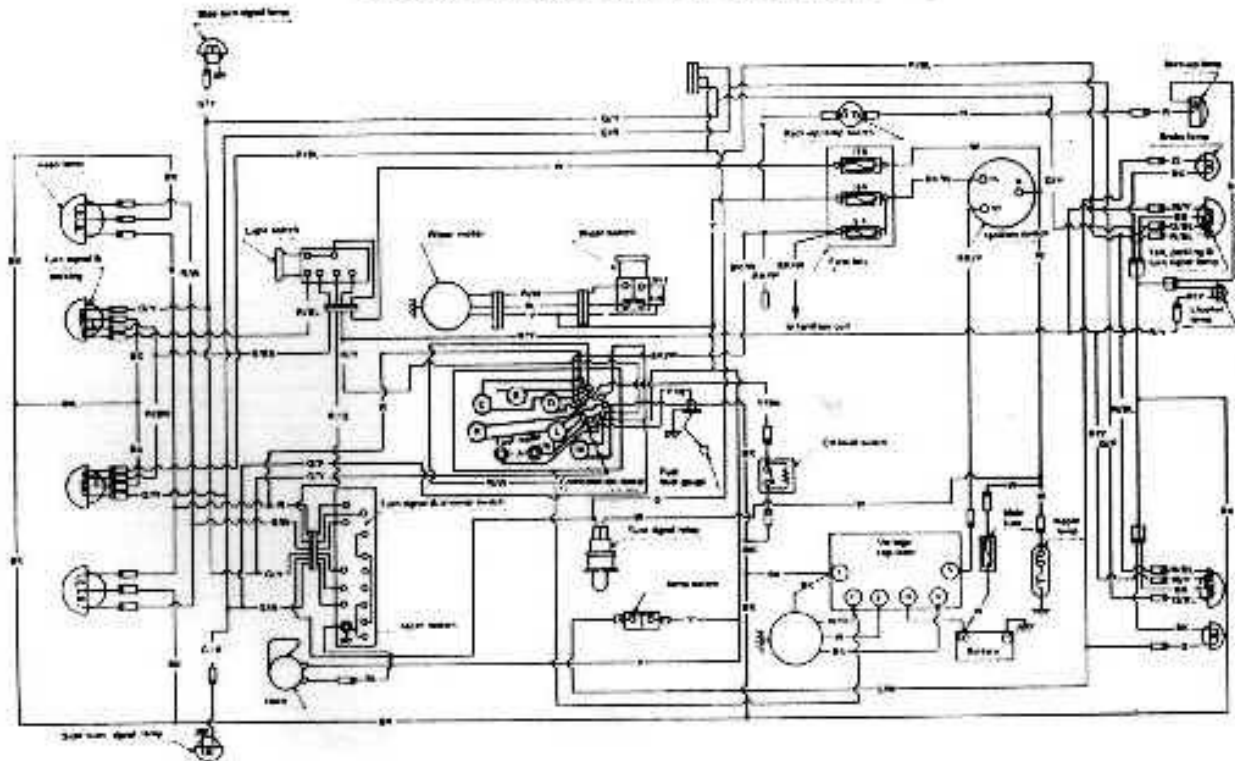
Toe-in	2~6mm (0.079~0.24in)
Side slip: (when tested with driver seated in position)	in 2~in 4

- 2) Camber and caster

The camber and caster are not adjustable. However, it is important to check the front axle housing for bending, spring seats for damage and front springs for permanent yield as these have a close bearing on the front wheel alignment.

Camber	1°
Caster	4°
King pin inclination	9°

# SUZUKI LJ10 WIRING DIAGRAM



-35-

Head lamp	12V 50W/40W
Perking tail & turn signal lamp	12V 8, 3.4W/23W
Brake lamp	12V 23W
License lamp	12V 10W
Combination meter lamp	12V 3.4W x 4
Room lamp	12V 5W
Main fuse	20A
Fuse in fuse box	15A, 10A, 5A
Back up lamp	12V 10W
Side turn signal lamp	12V 5W

C	Charge lamp
B	High beam indicator lamp
O	Oil level lamp
R	Right turn signal indicator lamp
L	Left turn signal indicator lamp
M	Combination meter lamp

G	Green
R	Red
W	White
Y	Yellow
BK	Black
BL	Blue
G/R	Green with red tracer
G/W	Green with white tracer
G/Y	Green with yellow tracer

R/G	Red with green tracer
R/W	Red with white tracer
R/Y	Red with yellow tracer
W/R	White with red tracer
Y/R	Yellow with red tracer
G/BL	Green with Blue tracer
R/BK	Red with black tracer
R/BL	Red with blue tracer
Y/BK	Yellow with black tracer
BK/W	Black with white tracer
BK/Y	Black with yellow tracer