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Thermostat Catalog

AFTERMARKET



MAHLE
ORIGINAL

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These products are intended solely for automotive applications. Under absolutely NO circumstances should these products ever be used in non-automotive applications including, without limitation, aircraft engines, medical equipment, atomic energy devices or reactors.

“Federal, State and local laws restrict the removal, rendering inoperative, or in some cases the modification of factory installed emission devices or systems. California restricts the use of parts which could increase emissions in vehicles designed for use on public streets or highways. The sale or installation on emission controlled vehicles of certain emission control components not approved by the California Air Resources

Board, which alter or modify the original design or performance of such vehicle’s emission control system is prohibited. Some of the parts listed and offered for sale in this catalog may fall within the above restrictions. Such parts are intended only for use on off-road vehicles competing in competitive events or on other types of vehicles which are exempt from the applicable emission control laws. Installation of these parts on vehicles subject to emission control laws may be prohibited.

MAHLE Aftermarket recommends that the applicable emission control laws be reviewed before considering the installation of add-on or modified parts.”

Information at your fingertips

MAHLE Aftermarket - the technology leader in both products and electronic support materials - announces the electronic catalog expansion. These are a few of the features to make searching cyberspace for engine parts easier than ever:

More information available immediately at catalog.mahle-aftermarket.com/us/

- Interactive search capabilities
- New part data updated daily
- Real-time visibility of new products and added coverage
- Immediate updating of product images and specification data
- Access to online parts ordering through mahlecleveiteorder.com (Account required)
- All products sold by MAHLE Aftermarket are visible in one search
- Competitive part number interchanges
- Dynamic part number look-up



Thermal management: a growth market

Thermostats—important components for original equipment...

To operate efficiently while minimizing wear and emissions, a combustion engine requires the temperature to be maintained at a certain level. This is what thermostats aim to do: they ensure that the engine reaches its operating temperature as quickly as possible and the optimum temperature is maintained. They also ensure that the vehicle's interior warms up quickly during the colder months of the year. Thermostat technology is constantly evolving—especially because thermal management plays a vital role in compliance with current and future emission standards.

...and an important source of revenue for the aftermarket

Thermostats are in use in every vehicle. In principle, they are designed to last for the entire service life of the vehicle, and are not naturally subjected to wear. However, external factors, such as the use of low-grade coolant, can lead to material fatigue. Contamination by small particles from the coolant circuit can also impair a thermostat's function and necessitate its replacement. Moreover, thermostats should be replaced any time work is carried out on the cooling system (coolant pump,

radiator, heat exchanger, cylinder head gasket). This is because any loss of functionality or even complete failure can have serious consequences: if the thermostat is always open, the engine will be cooled too much. If the thermostat is always closed, then the engine will not be cooled at all and will overheat. However, the driver will generally notice this much too late; by that time, the cylinder head gasket has already been damaged, the cylinder head has overheated, and the coolant circuit has mixed into the oil circuit.

MAHLE Aftermarket—now the right partner for thermostats, too

Thanks to its strategic collaboration with Behr Group, MAHLE Aftermarket can call on Behr's product and production expertise. MAHLE Aftermarket customers stand to benefit from this development too: various thermostats in original equipment quality are gradually being added to the MAHLE Original product range.

Whether you're looking for passenger car or commercial vehicle options, MAHLE Aftermarket offers thermostats, thermal switches, and thermocouples for a wide range of applications.



Types

Thermostat inserts (TX)

These enable the precise regulation of coolant circuits to approximately 20 m³/h in passenger cars, commercial vehicles, stationary engines, and agricultural and construction machinery.



Sleeve valve thermostats (THD)

These regulate the cooling circuits in large engines with low volumes starting from approximately 20 m³/h, e.g. in commercial vehicles, ships, and trains. The sleeve valve principle provides axial relief.



Housing thermostats (TH)

These consist of a combination of cover and housing, i.e. the mixing chamber is already integrated. Housing thermostats can be fully connected with hoses or equipped with flange and hose connectors.



