State of California AIR RESOURCES BOARD

EXECUTIVE ORDER D-220
Relating to Exemptions Under Section 27156
of the Vehicle Code

MECROM USA, INC. FUEL EZ GAS CAP

Pursuant to the authority vested in the Air Resources by Section 27156 of the Vehicle Code; and

Pursuant to the authority vested in the undersigned by Section 39515 and 39516 of the Health and Safety Code and Executive Order G-45-5;

IT IS ORDERED AND RESOLVED: That the installation of the Fuel -EZ gas cap manufactured for Mecrom USA, Inc. of 4144 Haywood Road, Horse Shoe, North Carolina 28742, has been found not to reduce the effectiveness of required motor vehicle pollution control devices, and therefore is exempt from the prohibitions of Section 27156 of the Vehicle Code for 1991 and older motor vehicles with screw or cam type gas caps.

Changes made to the design or operating conditions of the device, as exempted by the Air Resources Board, that adversely affect the performance of a vehicle's pollution control system shall invalidate this Executive Order.

Marketing of this device using an identification other than that shown in this Executive Order or marketing of this device for an application other than those listed in this Executive Order shall be prohibited unless prior approval is obtained from the Air Resources Board. Exemption of a kit shall not be construed as an exemption to sell, offer for sale, or advertise any component of the product as an individual device.

This Executive Order does not constitute any opinion as to the effect that the use of this device may have on any warranty either expressed or implied by the vehicle manufacturer.

THIS EXECUTIVE ORDER DOES NOT CONSTITUTE A CERTIFICATION, ACCREDITATION, APPROVAL, OR ANY OTHER TYPE OF ENDORSEMENT BY THE AIR RESOURCES BOARD OF ANY CLAIMS OF THE APPLICANT CONCERNING ANTI-POLLUTION BENEFITS OR ANY ALLEGED BENEFITS OF THE MECROM USA, INC.'S FUEL EZ GAS CAP.

No claim of any kind, such as "Approved by the Air Resources Board" may be made with respect to the action taken herein in any advertising or other oral or written communications.

Violation of any of the above conditions shall be grounds for revocation of this order. The order may be revoked only after ten day written notice of intention to revoke the order, in which period the holder of the order may request in writing a hearing to contest the proposed revocation. If a hearing is requested, it shall be held within ten days of receipt of the request and the order may not be revoked until a determination after hearing that grounds for revocation exist.

Executed at El Monte, California, this day of June, 1991.

R.B. Summerfield

Assistant Division Chief Mobile Source Division

State of California AIR RESOURCES BOARD

EVALUATION OF MECROM USA, INC. FUEL EZ GAS CAP FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF THE CALIFORNIA CODE OF REGULATIONS

State of California AIR RESOURCES BOARD

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SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF THE
CALIFORNIA CODE OF REGULATIONS

by

Mobile Source Division State of California Air Resources Board 9528 Telstar Avenue El Monte, CA 91731

(This report has been reviewed by the staff of the California Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Air Resources Board, nor does the mention of trade names or commercial products constitute endorsement or recommendation for use.)

SUMMARY

Mecrom USA, Inc., of 4144 Hayward Road, Horse Shoe, North Carolina 28742 has applied for an exemption for the Fuel EZ gas cap from the prohibitions of Section 27156 of the California Vehicle Code. Fuel EZ gas cap replaces the OEM fuel cap of 1991 and older model year vehicles (see Appendix for vehicle applications). Fuel EZ gas caps are available in two models, screw type and cam type. The fuel cap is designed with a special self-closing trap door so that the vehicle's fuel tank may be refueled without the cap's removal.

Based on results from a comparative SHED evaporative emissions test and a durability test conducted at an independent laboratory and verified at the Air Resources Board's Haagen-Smit laboratory, the staff concludes that Mecrom USA Inc.'s Fuel EZ fuel cap will not adversely affect exhaust emissions from vehicles for which an exemption is requested.

