



SERVICE NEWS

**A Truckload of
Wheel Alignment
Tips for 4 X 2s
and 4 X 4s.**

**Rust Buster Body
Repair.**

**Oil Filter Test
Results — One
Brand Does Do a
Better Job of
Removing
Contaminants.**

**When It Comes
to Resin Bumpers,
Paint By the
Numbers!**

**PART OF TOYOTA'S
CONTINUING SUPPORT TO
AFTERMARKET REPAIR.**



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SERVICE NEWS

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2WD/4WD WHEEL ALIGNMENT

MODEL APPLICATION: 1984 – 1988 2WD/4WD PICKUP TRUCK

Wheel alignment has a dramatic impact on both the service life of the tires and the handling characteristics of a truck. A quick visual inspection of the front tires will give a good indication of alignment conditions.

Incorrect camber will cause one side of the tire to wear more than the other. Incorrect toe-in results in “feathering” of the tread edges. Bald spots, cupping or scalloping usually indicate the tire and wheel are out of balance, or may indicate a suspension/steering component problem.

Alignment refers to the position of the tires relative to the road and to the vehicle direction. Alignment involves the measurement and possible adjustment of the wheel/tire toe-in and camber, and caster.

Toe-in refers to the fact that the front tires, when properly aligned, do not point straight ahead, but inward toward the center of the car to a small degree.

Camber refers to the tilt of the tire. In other words, the tire is not precisely vertical or straight up and down. If the top of the tire tilts inward, the camber is **NEGATIVE**. If the tire tilts outward, the camber is **POSITIVE**.

Caster is a measurement of the steering axis viewed from the side. Caster is achieved by tilting the suspension to one side of absolute vertical.

PRE-ALIGNMENT CHECKS

Before measuring the actual vehicle alignment, a series of quick checks should be performed to make sure the suspension components are in good shape.

1. Check the tires for proper inflation.

CORRECT TIRE INFLATION

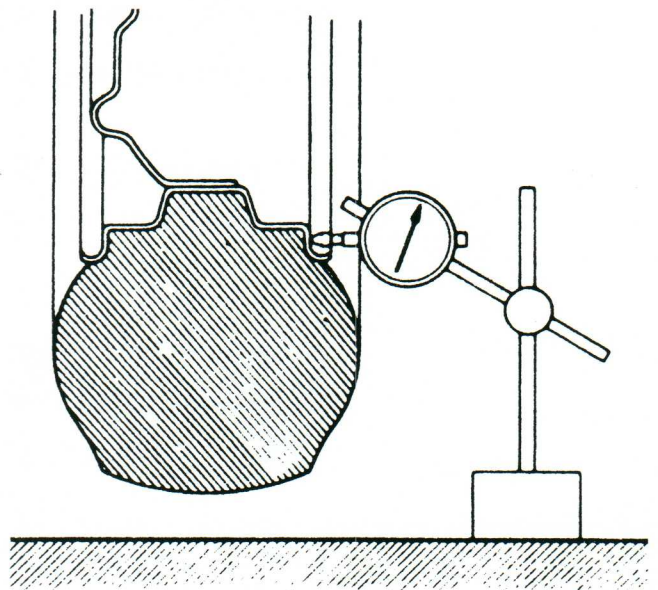
Correct tire pressure:	kg/cm ² (psi, kPa)	
	Tire Size	Front Rear
7.00 – 14 – 6 PR	1.7 (24, 167)	2.5 (36, 245)
P195/75 R 14	2.0 (28, 196)	2.45 (35, 240)
205/70 SR 14	1.9 (27, 186)	2.25 (32, 221)
185 R 14 – LT 8 PR	1.8 (26, 177)	4.5 (64, 441)

2. Using a dial indicator, check each front wheel for lateral runout.

Runout should measure 1.3 mm (0.047 in.) or less.

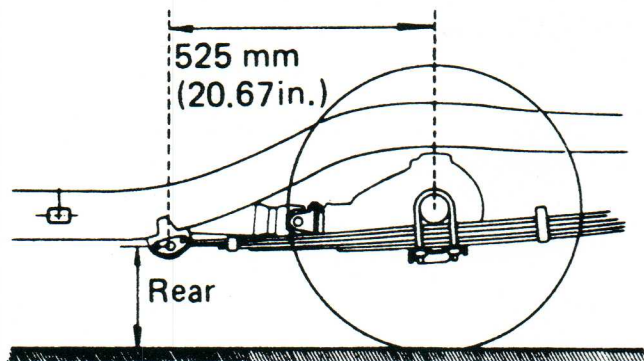
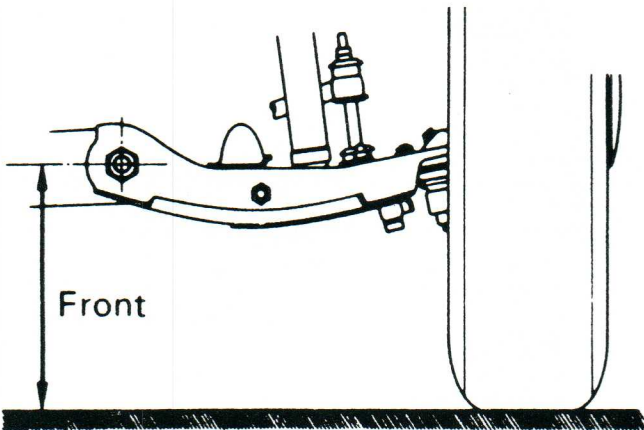
If the runout exceeds this measurement, check:

- Front wheel bearings for looseness
- Front suspension for looseness
- Steering linkage for looseness



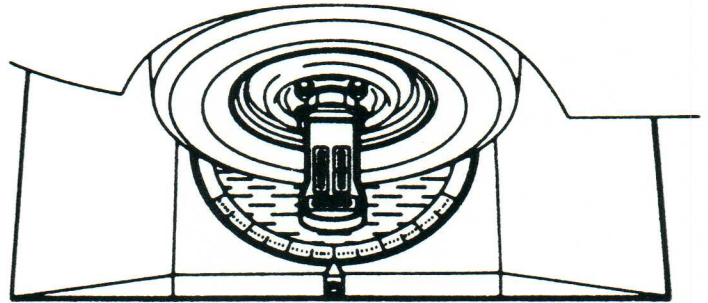
Features

3. Bounce the truck at each corner to test the shock absorbers. The truck should bounce only two or three times after you release it if the shock absorbers are in good condition. If it bounces more than three times, the shocks need to be replaced.
4. Measure the vehicle height at the front cross member and at the rear frame just in front of the forward spring mounting point. Ride height specifications are provided in the Service Manual. If the vehicle is not at the correct height, or not level from side to side, shake it vigorously and remeasure. If it is still not correct, check for bad springs or worn or loose suspension parts.



2WD AND 4WD WHEEL ANGLE ADJUSTMENT

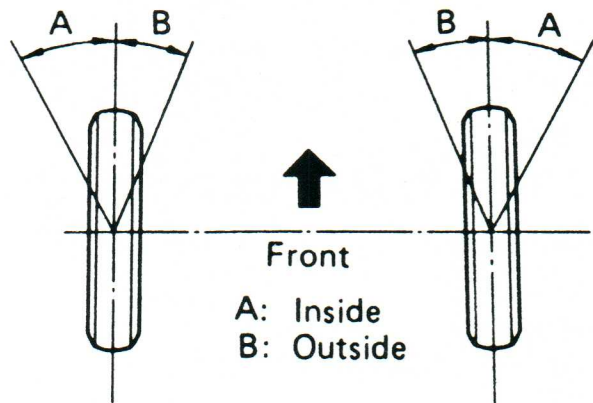
1. Follow the manufacturer's instructions and install the wheel alignment equipment.



2. Remove the knuckle stopper bolt protective caps.
3. Measure the inside and outside steering angles. The correct angles are given on the chart below.

WHEEL ANGLE CHART

Wheel angle		
Max.	Inside wheel	$34^{\circ} + 1^{\circ}$ $- 2^{\circ}$
	Outside wheel	30°
at 20°	Inside wheel	$22^{\circ} 15'$
	Outside wheel	20°

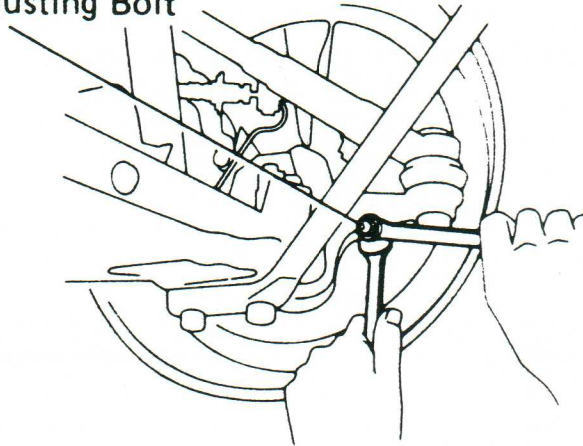


Features

CAUTION: When the steering wheel is turned to full lock, check to be sure the wheel does not touch either the brake line or the body.