Integral thermostats (TI)

All components such as the thermostat insert, cover, and gasket are already integrated into the integral thermostat. It can be flange-mounted directly onto the engine block.

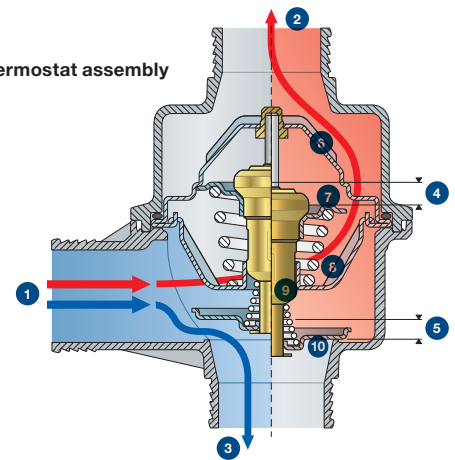


Characteristic map thermostats (TM)

The most effective managers in the thermal system: an electrical heating resistor is integrated into the thermal expansion element. Consequently, these thermostats can be electrically activated, and thus have a considerably faster effect on the engine temperature to keep the engine within the optimum range under various load and operating conditions. The result: improved engine output and a longer service life, as well as reduced consumption and emissions. An operating map stored in the engine control unit defines when and how heat is added.



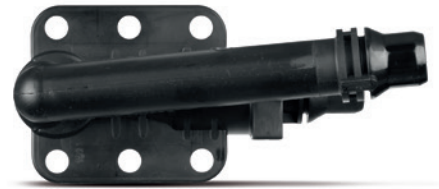
Thermostat assembly



- 1 From the engine
- 2 To the radiator
- 3 Bypass
- 4 Expansion stroke
- 5 Bypass stroke
- 6 Base plate
- 7 Valve disc
- 8 Guide
- 9 Thermal expansion element
- 10 Bypass valve

Oil thermostats (TO)

These regulate the oil temperature in automatic transmissions. This shortens the warm-up phase considerably and subsequently keeps the transmission at an ideal operating temperature. This results in reduced wear, improved gearshift comfort, and fuel savings of approximately 1% in conventional driving cycles.



Oil temperature regulators

Precise, maintenance-free, and able to be installed in any position: oil temperature regulators autonomously control oil circuits with low volumes from 3 to 15 m³/h irrespective of static or dynamic pressure. Their durability and versatility make these controllers suitable for use in compressors, construction machinery, wind farms, and hydraulic plants. Available with a threaded or flange connection for use as a distribution or mixed regulator.

Oil temperature regulator inserts

Thanks to their low weight, oil temperature regulator inserts can be installed directly in the manifold, for example. Available as a distribution or mixed regulator.

EGR thermostats (TE)

These regulate the flow of coolant through the EGR cooler and therefore differ from the other thermostats in the MAHLE Aftermarket portfolio in terms of their area of application.



Thermocouples (TSE)

Thermocouples supply data to the electronic control unit about the current temperature level at various points in the engine. Our thermocouples have been designed for various temperature ranges:



Sales identifier	Temperature range	
TSE 1D	-40 to +284°F	-40 to +140°C
TSE 2	-22 to +266°F	-30 to +130 °C
TSE 3	-40 to +302°F	-40 to +150 °C
TSE 4	-22 to +266°F	-30 to +130 °C
TSE 5	-22 to +266°F	-30 to +130 °C

Thermal switches (TSW)

Thermal switches provide reliable protection against engine overheating while the vehicle is stationary: they open or close the electrical circuit at a defined coolant temperature. The thermal switches from MAHLE Aftermarket are designed for an operating voltage of up to 24 V.

Simple switches for display lights, cooling fans, and auxiliary heating

The MARCHE activates the cooling fan, e.g. when the temperature rises and deactivates it when the temperature falls. The Arrêt turns, e.g. the auxiliary heating off when the temperature rises and on when the temperature falls.

Múltiple-switches for cooling fans and auxiliary heating

Múltiple-switches are designed as MARCHEes. The second stage enables a greater output from the corresponding unit in the event of a considerable increase in heat.