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EVALUATION OF MECROM USA, INC. FUEL EZ GAS CAP FOR EXEMPTION FROM THE PROHIBITIONS OF VEHICLE CODE SECTION 27156 IN ACCORDANCE WITH SECTION 2222, TITLE 13, OF THE CALIFORNIA CODE OF REGULATIONS

I. <u>INTRODUCTION</u>

Mecrom USA, Inc., of 4144 Hayward Road, Horse Shoe, North Carolina 28742 has applied for an exemption for the Fuel EZ gas cap from the prohibitions of Section 27156 of the California Vehicle Code. Fuel EZ fuel gas cap replaces the OEM fuel cap of 1991 and older model year vehicles (see Appendix for vehicle applications). The fuel cap is designed with a special self-closing trap door so that the vehicle's fuel tank may be refueled without the cap's removal.

II. <u>CONCLUSIONS</u>

Based on results from a comparative SHED evaporative emissions test and a durability test conducted at an independent laboratory and verified at the Air Resources Board's Haagen-Smit laboratory, the staff concludes that Mecrom USA Inc.'s Fuel EZ fuel cap will not adversely affect exhaust emissions from vehicles for which an exemption is requested.

III. <u>RECOMMENDATION</u>

The staff recommends that Mecrom USA, Inc. be granted an exemption for the Fuel EZ fuel cap for installation on 1991 and older model-year vehicles and that Executive Order D-220 be granted.

IV. <u>DESCRIPTION</u>

Fuel EZ fuel cap is molded from a reinforced fiberglass which is impervious to gasoline and gasoline vapors. Two types of seals are used to prevent fuel tank vapors from escaping into the atmosphere. The first is an

"O" ring to seal the cap to the vehicle's filler neck. The second seal is sandwiched beneath the caps face and a normally closed, oval shaped, spring loaded trap door. A 360 degree seal is obtained when the trap door is closed against the smaller diameter cap face. The cap comes in two models; a screw type and a cam type model. Both models are 2.5 inches wide and 2.0 inches high with the trap door opening at 1.25 inches in diameter. The screw type is 2.0 inches high, while the cam type is only 1.5 inches.

The Fuel EZ consists of three parts: top cover, main body, and trap door. The round cover with dimensions of 2.5" x 1.0" is tapered at the top, allowing the cap to make contact with the vapor recovery boot on fuel filler nozzle. Two clips, spaced equally apart, hold the body and the cover together which can only be separated when squeezed together. The bottom side of the cap is cut out to not interfere with the operation of the trap door. A previous design did not have this cut out and the trap door would disengage from the body when the trap door was opened to its full extent. To solve this problem, the trap door was re-designed to be part of the body making it impossible to disengage.

Fuel EZ is only designed for vehicles listed in the Appendix. Using the Fuel EZ in vehicles other than those specified in Appendix could cause the fuel filler nozzle not to open the trap door in the filler neck of the gas tank, resulting in a fuel splash back.

V. DISCUSSION

A 1991 Ford Mustang was chosen as the test vehicle to determine the impact of the device on evaporative emissions test. A baseline evaporative emissions (SHED) test was performed on the test vehicle. Following the baseline evaporative emission testing, a durability evaluation was performed

in which a fuel filler nozzle was inserted 100 times into the Fuel EZ while installed on the test vehicle. One tenth of a gallon of fuel was pumped into the vehicle's fuel tank on the initial and on every fifth cap duration cycle. The purpose of pumping fuel is to lubricate the seal area with gasoline and expose fuel to the materials in this area as normally would occur during refueling. This durability test is designed to simulate two years usage of the cap and to determine if the cap's control of gasoline vapors would be affected by the use. After this procedure, another SHED test was conducted with the Fuel EZ installed on the vehicle.