4. If the wheel angles do not fall within specification, adjust the angles using the knuckle stopper bolts.

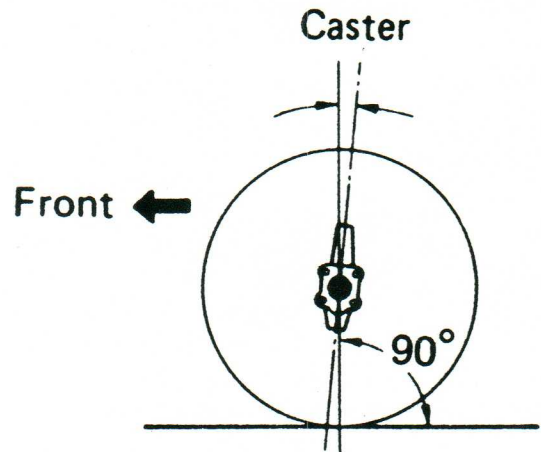
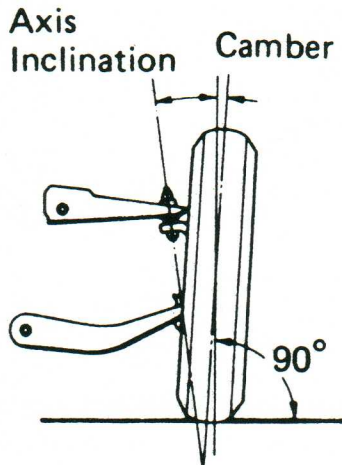
Adjusting Bolt



- Once you have adjusted the wheel angle, torque the locking nut on 2WD trucks to 350 kg-cm (25ft-lb, 34 N-m), on 4WD trucks to 480 Kg-cm (35ft-lb, 47 N-m).
- If you cannot set the wheel angle within limits using the adjusting bolts, inspect the steering components and replace all worn or damaged parts.

2WD CAMBER/CASTER ADJUSTMENT

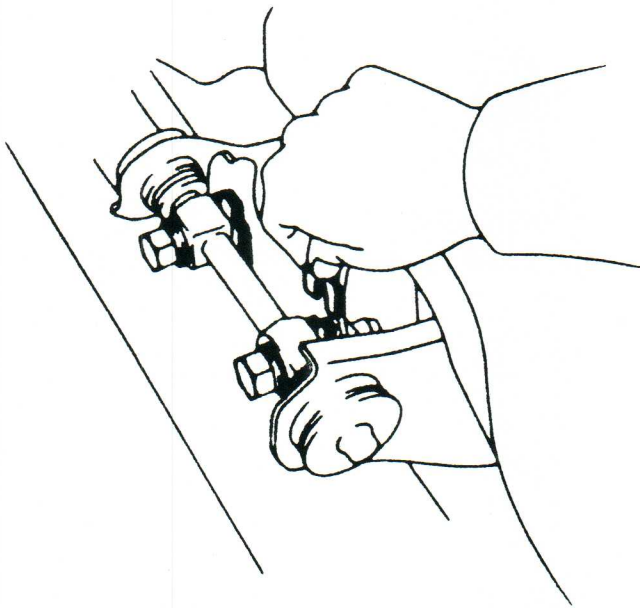
- Using calibrated wheel alignment equipment, measure the camber and caster of each front wheel. The correct camber/caster specifications are provided in the chart below.



CAMBER/CASTER ANGLE

	Inspection STD	Adjustment STD
Camber Left-right error	0°30' ± 45' 30' or less	0°30' ± 30' 30' or less
Steering axis inclination Left-right error	10°00' ± 45' 30' or less	—
Caster		
1/2 ton short	0°40' ± 45'	0°40' ± 30'
1/2 ton Long	1°10' ± 45'	1°10' ± 30'
1/2 ton extra long	1°00' ± 45'	1°00' ± 30'
1 ton	0°35' ± 45'	0°35' ± 30'
C&C long (SRW)	0°05' ± 45'	0°05' ± 30'
C&C long (DRW)	0°35' ± 45'	0°35' ± 30'
C&C super long (DRW)	0°50' ± 45'	0°50' ± 30'
Left-right error	30' or less	30' or less

- If the camber/caster is not within specifications, adjust by adding or removing spacer shims on the upper arm. The following chart provides available adjusting shim thicknesses.



4WD CASTER/CAMBER ADJUSTMENT

On 1984-1985 4WD trucks, the caster/camber is not adjustable. If the caster/camber measurements and king pin inclination do not fall within the specifications provided on the chart below, inspect and replace steering knuckles, wheel bearings, and springs.

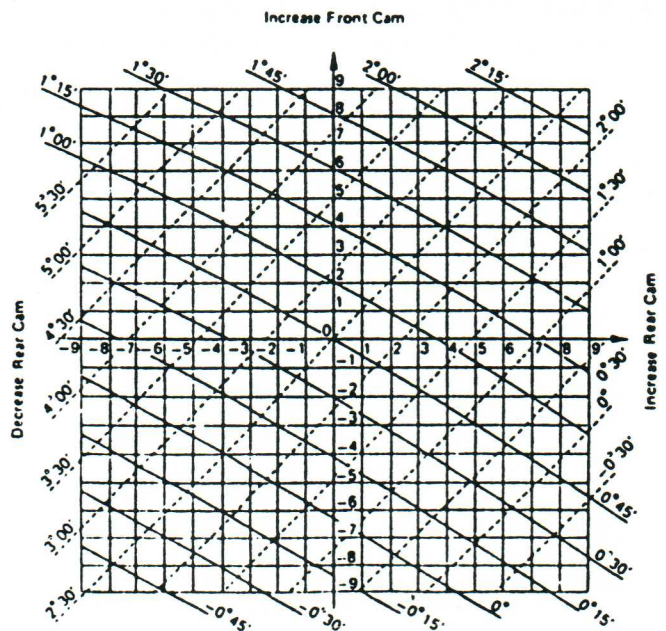
Caster/Camber IS adjustable on 1986 - 1988 4WD trucks using front and rear adjusting cams.

To determine the amounts by which the front and/or rear cams must be adjusted, use the special alignment graph provided below. (Also found in service manual).

AVAILABLE SHIM THICKNESS

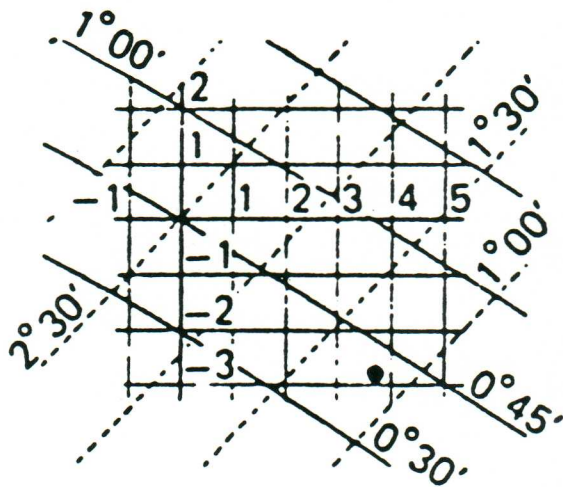
Shim thickness	mm (in.)
Thickness	
4.0	(0.157)
1.6	(0.063)
1.2	(0.047)

- Once you have adjusted the caster/camber, check the steering axis inclination. If it does not fall within the specifications given on the chart, check to make sure the steering knuckle and front wheel are not loose or bent.



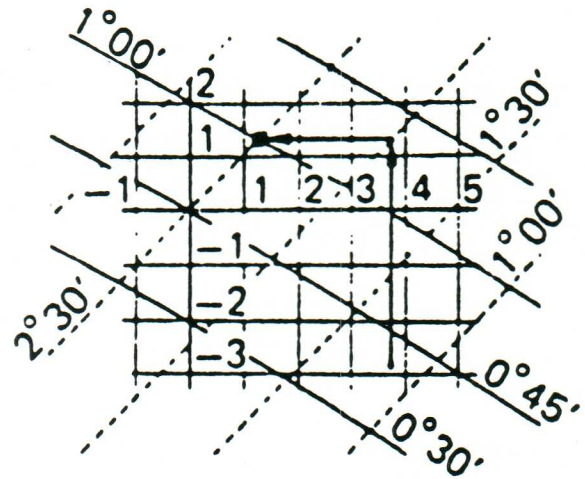
- Mark the correct caster/camber service specifications on the graph (Listed in service manual).