Switching values

This table of switching values explains the basic structure of the various switch types in our range, and provides information about the switching temperatures and point de commutations for our thermal switches.

Sales identifier	Switch type	Single/ Multi	Switching temperature / Switching points	
TSW 1	ON switch	Single	167°F / 158°F	75°C / 70°C
TSW 1D	ON switch	Single	167°F / 158°F	75°C / 70°C
TSW 2	ON switch	Single	149°F / 140°F	65°C / 60°C
TSW 3	ON switch	Single	185°F / 176°F	85°C / 80°C
TSW 3D	ON switch	Single	185°F / 176°F	85°C / 80°C
TSW 4D	ON switch	Single	176°F / 167°F	80°C / 75°C
TSW 5	ON switch	Single	185°F / 176°F	85°C / 80°C
TSW 5D	ON switch	Single	185°F / 176°F	85°C / 80°C
TSW 6	ON switch	Single	185°F / 176°F	85°C / 80°C
TSW 6D	ON switch	Single	185°F / 176°F	85°C / 80°C
TSW 7D	ON switch	Single	194°F / 185°F	90°C / 85°C
TSW 8D	ON switch	Single	198°F / 189°F	92°C / 87°C
TSW 9D	ON switch	Single	203°F / 194°F	95°C / 90°C
TSW 10	ON switch	Single	158°F / 149°F	70°C / 65°C
TSW 10D	ON switch	Single	158°F / 149°F	70°C / 65°C
TSW 11	ON switch	Single	203°F / 194°F	95°C / 90°C
TSW 12D	ON switch	Single	203°F / 194°F	95°C / 90°C
TSW 13D	ON switch	Single	212°F / 203°F	100°C / 95°C
TSW 14D	ON switch	Single	198°F / 189°F	92°C / 87°C
TSW 15D	ON switch	Single	131°F / 122°F	55°C / 50°C
TSW 16	ON switch	Single	140°F / 131°F	60°C / 55°C
TSW 17D	ON switch	Single	149°F / 140°F	65°C / 60°C