The difference between the SHED with the device test results and baseline SHED test results indicated that total evaporative emissions are within the allowable limits of 0.2 grams (see Appendix). Therefore, the installation of the Fuel EZ gas cap did not have an adverse effect on evaporative emissions of the test vehicle. The staff recommends that Executive Order D-220 be granted to Mecrom USA, Inc.

APPENDIX

TEST RESULTS

Test vehicle: 1991 Ford Mustang 5.0L

Engine Family: MFM5.0V5HBG7

Fuel Capacity: 15.4 gallons (40% fill = 6.2 gallons)

Odometer: 9,015 miles

INDEPENDENT TEST LABORATORY:

Automotive Testing and Development Services, Inc.

15442 Chemical Lane

Huntington Beach, CA 92649

Test Cap	Diurnal(Cold)	Hot Soak	Total (grams)
OEM Cap Test 1	0.205	0.136	0.341
Z Cap Test 1 ع	0.438	0.135	0.573
EZ Cap Test 2	0.088	0.136	0.224
OEM Cap Test 2	0.178	0.129	0.307
Average OEM Cap	0.192	0.132	0.324
Average Fuel EZ Cap	0.264	0.136	0.399
Difference	+0.072	+0.004	+0.075
Percent Difference	+38%	+1%	+23%

CONFIRMATORY TESTING

ARB's Haagen-Smit Laboratory

Test Cap	Diurnal(Cold)	Hot Soak	Total (grams)
OEM Cap Test 1	0.330	0.130	0.460
EZ Cap Test 1	0.460	0.180	0.640
Difference	+0.130	+0.050	+0.180
Percent Difference	+39%	+28%	+39%



EFUJELEZ.

The revolutionary new fuel filler cap from Mecrom USA

1990-91 APPLICATION CHART

ACURA			BUICK		
Integra				Floates Catalante	
1990-88	All	Cam type	Lindend Da	Electra, Estate Wagon, Invicta, Let	Sabre,
Legend	****	Cam type	1981-75	ark Avenue, Riviera, Roadmaster, W	
1990-86	All	Com turn		All	Screw type
.000 00	Au .	Cam type	Apollo, Cel	ntury, Gran Sport, GS, Regal, Speci	ial,
AUDI			Skylark, Sc	merset, Somerset Regal, Sportwag	
Quattro			1989-75	All	Screw type
1988	A.14	_	Skyhawk	• • •	
1987-86	All	Cam type	1989-82	All	Screw type:
1985-82	All (exc. Turbo)	Cam type	Clectra, Le	Sabre, LeSabre Wagon, Century,	