Features



EXAMPLE: Camber 0 40' Caster 1 10'

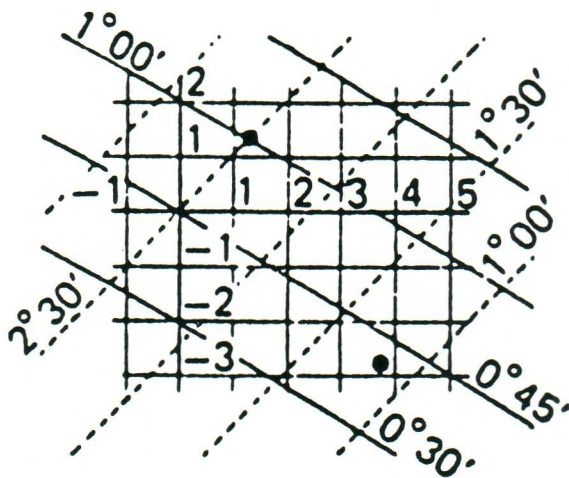
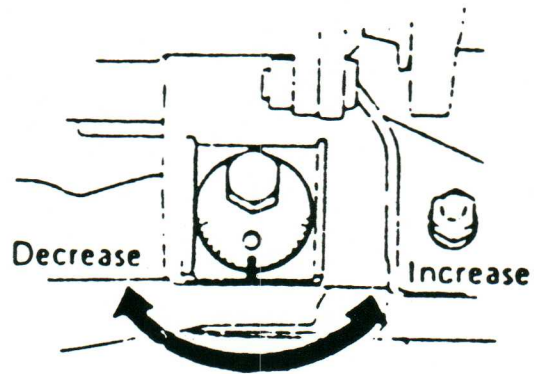
- Then mark the actual measurements taken from the vehicle.



EXAMPLE: Front cam +4.3 Rear cam -2.3

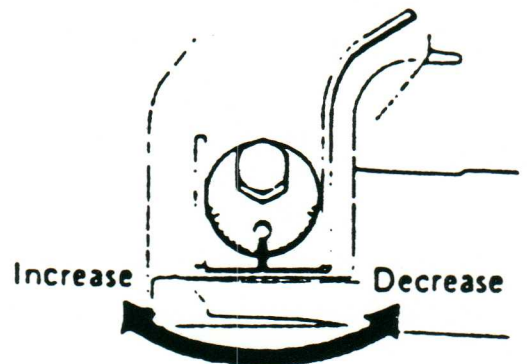
- Loosen and adjust the front and/or rear cam.

Front Adjusting Cam



EXAMPLE: Camber 1 00' Caster 2 30'

Rear Adjusting Cam



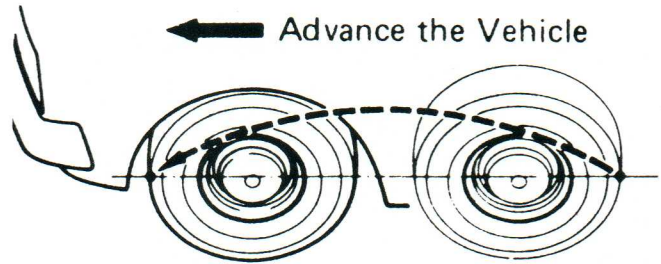
- The graph will now indicate the amounts by which the front and rear cams need to be adjusted.

Features

5. Torque the cam nuts to 2,800 Kg-cm (203 ft-lb, 275 N-m).

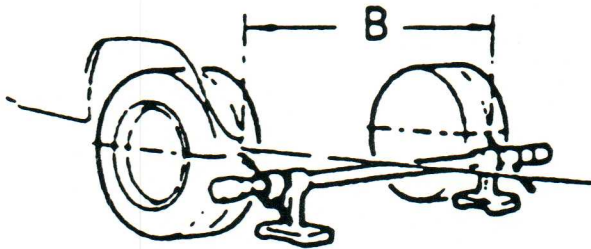
2WD AND 4WD TOE-IN ADJUSTMENT

1. Make sure the wheels are positioned straight ahead.

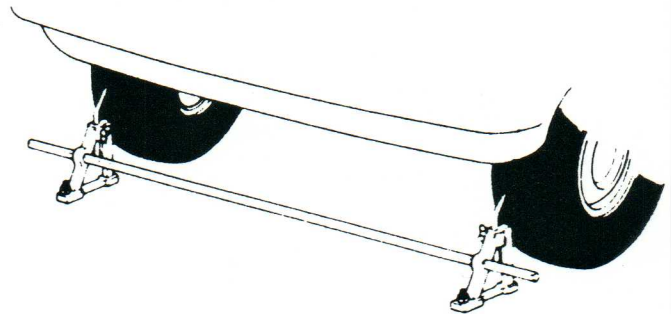


2. Mark the center of each rear tread at spindle height with chalk or paint.

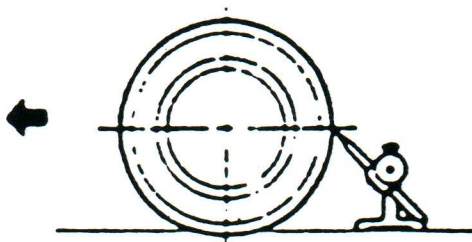
4. Roll the truck forward until the marks are now at the front of the tread at spindle height.



5. Measure the distance between the marks on the right and left tires.



Front



3. Measure the distance between the marks on the right and left tires.

6. Subtract this second measurement from the first to determine the toe-in. Toe-in specifications are listed in the charts below.

Features

Toe-in:

		mm (in.)	
	Tire	Inspection STD	Adjustment STD
1/2 ton Short	Bias	4 ± 4 (0.16 ± 0.16)	4 ± 1 (0.16 ± 0.04)
	Radial	1 ± 4 (0.04 ± 0.16)	1 ± 1 (0.04 ± 0.04)
1/2 ton Long	Bias	6 ± 4 (0.24 ± 0.16)	6 ± 1 (0.12 ± 0.04)
	Radial	3 ± 4 (0.12 ± 0.16)	3 ± 1 (0.12 ± 0.04)
1 ton, C & C	Radial	4 ± 4 (0.16 ± 0.16)	4 ± 1 (0.16 ± 0.04)

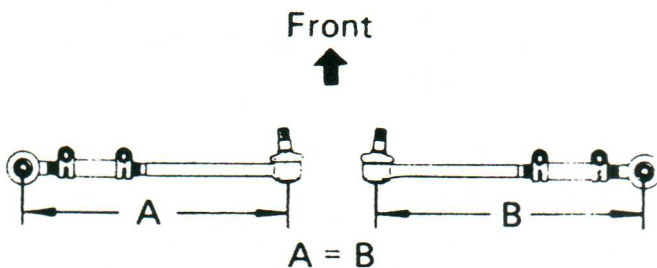
1984 - 1985

Toe-in:

		mm (in.)	
	Tire	Inspection STD	Adjustment STD
1/2 ton Short	Bias	4 ± 2 (0.16 ± 0.08)	4 ± 1 (0.16 ± 0.04)
	Radial	1 ± 2 (0.04 ± 0.08)	1 ± 1 (0.04 ± 0.04)
1/2 ton Long	Bias	6 ± 2 (0.24 ± 0.08)	6 ± 1 (0.24 ± 0.04)
	Radial	3 ± 2 (0.12 ± 0.08)	3 ± 1 (0.12 ± 0.04)
1 ton, C & C, 1/2 ton extra long	Radial	4 ± 2 (0.16 ± 0.08)	4 ± 1 (0.16 ± 0.04)

1986 - 1988

7. To adjust the toe-in, loosen the tie rod clamp bolts.

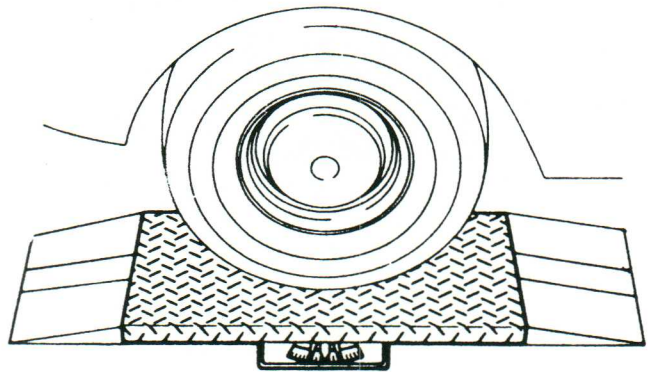


8. Adjust toe-in by turning the left and right tie rod tubes an equal amount.

CAUTION: Make sure the tie rods are the same length. Allowable left-right error is less than 3.0 mm (0.118 in.).

9. Once the toe-in is correct, tighten the tie rod clamp bolts and torque them to 260 kg-cm (19 ft-lb, 25 N-m).

10. Inspect the side slip using a slide slip tester. Side slip should be less than 3.0 mm/m (0.118 in./3.3 ft.). If the slip angle exceeds this limit, the toe-in or other front wheel alignment adjustments may not be correct.



11. Once all the adjustments have been made, test drive the vehicle and check to be sure that it does not "pull" to one side or the other when driven down a straight stretch of road.