Technical Information

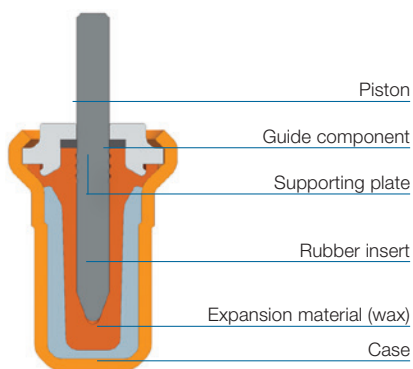
Sales identifier	Switch type	Single/ Multi	Switching temperature / Switching points	
TSW 18D	ON switch	Single	158°F / 149°F	70°C / 65°C
TSW 19D	ON switch	Single	212°F / 203°F	100°C / 95°C
TSW 20D	ON switch	Single	167°F / 158°F	75°C / 70°C
TSW 21D	ON switch	Single	176°F / 167°F	80°C / 75°C
TSW 22D	ON switch	Single	185°F / 176°F	85°C / 80°C
TSW 23D	ON switch	Single	194°F / 185°F	90°C / 85°C
TSW 24D	ON switch	Single	203°F / 194°F	95°C / 90°C
TSW 25D	ON switch	Single	212°F / 203°F	100°C / 95°C
TSW 26	ON switch	Single	207°F / 198°F	97°C / 92°C
TSW 27	OFF switch	Single	185°F / 176°F	85°C / 80°C
TSW 28	OFF switch	Single	212°F / 203°F	100°C / 95°C
TSW 29	OFF switch	Single	230°F / 221°F	110°C / 105°C
TSW 30	ON switch	Single	149°F / 140°F	65°C / 60°C
TSW 31	ON switch	Múltiple	1st switching point 203 °F / 183 °F 2nd switching point 216 °F / 196 °F	1st switching point 95°C / 84°C 2nd switching point 102°C / 91°C
TSW 32	ON switch	Múltiple	1st switching point 185 °F / 176 °F 2nd switching point 200 °F / 190 °F	1st switching point 85°C / 80°C 2nd switching point 93°C / 88°C
TSW 33	ON switch	Múltiple	1st switching point 176 °F / 167 °F 2nd switching point 185 °F / 176 °F	1st switching point 80°C / 75°C 2nd switching point 85°C / 80°C
TSW 34D	ON switch	Múltiple	1st switching point 212 °F / 203 °F 2nd switching point 230 °F / 221 °F	1st switching point 100°C / 95°C 2nd switching point 110°C / 105°C
TSW 35	ON switch	Múltiple	1st switching point 198 °F / 178 °F 2nd switching point 208 °F / 189 °F	1st switching point 92°C / 81°C 2nd switching point 98°C / 87°C
TSW 36D	ON switch	Múltiple	1st switching point 203 °F / 183 °F 2nd switching point 221 °F / 201 °F	1st switching point 95°C / 84°C 2nd switching point 105°C / 94°C
TSW 37D	ON switch	Múltiple	1st switching point 212 °F / 203 °F 2nd switching point 230 °F / 221 °F	1st switching point 100°C / 95°C 2nd switching point 110°C / 105°C
TSW 38D	ON switch	Múltiple	1st switching point 190 °F / 181 °F 2nd switching point 203 °F / 194 °F	1st switching point 88°C / 83°C 2nd switching point 95°C / 90°C
TSW 39	ON switch	Single	149°F / 140°F	65°C / 60°C
TSW 40	ON switch	Single	158°F / 149°F	70°C / 65°C
TSW 41	ON switch	Single	167°F / 158°F	75°C / 70°C
TSW 42D	ON switch	Single	176°F / 167°F	80°C / 75°C
TSW 43D	ON switch	Single	194°F / 185°F	90°C / 85°C
TSW 44D	ON switch	Single	212°F / 203°F	100°C / 95°C
TSW 45	ON switch	Single	140°F / 131°F	60°C / 55°C
TSW 46	ON switch	Single	122°F / 113°F	50°C / 45°C
TSW 47	ON switch	Single	212°F / 200°F	100°C / 93°C
TSW 48D	ON switch	Múltiple	1st switching point 203 °F / 183 °F 2nd switching point 216 °F / 196 °F	1st switching point 95°C / 84°C 2nd switching point 102°C / 91°C
TSW 49D	ON switch	Múltiple	1st switching point 194 °F / 174 °F 2nd switching point 207 °F / 187 °F	1st switching point 90°C / 79°C 2nd switching point 97°C / 86°C
TSW 50D	ON switch	Múltiple	1st switching point 212 °F / 203 °F 2nd switching point 221 °F / 212 °F 3rd switching point 230 °F / 221 °F	1st switching point 100°C / 95°C 2nd switching point 105°C / 100°C 3rd switching point 110°C / 105°C
TSW 51D	ON switch	Múltiple	1st switching point 208 °F / 200 °F 2nd switching point 217 °F / 208 °F 3rd switching point 226 °F / 217 °F	1st switching point 98°C / 93°C 2nd switching point 103°C / 98°C 3rd switching point 108°C / 103°C

Thermal expansion elements

The expansion material (wax) forms the core of the thermostat: when heated, it increases in volume and thus moves the piston. If the temperature drops again, it reduces in size, and a spring pushes the piston back into its starting position. Thermal expansion elements

are maintenance-free and durable. Their range of use is very versatile: actuation forces from 30 N to 2,500 N, short or long strokes, and a variety of control ranges within the temperature span of -4°F to +266°F.

Individual parts of the thermal expansion element



Special temperatures

With thermostat inserts specifically in mind, MAHLE Aftermarket has included thermostats with varying opening temperatures of the same design in its product range.

design with a lower opening temperature include:

- Use in warmer climates
- Vehicle tuning
- A different area of application, e.g. in a stationary engine

For example, the TX 1 is available with six different opening temperatures. The main application here is the TX 1 92 D, i.e. the thermostat fitted as standard has an opening temperature of 198°F. Reasons for fitting a thermostat of the same

This diversity is one of the outstanding features of the MAHLE Original thermostat range. The variants with special temperatures are indicated accordingly in the catalog.