60, 72, 75, 80	All	Cam type	Regal, Skyl		
1989-88		_	1990	All	Screw type
	All	Cam typę	Reatta, Rivi	-	
1989	00L, 100LS, Coupe		1990-88	All	Screw type
	Sta. Wag. uattro, Wagon	Cam type		•	
1989		_			
	All	Cam type	CADILL	AC	
	oupe, 4000 Quattro		1989-75	All (exc. Allante)	_
1987-80	All	Cam type		All (exc. Allante)	Screw type
	rbo, Coupe, GT		1990	etwood, Eldorado, Seville	
3-65	All (exc. Turbo)	Cam typę	1550	All	Screw type
19877-85	All Turbo	Cam type		÷	-
1984	Ail	Cam type			
1983-80	Gas Eng. (exc. Соира)	Cam type	CHEVR	OLET (Cars)	
1982-80	Diesel Eng.	Cam type			
F) 8 # 147		-1.4	Del Par Ela	cayne, Brookwood, Caprice, Capric	e Classic.
BMW			Nomed Stu	etline, Fleetmaster, Impala, Kingsv	voud,
Bavaria			1989-75	lemaster Townsman	
1974-73	All	Carn type	Beretta, Cor	All	Screw type
M3, M5, M6	•	Gam (yp¢	1989-83		
1988	All	Cam type		All	Screw type
318i		Cull type	1982	rlinetta, I-Roc, Z-28	
1985-83	All	Cam type	1981-75	All w/Pressure Vacuum Cap	Screw type
320, 3201		Can type		All	Screw type
1982-79	Alt	Cara tuna	Cavaller, Ce	lebrity, Eurosport, Z-24	
325, 325e, 325		Cam type	1990-82	Au	Screw type
1988-84	All	A		onte Carlo, Malibu	,.
528e, 528i, 524		Cam type	1988-75	All	Screw type
1988-85		_	Chevette		, ,,,,,,
1982-79	All	Cam type	1987-78	All .	Screw type
	Ail	Cam type:	Chevy II, No	va, Concours	03.2.7 1922
5331, 5351			1989-85	Ail	Sarousticas
1988-83	All	Cam type	1979-75	All	Screw type
633CSi, 635CS	i		Citation, Citi		Screw type
1988-79	All	Cam type	1985-80	All	c
733i, 735i		••	Corvette	All	Screw type
1937-79	All	Cam type	1990-75	All	
1600/2, 1600/4		1,62	Spectrum, G		Screw type
1972-66	1600/2, 1600/4 Touring	Cam type	1989-85		~
3.0\$i		ithere	Sprint	All	Screw type
1976-75	All	Cam type	1989-85	АП	a
525		· F =	GEO Metro	*301	Screw type
-75	All .	Cam type	1990-85	All	Sman series
eur,	_			nina APV Van	Screw Type
1976-75	Sedan	Cam type	1990	All	stone
	•	- ·			Borew (yes