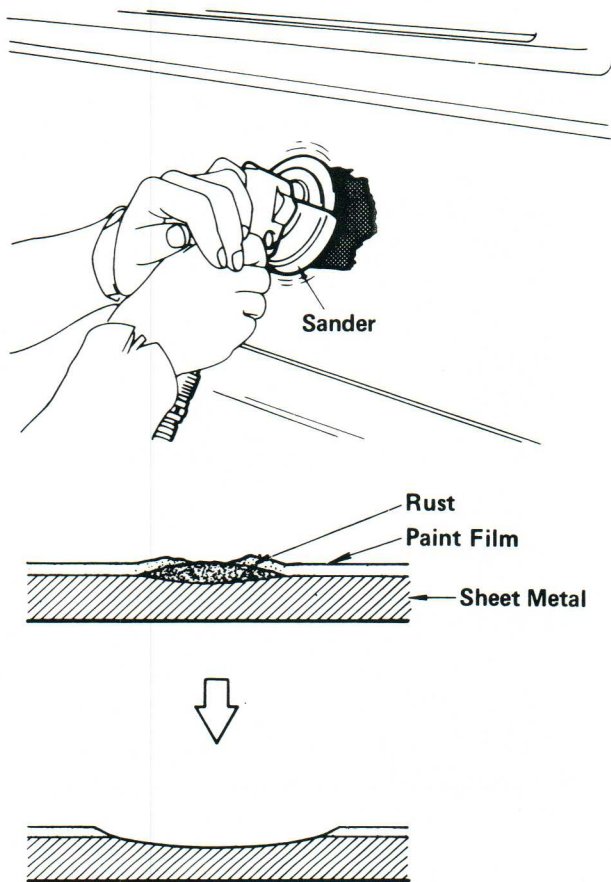
RUST REPAIR

MODEL APPLICATION: ALL

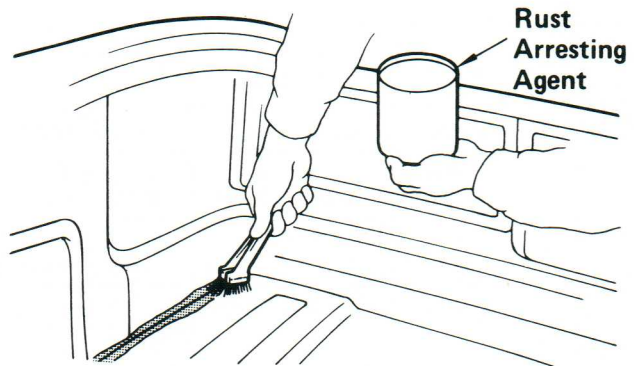
The passage of time, harsh environments and damage to body panels can cause rust to develop in steel body panels. If this rust is not removed and the panel repaired, it can eventually cause the metal to crumble into pieces. In repairing rusted panels, it is important not only to remove the existing rust, but to make repairs in such a way that the rust will not return. Repair methods vary depending on whether the rust is only on the surface of the metal, or has progressed to a point where the metal has been perforated.

SURFACE RUST REPAIR

1. Grind the rust from the panel with a sander.



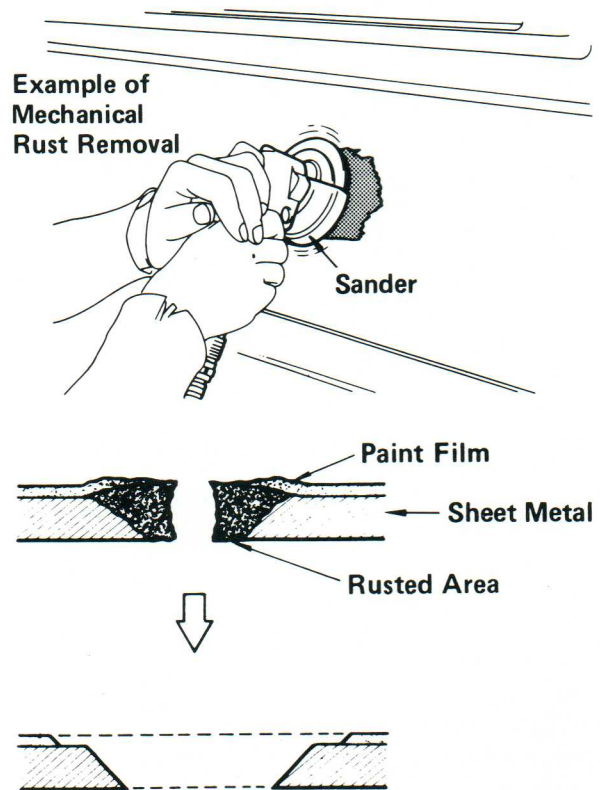
2. In areas where you cannot remove the rust, apply a rust arresting agent to stop the progress of the rust.



PERFORATION REPAIR USING FIBERGLASS

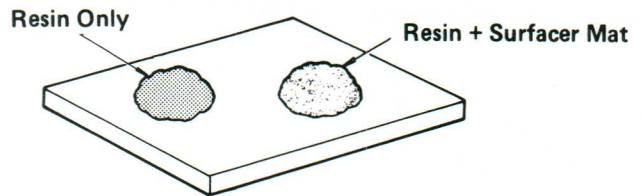
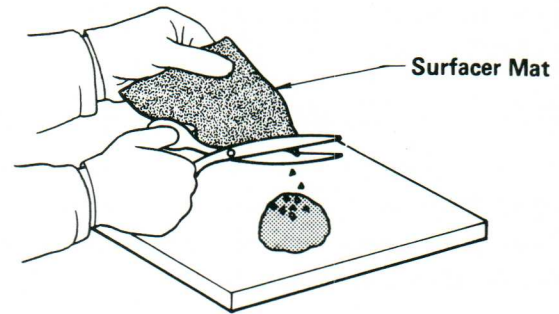
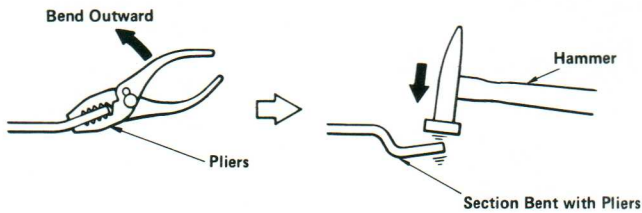
Fiberglass resin (FRP) can be used to repair holes up to roughly the size of an egg.

1. Grind off the corrosion and paint from the immediate and surrounding rusted areas.

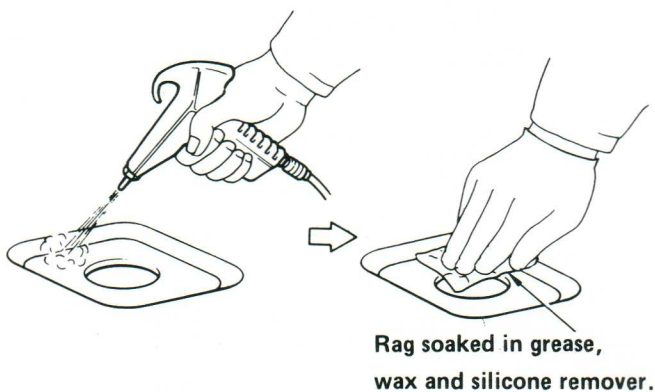


Features

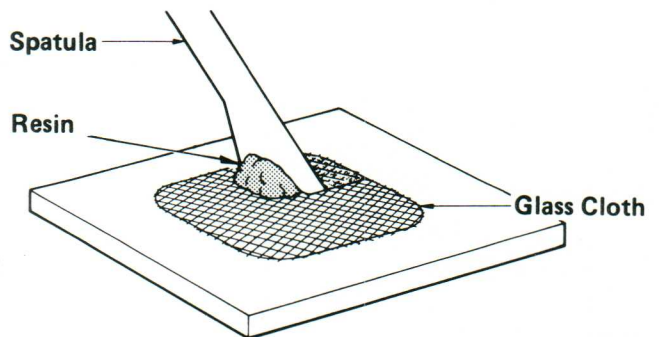
2. Apply a rust-arresting agent in areas where the rust can't be removed by mechanical means such as sanding.
3. Use a hammer and make a depression around the hole.
4. Lightly bend the edge of the hole outward using pliers, then form a flange or step using a body hammer.



5. Using an air gun, blow off the repair area. Then degrease thoroughly.



7. Divide the resin in half on your mixing board.
8. Add finely cut fibers from a piece of surfacer mat to one batch (half) of the prepared resin.
9. Cut a piece of glass cloth larger than the hole being repaired to fit inside the flange area.
10. Thoroughly impregnate the piece of glass cloth with the plain resin.



6. Mix the resin by measuring out the necessary amounts of resin and hardener on a mixing board. Blend until the color is uniform.