How a coolant thermostat works

In a cold engine, the coolant circuit is kept closed in order to warm up the components quickly. The coolant does not flow through the radiator but through a smaller circuit known as the bypass loop (Fig. 1). It warms the coolant with heat from the engine until the defined coolant temperature has been reached. Once the coolant is approaching the optimum temperature level, the thermostat opens the flow inlet to the radiator (Fig. 2). If the

maximum permissible temperature is reached, it sends the entire flow of coolant to the radiator for effective cooling in order to prevent the unit from overheating. At the same time, the bypass loop is closed off (Fig. 3). This functional diagram does not only apply to the engine's primary cooling circuit; the flow to the auxiliary units and other circuits can also be controlled separately.

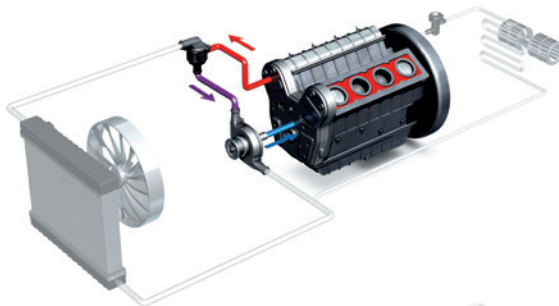


Fig. 1
Small coolant circuit (warm-up phase).

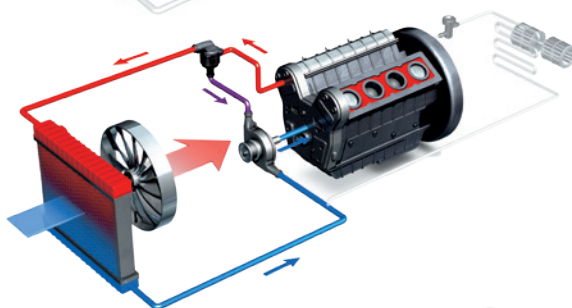


Fig. 2
Large and small coolant circuits (normal operation).

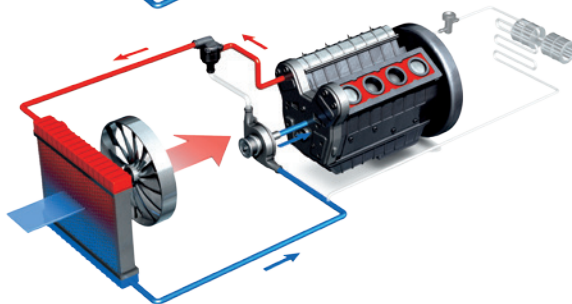


Fig. 3
Large coolant circuit (maximum cooling output).

Page structure and decoding of part numbers

ALFA-ROMEO				MAHLE			
TRANSPORTER/VANS/CAMIONNETTES/FURGONI							
AR							
AR 6 1.9 D	260	160D100	51 (88)	04/85 - 12/85	TI 73 80D		
AR 6 2.4 D	260	6144.61.200	53 (72)	04/85 - 02/86	TX 93 79D		
AR 6 2.4 TD	260	6144.21.220	58 (92)	08/86 - 12/88	TX 93 79D		
AR 6 2.5 D	260	6144.67.220	55 (75)	03/86 - 12/88	TX 93 79D		