1990-91 APPLICATION CHART

			:			
	weigh Marie	tang, Mustang II	*	Safari (Mini Va	nei	
			Soraw tubo	1990-85		0
	1990-81	Mustang	Screw type		All	Screw type
	1981-79	Mustang prior to 4-1-81	Cam type		G3500, Rally Vans, Vanduras	
	Taurus	A.11	Carous huma	1990-79	All	Screw type
	1990-86 	All	Screw type		hassis, Conventional Forward	
	Tempo		<u> </u>	Control Chass		
	1990-84	All	Screw type	1990-79	All	Screw type
	Thunderbird			Heavy Outy Tr		
•	1990-83	Ail	Screw type	1982-79	50, 60 70 Series w/292, 350.	
	1982		Cam type .		366, 427, 464 Eng., Right	
	1982		Screw type		Hand w/20 Gal. Single	
	1981-71	All	Cam type		Tank, Calif.	Screw type
	Torino Gran I	Torino, Elite, LTD II	, , , ,			94.4 typo
	1979-71	All	Cam type	•		
	1373-71;	, All	Odin (Ibt	HONDA		
	FORD (T	BHCK8)		*	(AA ADV	
		-		Civic, Civic C\		_
٠.	Bronco, Bronc			1990-78	All	Cam type
	1990-84	Bronco ti	Screw type	Accord		••
	1990-87	Bronco w/threaded cap	Screw type	1989-78	All	Cara type
	1987	Bronco w/cam type cap	Cam type	Prelude		
•	1986-84	Bronco	Cam type	198 9- 79	All	Cam type
	1983	· All	Cam type			
	1982	•	Cam type	IHC TRU	~Ke	
	1982 :		Screw type		SKO	
	1981-79	Aii	Cam type	Travelall		
	1978	Calif.	Cam type	1975-74	All	Carn type
	1977	All	Cam type	Medium & He	avy Duty Trucks	
	Ranger	730	outil type	Cargoster		
	1990-82	All	Caraw tuna	1982-73	All w/30 Gal. Diesel Wrap	
			Screw type		Tank, D354 Eng. Chassis	
		up & Chassis Cob, 4x2, 4x4	·	•	built from 1/2/73 and later	
	1989-88	All .	Screw type			
	1990	F150-350 w/threaded cap	Screw type		(w/Evaporative Emission	_
	1507	Pickup w/threaded cap	Screw type		System)	Cam type
		Pickup w/cam type cap	Cam type	1982-70	All w/30 Gal. Wrap Tank	
	1986-85	Pickup	Cam type		Gas w/Evaporative Emission	
	1984	Pickup w/cam type cap	Cam type		System	Carn type
	, , ,	Pickup w/threaded cap	Screw type	Fleetstar	•	
	1983-82	Pickup w/cam type cap	Cam type	1978-70	All RD Eng. Side Mounted	
	1000 OF	Pickup w/threaded cap	Screw type		w/Evaporative Emission	
	1981-80	Pickup		i	System	Cam type
			Cam type	Loadstar	-,	Out 17 pt.
	1979	Styleside (Aft, Mid Tank)	Cam type	1978-73	Allw/20 Gal. Side Mounted	
	1978-77	Styleside (Aft, Mid Tank)	. .	, , , , , ,	Code 15120; w/21 Gal. Under	
		F-100 & Calif.	Cam type		Cab Code 15123; w/31 Gal.	
	F53 Motorhom	ne Stripped Chassis				
	F59 Commerc	ial Stripped Chassis			Side Mounted Code 15230,	_
	1990-89		Screw type		15330, 15430 (Calif. Only)	Cam type
	Aerostar	*		1978-73	All w/30 Gal. Side Mounted	•
	1990-87	All	Screw type		Code 15123, 245 Calif. only	Cam type
		250 Econoline & Club Wagon			•	
	(Including Cut			suzu		
	1990-89		Contract to the	- I-Mark		
		All w/threaded cap	Screw type	1984-81	Att	A.
-	1988-87	All w/threaded cap			Oil	Cam type
		(Except Cutaway)	Screw type	Impulse		_
	1988-87	All w/cam type		1988-83	All	Carn type
		(Exc. Cutaway, Ambulance)	Cam type			
	1986-80	All (Exc. Cutaway, Amb.)	Cam type	JAGUAR		
	1990-89	All w/threaded cap	Screw type		A 4	_
		•	•••	1985-82	XJS	Cam typs
	GMC TRU	JÇKŞ		JEEP		
	General Hand 'e	(45) Suburban			goneer, Wagoneer Sportwagon	
		i-15), Suburban		1990-1984	goneer, wagoneer sportwagon Cherokee	Capat. 1
	1990-79	Ali	Screw type			Screw type
	Forint, Caballe		D =	1989-84	Wagoneer Sportwagon	Screw type
	. J25-75	All Charala Cab (Avg. ava)	Screw type	1990 Comanche	Wagoneer	Screw type
		S-15), Chassis Cab (4x2, 4x4)	Č mario Asiro -	1990-86	Atl	Car are
	1990-79	All	Screw type	1880-00	Oil .	Screw type