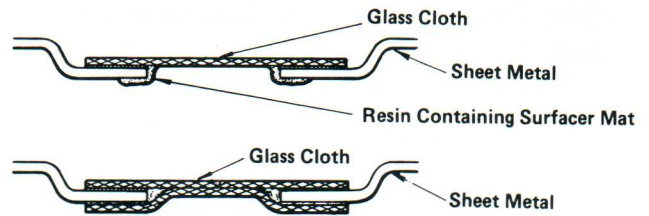
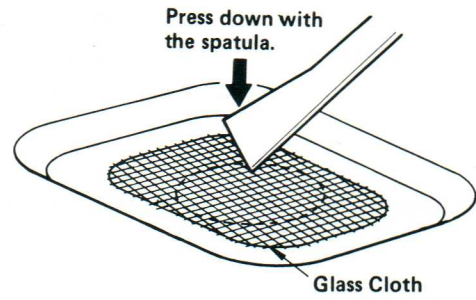
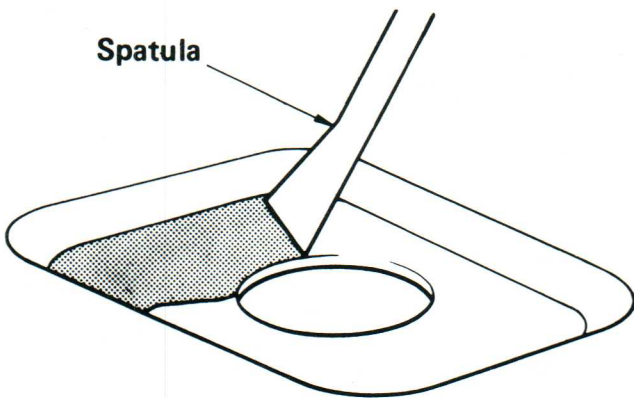
NOTE: The prescribed mixing ratio is generally 100 parts resin to two parts hardener.

RESIN IMPREGNATION

Features

11. Apply the plain resin evenly to the glass cloth application surface of the flange using a spatula.

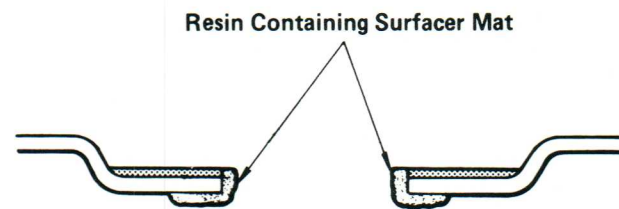
12. Apply the resin mixed with fibers to area surrounding the hole. Work the resin through the hole and around its edges.



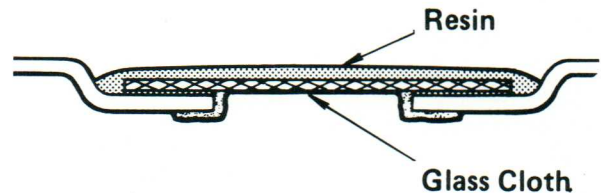
14. Apply the remaining resin on top of the glass cloth.

15. When the resin thickens a little, add more glass cloth.

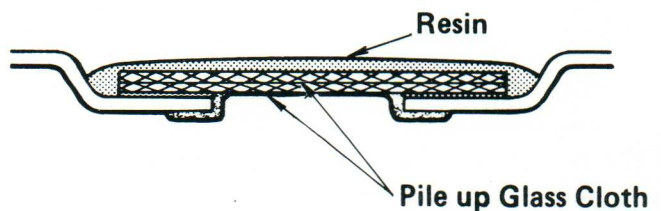
CAUTION: Do not build up the thickness using resin alone. This repair could crack later. Build up the surface using cloth coated in resin.



First Step



Second Step



13. Position the impregnated glass cloth over the hole and press down on the circumference with a spatula to make sure it adheres tightly.

NOTE: If you can get at the back side of the panel, apply glass cloth to both sides for added strength.

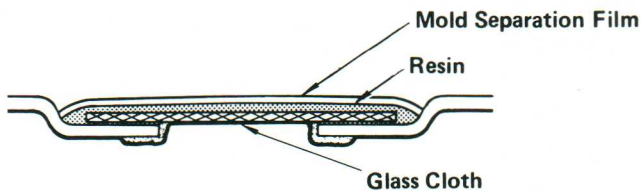
Features

16. Force dry the resin.

CAUTION: Do not exceed 60 degrees C (140-degrees F). This can cause the resin to dry too quickly, discolor, and eventually crack.

NOTE: If you apply a sheet of mold separation film on the surface, the resin will dry more quickly.

17. When the resin is dry, smooth the surface with a power sander.



NOTE: It is easy for pores to form in the resin repair material, so sand the patch a little lower than the final finish surface and apply poly putty for final finishing.

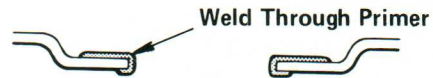
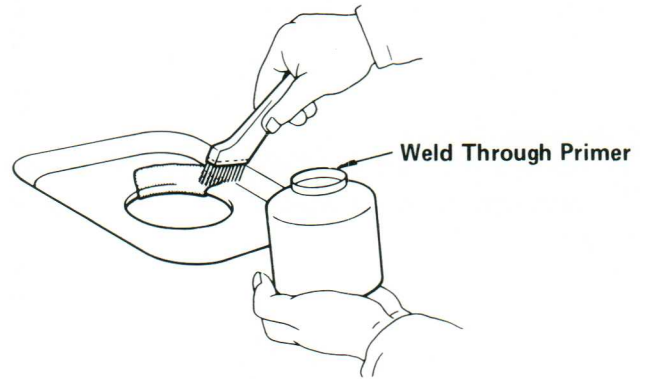
PERFORATION REPAIR USING A SHEET METAL PATCH

For holes larger than roughly an egg, the most efficient repair is made by applying a metal patch over the perforation hole.

1. Grind off the corrosion and paint from the immediate and surrounding rusted areas.

2. Apply a rust-arresting agent in areas where the rust can't be removed by mechanical means such as sanding.

3. Use a hammer and make a depression around the hole.

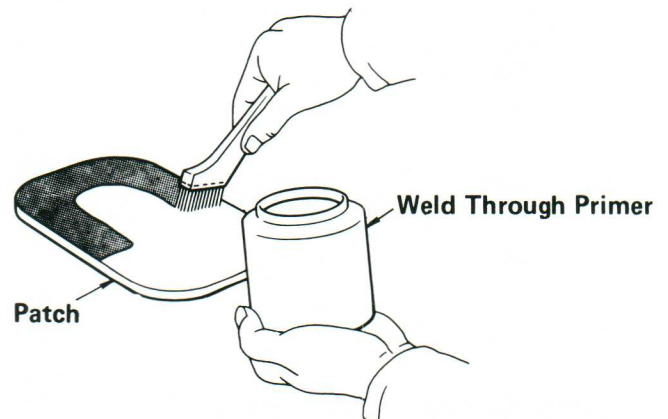


4. Coat the patch area with weld-through primer. Be sure to apply primer to both sides of the panel if possible.

5. Cut a patch from sheet metal larger than the hole to be repaired and sized to fit inside the flange area.

NOTE: If the hole to be repaired is comparatively large, be sure to use a piece of sheet metal of the same or higher grade material.