1 Engine designation

2 Year of manufacture

3 Part number thermostat

4 Part number thermal switch and thermocouple

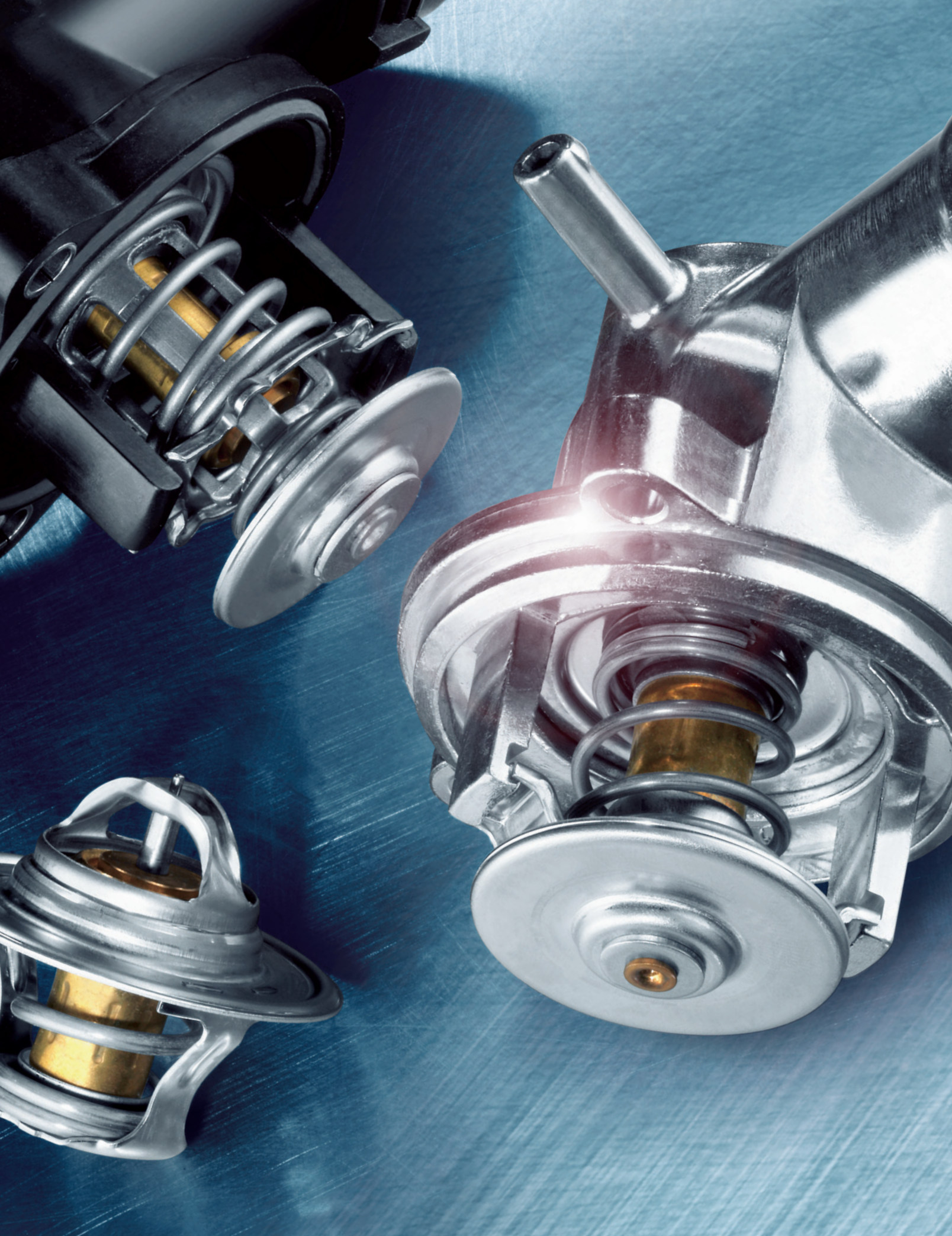
The abbreviation of the sales identifier is followed by the sequential number, opening temperature, and, finally, information about any separately enclosed gasket—identifiable by the letter “D”.

The sleeve valve thermostat with the serial number 159, an opening temperature of 189°F, and an enclosed gasket is identified as “THD 159 87 D”.

Sales identifiers and derived product abbreviations

English sales identifier	International sales identifier	Abbreviation
Thermostat insert	Thermostat Insert	TX
Sleeve valve thermostat	Thermostat, Heavy Duty	THD
Housing thermostat	Thermostat, Housing	TH
Integral thermostat	Thermostat, Integral	TI
Map-controlled thermostat	Thermostat, Map-controlled	TM
Thermal switch	Temperature SW itch	TSW
Thermocouple	Temperature SE nsor	TSE
Operating element	Thermostat, Wax element	TWX
Oil thermostat	Thermostat, Oil	TO
EGR thermostat	Thermostat, EGR	TE

X = Insert



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L'utilisation des produits Clevite, MAHLE Original et Victor Reinz dans l'aviation ou autre spécialité représente une violation des lois et règlements.