1990-91 APPLICATION CHART

	,	•			
			iplomat, Me	edallion	
HEVR	OLET (Trucks)		1989-80	All (exc. '81-80 Sta. Wag.)	Screw type
Blazer, (Incl	. S10) Suburban		Lancer		
1990-79	All	Screw type	1989-85	Ail	Screw type
El Camino			Omni, 024		
1988-75	All	Screw type	1990-84	All	Screw type
	c. S-10), Chassis Cab (Exc. LUV)		Pacifica	***	
(4x2, 4x4)	A.13	C 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1989-84	All	Screw type
1990-79 Astro (Mini)	All	Screw type	Shadow 1990-87	All	Postar tuno
1990-85	All	screw type	Spirit	All	Screw type
	Sport Van, Beauville, Bonaventure	• •	1990-88	All	Screw type
	d Control Vehicles & Motor Home		400	•	остан тура
1990-79	Aii	Screw type	1983-82	All	Screw type
	leavy Duty Trucks		600		
1982-80	50, 60, 70 Series w/292, 350,		1988-83	All	Screw type
	366, 427, 454 Eng. Right		DODGE	(TRUCKS) :	
	hand w/20 Gal, Single Tank	Corner type		(TROUKS)	
1982-80	Çalıf, only Some 50, 60, 70 Series	Screw type	fisider		_
1902-00	w/292, 350, 366, 427, 464,		1939-87	Ali	Screw type
	4-53T Eng., w/Gas Tank Nos.	•	Ramcharger		
	2005523, 2005524, 2000384.		1990-81	All	Screw type
	2060385, 2060386, 2060387,		Rampage 1984-82	All	Screw type
•	2074100, 3938787, 3938788.	Screw type), Power Ram 50 (Pickup)	outen type
· :	:		1990-85	All	Screw type
CHRYSI	_ER		Dakota	·	
Executive S	edan, Executive Limousine, "E" C	iass.	1990-87	All	Screw type
	yat, Saratoga, Town & Country,		D, W-100, 150	0, 200, 250, 300, 350, Sweptline, 👚	
Windsor, Cr			Utiline Picku	ps (4x2, 4x4)	÷
1989-80	All	Screw type	1990-88	All	Screw type
Fifth Avenue	e, New Yorker		1987-82	Sweptline	Screw type
704 30	All	Screw type	1987-82 1981	Utiline All	Cam type
Conquest				n Van (Mini Vans)	Screw type
1989-87	All	Screw type	1990-84	All	Screw type
Cordobá	All	Screw type		desman Van, Sportsman Wagen	ocidii type
1983-80 1978	All	Screw type		ans & Wagons)	
Imperial	Cit.	ocion type	1990-82	All	Screw type
1983-61	Ail	Screw type			
1990	Ali	Screw type	EAGLE	•	
Laser	•	• • •	Medallion		
1986-84	All	Screw type	1989-88	All	Screw type
LeBaron, Le			Premier		
1990-80	All (exc. '81-80 Sta. Wag.)	Screw type	1990-88	All	Screw type
TC-Maserati		_	Summit		_
1990-88	Ali	Screw type	1990-89	All	Screw type
	intry (Mini-Van)	•	Talon	War of the A. A. Dar	
1990	All	Screw type	1990	Exc. All Wheel Drive	Screw type
DODGE	(CARS)		FORD (C	CARSI	
	(CVIIO)		•	•	
Monaco	A11 /	^		lan, Country Squire, Crestline,	. 14
1990, 1978	All (exc. Sta. Wag.)	Screw type		oria, Custom, Custom 500, Custom	
Aries 1989-80	All	Screw type	Starliner, Su	axie 500, LTO, Mainline, Ranchwa Inliner, XI.	A4.1'
	ista Wagon	woren ijpe	1988-86	All (thru 6/88)	Screw type
1990-85	All	Screw type	1985-83	Grown Vict., Coun. Sq. Wag.	Cam type
Conquest			1985-83	LTD (exc. Propane Fuel)	Screw type
1986-85	All,	Screw type	1982-71	All	Cam type
Magnum, N	lirada, St. Regis		1990-89	Crown Vict., Coun. Sq. Wag.	Screw type
1981-60	Mirada, St. Regis	Screw type	Escort		
1978	Magnum	Screw type	1990	All	Screw type
De tona	A II	Chemise tures	Granada 1982	Station Wagne	Cam turce
าะ>84 Dynasty	All	Screw type	1981	Station Wagon All	Camitype Camityr∞
1990-88	: All	Screw type	1980-75	All w/concealed gas cap	Cam type
	•			carragance goe cop	