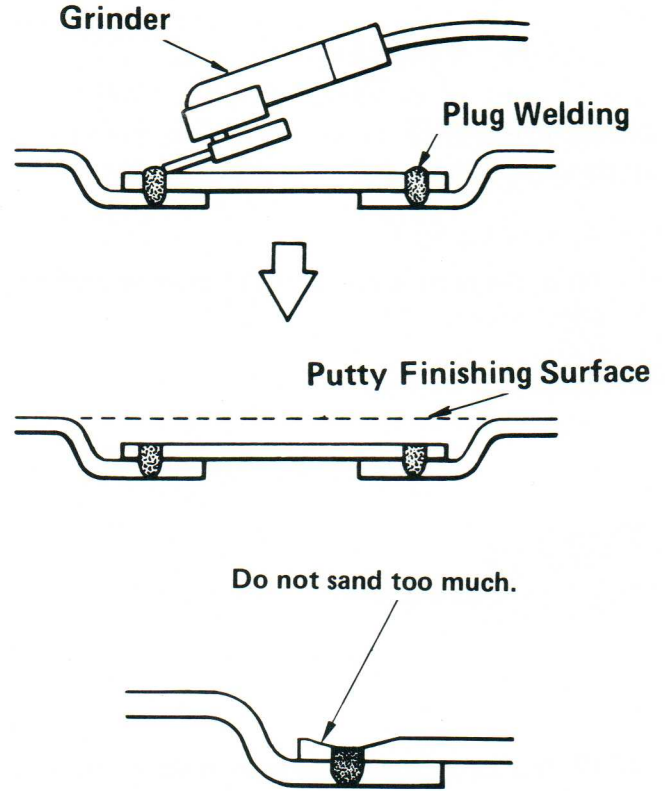
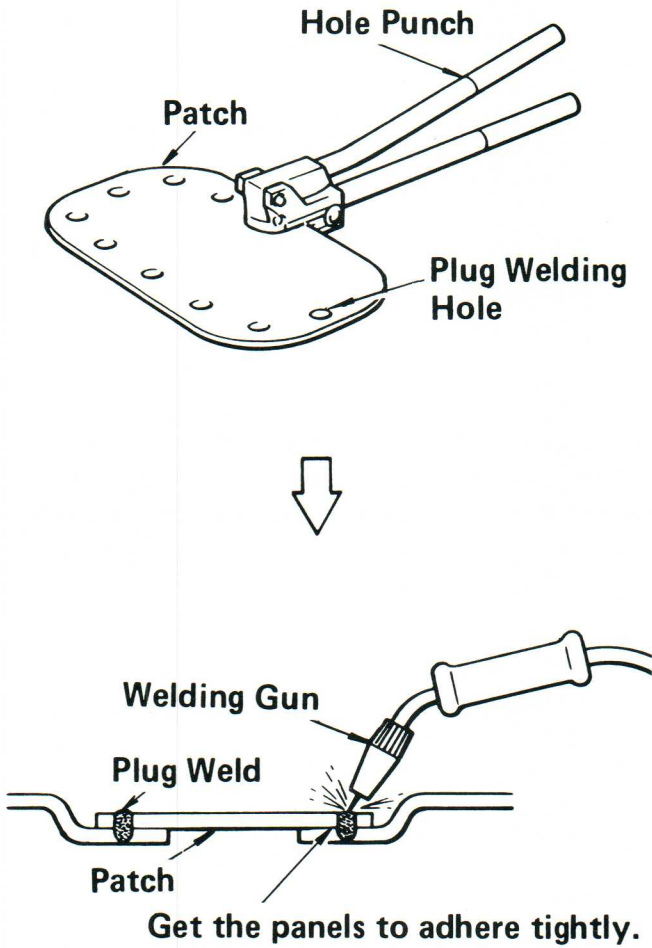
6. Apply weld-through primer to the sheet metal patch.



Features

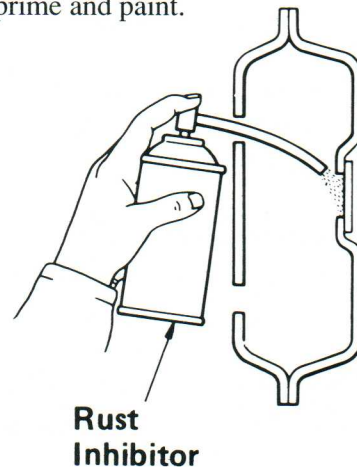
7. Punch plug welding holes into the sheet metal patch.

8. Weld the patch into position over the hole making sure the panel adheres tightly.



11. If accessible, use anti-rust treatment on the back side of the repaired panel. In areas where body sealer cannot be applied, apply a rust inhibitor using service holes, etc.

12. Finish, prime and paint.



9. Grind the surface of the welded areas smooth.

10. Grind the panel down slightly below the final finish level so that poly putty can be applied as the final finish surface.

TORQUE CONVERTER MOUNTING BOLTS

MODEL APPLICATION: AUTOMATIC TRANSMISSIONS WITH LOCK-UP TORQUE CONVERTERS

When reinstalling the transmission assembly after repair or replacement, it is critical that the correct torque converter mounting bolts are used. The use of longer-than-standard torque converter bolts results in a projection on the front cover of the torque converter. This projection can internally damage the torque

converter lock-up clutch disc and cause premature wear to the lock-up clutch material.

In addition, material from the lock-up clutch may contaminate the transmission and valve body requiring additional repairs.

The proper torque converter bolt set applications are listed in the following chart.

NOTE: When replacing a transmission in which the fluid has become contaminated, you must flush and clean all components including the valve body, transmission cooler and lines.

TORQUE CONVERTER SET BOLT				
MODEL	PROD. DATE	PART NUMBER	LENGTH	Q'TY.
EL3#	8/86-9/86	90109-08107	12MM	1
		90119-08269	"	5
	9/86-	90109-08113	"	1
		90119-08498	"	5
AE9#	8/87-	90109-08113	"	1
		90119-08498	"	5
AW15 (4A-GE)	8/85-	90109-08113	"	1
		90119-08498	"	5
AW16 (4A-GZE)	8/87	90119-09010	12.8mm	1
		90119-09010	"	5
ST1#, SV2#	8/85	90109-08113	12mm	1
		90119-08498	"	5
VV2#	2/88	90119-09010	12.8mm	1
		90119-09009	"	5
MA7#	1/86	90119-09010	"	1
		90119-09009	"	5
MX7#	8/84-1/85	90109-08107	12mm	1
		91611-60812	"	5
	1/85-8/88	90109-08113	"	1
		90119-08498	"	5
MX83	1/88-	90119-09010	12.8mm	1
		90119-09009	"	5
YR2#	8/83-8/85	90109-08107	"	1
		91611-60812	12mm	5
YR2#, 3#	8/85-	90119-08519	10.5mm	1
		90119-08520	"	5
RN5#, 6#	3/83-5/85	90109-08107	12mm	1
		91611-60812	"	5
RN5#, 6#, 7#	5/85-8/87	90109-08113	12mm	1
		90119-08498	"	5
	8/87-	* 90119-09010	12.8mm	1
		* 90119-09009	"	5

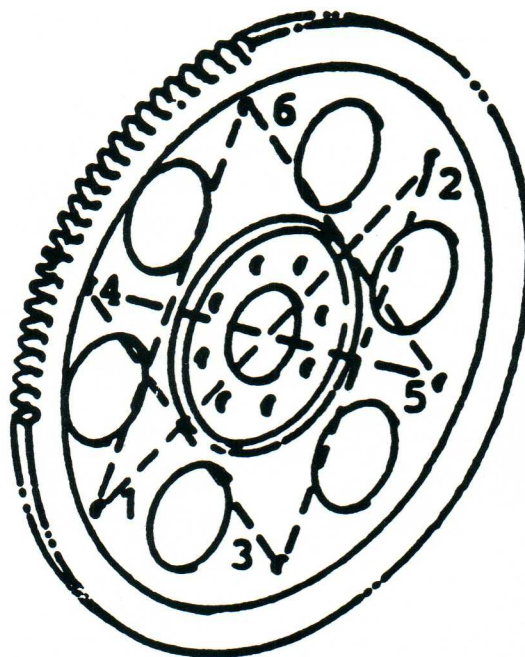
TORQUE CONVERTER SET BOLT				
MODEL	PROD. DATE	PART NUMBER	LENGTH	Q'TY.
RN8#, 9#, 1##	8/88-	90119-09010	"	1
		90119-09009	"	5
VN6#, 8#, 9#, 1##	11/87-	90119-09010	"	1
		90119-09009	"	5
FJ62	8/87-	90119-08523	14mm	1
		90119-08497	"	5

NOTE: One of the torque converter mounting bolts is a different color than the remaining five. This bolt must be installed first and **HAND TIGHTENED ONLY**. This bolt is used to center the flexplate onto the torque converter.

3. Progressively torque all six bolts in a three step process and in the cross pattern shown in the illustration below. Refer to the factory service manual for torque specifications.

MOUNTING BOLT INSTALLATION PROCEDURE

1. Install colored bolt and hand-tighten to center flex plate.
2. Install remaining five bolts and **HAND-TIGHTEN** only.



AUTOMATIC TRANSMISSION COOLER FLUSHING

MODEL APPLICATION: ALL AUTOMATIC-TRANSMISSION – EQUIPPED VEHICLES

When installing a new transmission or overhauling the existing transmission, it is critical that the transmission cooler and lines be flushed to remove all contaminated fluid.

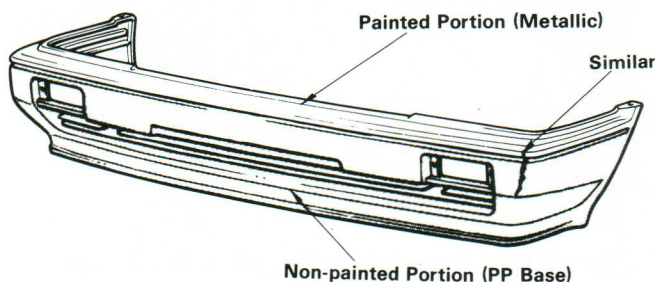
This contamination is caused by worn and failed transmission components from the vehicle's original transmission. This contamination, if not removed, can greatly affect the performance and durability of the remanufactured, overhauled or new unit you install. To flush the cooler and lines, follow these procedures:

1. Remove both rubber hoses connecting the transmission cooler lines at the transmission assembly.
2. Insert the end of the INLET hose into a container to catch the ATF and residue that will be expelled from the cooler and the lines.
3. Using an OSHA-approved air nozzle, blow compressed air (at approximately 50 psi) into the OUTLET hose.
4. Continue to blow air into the line until all traces of fluid are removed.
5. Fill the cooler and lines with clean ATF and repeat the flushing process.
6. Fill the cooler with ATF and connect the cooler lines to the transmission.

REPAINTING RESIN BUMPERS

MODEL APPLICATION: ALL

Resin or polypropylene bumpers used on Toyota cars come in either a tinted base material such as black or gray, or are color-keyed to the body color. The paint, as well as the painting procedures, used on resin bumpers differs significantly from those used on metal parts. A special primer and a softening agent in the top coat help to ensure proper bonding while reducing peeling.



RESIN BUMPER PREPARATION

1. Feather-edge DRY sand the damaged area using #240-320 abrasive paper.
2. Degrease and clean the entire bumper. Insufficient cleaning can result in peeling and beading so degrease carefully and thoroughly.
3. Apply resin bumper primer over entire bumper.
NOTE: Apply primer in several thin coats rather than one thick coat.
4. Allow a 10-minute setting time, then pre-heat at 30-40 degrees C (86-104 degrees F) for 10-20 minutes.
5. Force dry at 70-80 degrees C (158-176 degrees F) for 40-50 minutes.

CAUTION: Polypropylene bumpers are made of thermoplastic resin. Forced drying over 100 degrees C (212 degrees F) can result in deformation.

NOTE: The resin primer is very soft so be careful not to scratch it.

RESIN BUMPER REPAIR

1. Thoroughly mix equal parts of epoxy resin adhesive filler agents A and B.
2. Apply filler over the entire damaged area, being careful to prevent air bubbles.
3. Allow a set-up time of five minutes, then force dry at 50 - 60 degrees C (122 - 144 degrees F) for 20 - 30 minutes.
4. Wet sand the damaged area using #400 grit abrasive paper.
5. Using silicone solvent or comparable cleaner, degrease the surface thoroughly.
6. Primer the repaired area with a thin coat and allow at least a five-minute flash time.
7. Decrease the air pressure of the spray gun and form a narrow orange-peel like pattern.
8. After application, allow a 10-minute set-up time.
9. Pre-heat at 30-40 degrees C (86-104 degrees F) for 10-20 minutes.
10. Force dry at 70-80 degrees C (158-176 degrees F) for 40-50 minutes.

APPLYING TINTED BASE COLOR (Black, Gray, etc.)

1. Using a silicone solvent or comparable cleaner, degrease the entire bumper.
2. Spray a thin coat of paint on the entire bumper surface.
3. Match the color, apply the paint in several thin coats.
4. Allow a setting time of at least five minutes.
5. Apply a final dry coat.

NOTE: Be careful to use the correct amount of

softening agent to the paint and stir thoroughly. If an insufficient softening agent is used, the surface will lack the necessary flexibility. Too much softening agent will reduce the waterproofing effectiveness. Apply the paint about 10 minutes after mixing.

6. After application of base color, allow a 10-minute set-up time.
7. Pre-heat at 30-40 degrees C (86-104 degrees F) for 10-20 minutes.
8. Force dry at 70-80 degrees C (158-176 degrees F) for 40 -50 minutes.

APPLYING METALLIC COLORS

CAUTION: Do not allow more time than necessary between application of the force-dried primer and the top coat. If allowed to set for more than two days, adherence between the two coats will be reduced.

1. LIGHTLY polish the area to be painted using #600- #900 grit abrasive paper.
2. Mask off the areas that will not be painted.
3. Using a silicone solvent or comparable cleaner, degrease the area to be painted.
4. Apply the metallic enamel paint.
5. Apply a thin clear coat of metallic enamel.
6. Apply a dry coat of clear metallic enamel.
7. After the application of the clear coat, allow a 10 minute set-up time. Pre-heat at 30-40 degrees C (86-104 degrees F) for 10- 0 minutes.
8. Force dry at 70-80 degrees C (158-176 degrees F) for 40-50 minutes.

CAUTION: The paint film is still soft and easily damaged after forced drying. Allow the bumper to stand at room temperature for two - three hours before reassembly.

COMPACT OIL FILTER TEST RESULTS

MODEL APPLICATION: ALL

Ever since Toyota introduced its compact oil filter, people have wondered how effective it really is. According to a series of independent tests carried out by the Nationwide Consumer Testing Institute, the new compact Toyota oil filter out performs major aftermarket brands such as AC Delco, Lee, Purolator and Fram in filter capacity, and is unsurpassed in filter life.

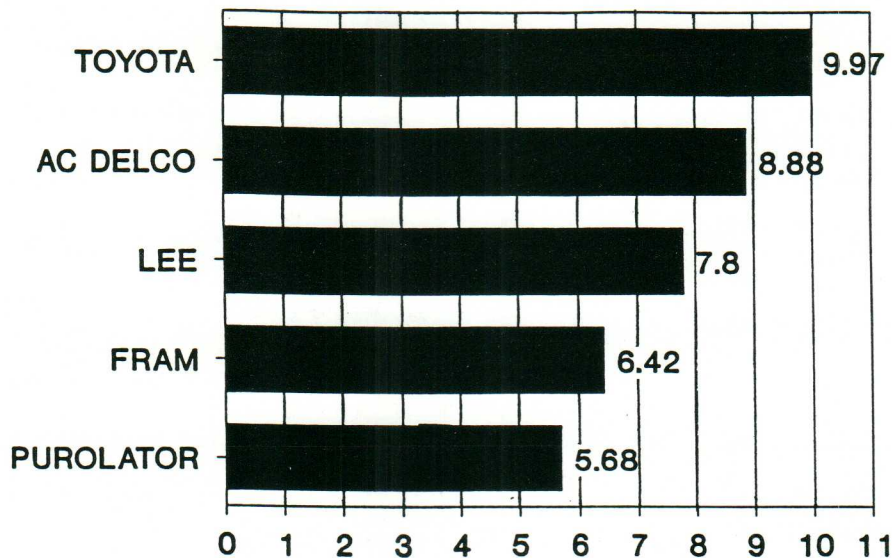
Part of the reason for the superior performance of the compact Toyota filter is the patented folding process which allows more filter material to be contained in a smaller filter canister.

The real test of a filter is how much contaminant it removes. Here, the Toyota compact filter was unbeaten, removing more contaminants than every one of the major competitive brands.

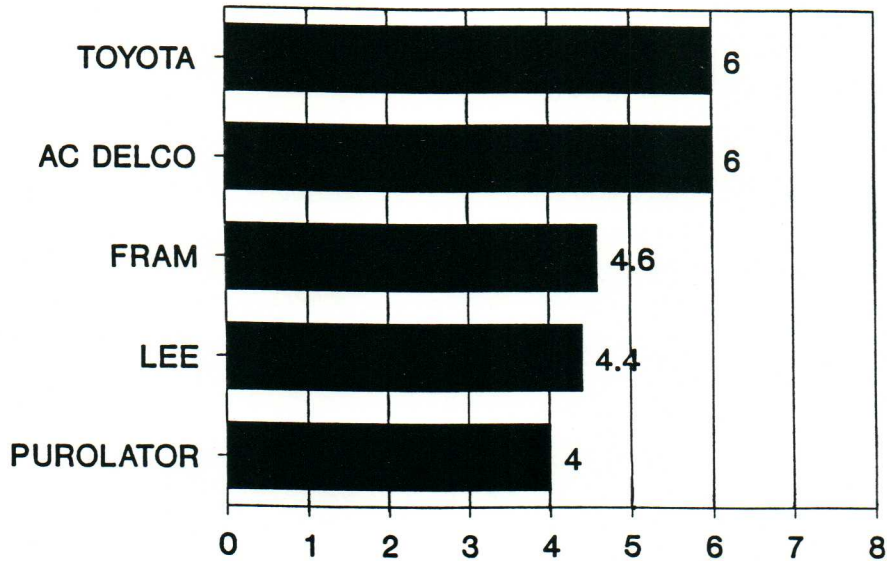
The Toyota filter removed 12 percent more contaminants than the AC Delco unit, 22 percent more than Lee, 55 percent more than Fram, and an impressive 75 percent more than Purolator.