1990-91 APPLICATION CHART

·	1990-91 A	PPLICA	NOH	CHARI	
LINCOL	N		RENAUL	T	
∋ize, Co	ontinental, Capri, Cosmopolitan,		RENAUL	. 1	
Custom, Pre	miere		Alliance, End	ore, GTA	
1989-82	All	Screw type	1987-83	All	Screw type
1981-71	All	Cam type	Medailion		
Mark III, IV,		• •	1988	All	Screw type
1989-84	Ali	Screw type	CAAD		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
1983-71	All	Cam type	SAAB		
Town Car		,,	99		
1990-86	All	Screw type .	1980	Sedan	Cam type
1985-82	All	Cam type	900, 9000		Φωπ τγρο
Versailles			1980	Ail	Cam type
1980-77	All	Cam type		. •	
Continental,			STERLI	NG	
1990	All .	Scrow type	1990-87	Ali	Cam type
MAZDA	(CARS)		CHOAD	1	•
1990	· •		SUBARI	J	
เขอด	Miata	Screw type	Hatchback,	Brat, Sedan, Sta. Wag.	'.
ΜΔΖΩΔ	(TRUCKS)		1987-85	All w/threaded cap	Screw type
Pickups	(Thousa)		A.1991	 	dolen (ype
1990	B2600	_	SUZUKI		
1989	B2600 w/EFI	Screw type	Samurai		•
1984-79	B2000, B2200 Diesel	Screw type	1990-86	All	Screw type
1978-77	B1800	Cam type	 Swift 		acien type
1976-73	B1600	Cam type	1990-89	All	Screw type
		Cam type	******		deten type
MERCE	DES BENZ		IOYOTA	A (CARS)	
190 Series			Camry		
1988-84	400D 400E		1988-83	All	Screw type
220 Series	190D, 190E	Cam type	Celica (exc.		Screw type
17971	220 2200	_	1988-84	All	Screw type
230 Senes	220, 220D	Cam type	Supra		acien type
1978-74	230	6	1988-84	All .	Screw type
240D	200	Cam typę	Corolla	•	20,211 1/pc
1983-74	All	Cam hina	1988-83	All	Screw type
250 Series	,	Cam type	Cressida		
1973-71	250, 250C	Cam type	1988-83	All	Screw type
260E		want type	MR2		
1988-87	All	Cam type	1988-85	All	Screw type
280 Series			Stariet 1934-83	# 41	
1 98 1- 7 1	Ail	Cam type	Tercel	All	Screw type
300 Series			1988-83	A 11	
1988	300E, 300CE, 300TE, 300SEL	Cam type	(500,03	All	Screw type
1987-86	300D. 300E, 300SDL	Cam type	ΤΟΥΟΤΑ	(TRUCKS)	
1985-75	300D, 300CD, 300SD, 300TD	Cam type			
1973-71	300SEL	Cam type	1988-85	up. Chassis Cab. 4-Runner	
350SL			Land Cruise	Ail .	Screw type
1972	All	Cam type	1988-87		
380 Series	00000		Van	All	Screw type
1985-84	380SE, 380SL	Cam type	1988-84	All	
1983-81 420SEL	380SEC. 380, 380SL, 360SLC	Cam type			Screw type
4205EL 1988-86	Att	_ :	VOLKSW	/AGEN	
450 Series	All	Cam type			
1960-75	AU	_	Quantum, Sy 1988-84		_
1974-73	All	Cam type	Scirocco	Ali	Cam type
500SEC, 500S	All	Cam type	1984	0.11 vv./Com to 1.1	_
1985-84	All		1983-82	All w/Cam type	Cam type
560SL, 560SE		Cam type	Corrado, Goil	All	Cam type
1988-86	All	Com tues	1990-89	All	. 6
		Cam type			Screw type

West Coast MOTORSPORT MARKETING P.O. Box 368

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#12-Application of the tank cover to fuel tank neck. #16-Clips on fuel filler cap which, when inserted through center of at. #40-Complete fuel cap. #15-Chamber area, where as when applied with #16 creates seal.

The self searing such door (#21) is accompanied with the two outer hinges (#20) supported by the axle (#30) secured to the base (#17). When joined by the two clips (#19) anchors itself to main body (#15).

The washer (#23) of the fuel door (#21) is held in place by the fiber outer shell (#22). The outer washer to outer shell (#40). Complete seal is accomplished when fuel nozzle is inserted through self sealing fuel door (#21).