When it comes to filter life, no filter is superior to the compact Toyota filter. In this test, researchers added a constant amount of contaminants to the oil and circulated it through the filter following the procedures specified by the Society of Automotive

**FILTER CAPACITY IN GRAMS
TOYOTA VS THE COMPETITION**



FILTER LIFE IN HOURS TOYOTA VS THE COMPETITION



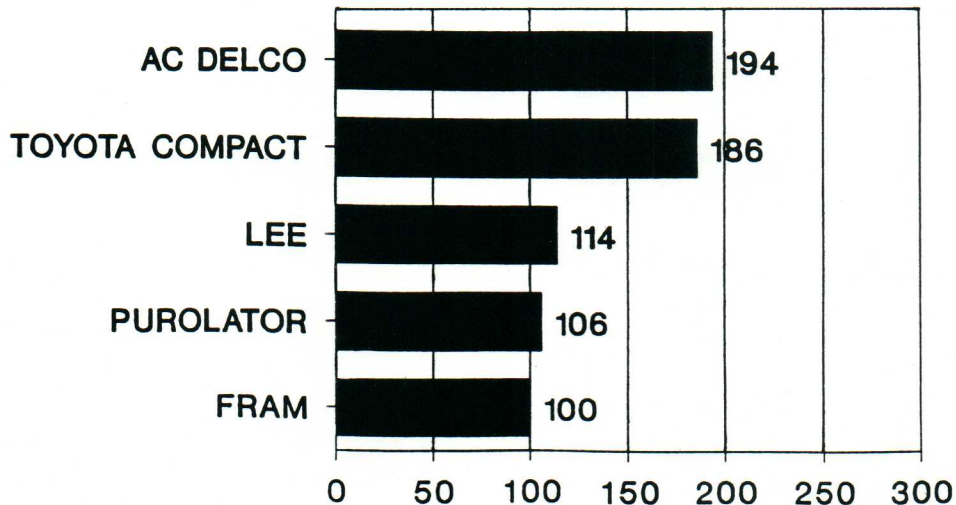
Engineers (SAE). The Toyota filter, as well as the filter from AC Delco, lasted 30% longer than Fram, 36% longer than Lee and 50% longer than Purolator.

The Toyota compact filter has dramatically more filtering area than comparable filters from Lee,

Purolator and Fram. Only AC Delco has a comparable amount of filtering area.

In short, the Toyota compact oil filter removed the most engine damaging contaminants of all brands tested, the primary job of an oil filter.

FILTER MEDIA SURFACE AREA SQ IN TOYOTA VS THE COMPETITION



1984 - 1988 2WD/4WD TRUCK

ENGINE

	22R	22RE	22R-TE
Model	22R	22RE	22R-TE
Type	4-cylinder in-line SOHC		
Displacement	144.4 cu. in. (2366 cc)		
Bore & Stroke	3.62 X 3.50 in. (92.0 X 89.0 mm)		
Horsepower @ rpm	103 @4800 [1]	116 @4800 [2]	135 @4800
Torque (ft-lb) @ rpm	133 @2800 [3]	140 @2800 [4]	173 @2800
Valve Clearance (hot)			
Intake(in)	0.008 (0.20 mm)		
Exhaust(in)	0.012(0.30mm)		
Idle Speed rpm	950		

IGNITION SYSTEM

Spark Plug Type			
Nippondenso	W16EXR-U		
NGK	BPR5EY		
Spark Plug Gap (in)	0.031 (0.8 mm)		
Firing Order	1-3-4-2		
Ignition Timing	0 BTDC @ max 950 rpm	5 BTDC	5 BTDC
		w/vacuumadvanceOFF	w/Tterminal shorted

COOLING SYSTEM

Capacity w/ Heater (qt)	8.9 (8.4 liter)		
Radiator Cap Pressure (psi)	11 - 15 (0.75 - 1.05 kg/cm ²)		
Thermostat Opening Temperature (F)	190 (88 C)	190 (88 C)	180(82 C)

LUBRICATION

Oil Capacity w/Filter (qt)	4.9 (4.6 liter)	Drain/refill 5.1 (4.8 liter)	Dry fill
Oil Filter Capacity (qt)	.9 (.8 liter)		
Oil Grade	API grade SF or better		

1984 - 1988 2WD/4WD TRUCK (continued)

ELECTRICAL

	22R	22RE	22R-TE
Model			
Battery			
Volts	12		
Amp Hours	50 [5]		
Alternator			
Volts	12		
Amperes	60		
Starter Motor			
Volts	12		
kW	1.0 [6]		

TRANSMISSION

Capacity (qt)			
W46 Manual	2.9 (2.7 liter)		
W52 Manual	2.7 (2.6 liter) 2WD		
W55 Manual		2.5 (2.4 liter)	
W56 Manual		2.5 (2.4 liter) 2WD	
		3.2 (3.0 liter) 4WD	
G52 Manual	4.1 (3.9 liter) 4WD		
A43D Automatic	6.9 (6.5 liter) 2WD Dry Fill		
	2.5 (2.4 liter) 2WD Drain & Fill		
A340E Automatic			7.3 (6.9 liter) 2WD
A340H Automatic			10.9 (10.3 liter) 4WD
Transmission Oil			
Manual	API GL-4, SAE 75W - 90		
Automatic	DEXRON II		

DIFFERENTIAL

Capacity (qt)	
2WD SB/LB	1.8 (1.7 liter)
2WD Turbo, Cab Chassis	1.9 (1.8 liter)
4WD Rear	2.3 (2.2 liter)
4WD Front	2.4 (2.3 liter)
Differential Oil	API GL-5, SAE 90 SAE 80W - 90 (below 0 F)

[1] 100 hp @ 4800 rpm in 1984 (Fed)

96 hp @ 4800 rpm in 1984 (Cal)

[2] 129 ft-lb at 2800 rpm in 1984

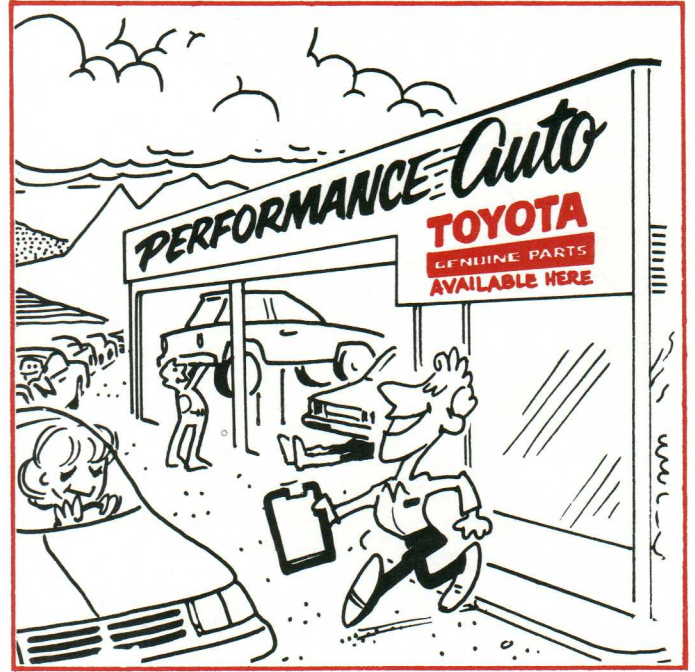
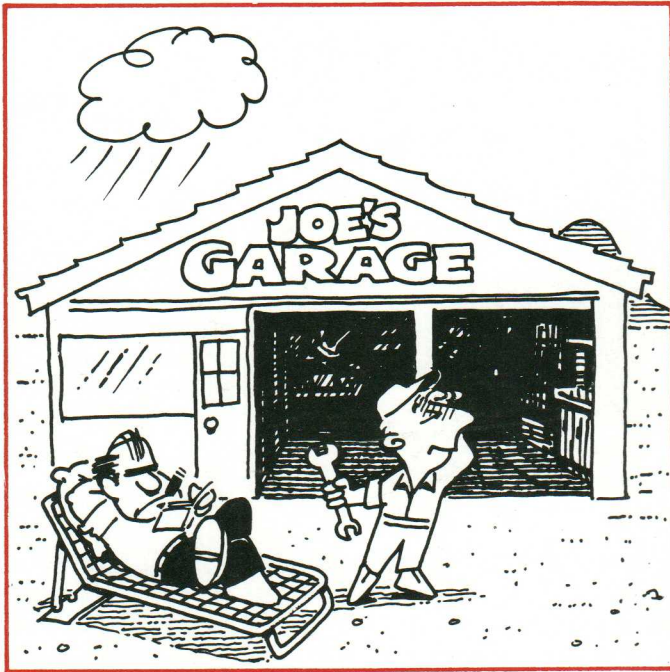
[3] 105 hp at 4800 rpm in 1984

[4] 137 ft-lb @ 4800 rpm in 1984

[5] 60A-hour with All Weather Guard

[6] 1.4kW with All Weather Guard

Traffic Sign.



When the flow of traffic into your shop is stop-and-go, it definitely can slow down your profitability.

But there's one sure way to attract more customers: Display Toyota Genuine Parts signage.

A Toyota Genuine Parts sign in your window or outside your shop says a lot of good things about you: That you're a professional. That you're concerned with providing excellent work. That you offer the

quality and value of Toyota Genuine Parts.

Toyota Genuine Parts signage sets your shop apart from the rest. It's a sign Toyota owners trust. And it's a sign that you care about a job well done.

Ask your Toyota dealer how you can get Toyota Genuine Parts signage for your shop.

Once Toyota owners know you're part of the team, there'll be no stopping them.

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