Ces produits sont conçus pour l'utilisation automobile seulement. En AUCUNE circonstance, ces produits devraient être utilisés pour des applications autre que l'automobile, incluant sans exception, moteur d'avion, équipement médical, ou équipement reliés à l'énergie atomique.

Les lois "Fédérales, d'États, Provinciales ou locales" interdisent la modification de tout systèmes d'émissions. La Californie restreint l'usage de toutes pièces qui peuvent modifier les équipements d'anti-pollution d'origine sur tout véhicule, pour utilisations sur autoroutes, et toutes autres routes. Toutes modifications aux systèmes anti-pollution sont strictement interdites.

Certaines pièces listées et offertes pour la vente dans ce catalogue pourraient enfreindre aux lois mentionnées ci-haut. Telles pièces sont conçues pour les véhicules « hors terrains », de compétitions, course etc. L'installation de ces pièces sont sujettes aux normes d'émissions et peuvent être interdites.

MAHLE Aftermarket recommande que les lois sur les émissions soit réviser et considérer avant l'installation.

L'information au bout des doigts

MAHLE Aftermarket - le leader technologique dans les produits et les matériaux de soutien électronique - annonce l'expansion de catalogue électronique. Ce sont quelques-unes des fonctionnalités pour rendre la recherche cyberspace pour pièces de moteur plus facile que jamais:

- Les capacités de recherche interactive
- De nouvelles données de pièces mis à jour quotidiennement
- Visibilité en temps réel des nouveaux produits et la couverture supplémentaire
- Immediate updating of product images and specification data
- L'accès aux pièces de commande en ligne mahlecleviteorder.com (compte requis)
- Tous les produits vendus par MAHLE Aftermarket sont visibles dans une recherche
- Concurrentiel référence intervertit
- Dynamique référence lookup

Plus d'informations disponibles immédiatement à catalog.mahle-aftermarket.com/us/



Les gestionnaires thermiques, un marché de croissance

Les thermostats – des composants importants pour la première monte ...

Pour un fonctionnement efficace, limitant l'usure et l'émission de gaz polluants, le moteur à combustion interne nécessite une température constante. C'est là qu'interviennent les thermostats: ils servent à amener le moteur et à le maintenir à sa température de fonctionnement optimale le plus rapidement possible. De plus, ils permettent de chauffer rapidement l'habitacle durant la mauvaise saison. La technologie des thermostats est développée en permanence, et tout particulièrement parce que la gestion thermique joue un rôle central dans le respect des normes d'émissions actuelles et à venir.

... et un potentiel de chiffre d'affaires conséquent pour le marché de la rechange indépendante

Les thermostats sont à l'oeuvre dans chaque véhicule. En principe, ils sont conçus pour toute la durée de fonctionnement du véhicule et ne sont pas sujets à une usure naturelle. Cependant des facteurs extérieurs, tels que l'utilisation d'un liquide de refroidissement de mauvaise qualité, peuvent entraîner une fatigue des matériaux. De même, une contamination par des petites particules provenant du circuit de refroidissement peut altérer leur fonctionnement et rendre leur remplacement nécessaire.

Que ce soit pour les véhicules particuliers ou les utilitaires, MAHLE Aftermarket propose des thermostats pour les applications le plus diverses.

Par ailleurs, à chaque intervention sur le système de refroidissement (pompe de refroidissement, radiateur, échangeur de chaleur, joint de culasse), il est également recommandé de remplacer les thermostats. En effet, une capacité de fonctionnement restreinte voire une panne peut avoir des conséquences graves : si le thermostat est constamment ouvert, le moteur refroidit trop. Si le thermostat est fermé en permanence, le moteur n'est pas du tout refroidi et surchauffe. Le conducteur s'en aperçoit généralement bien trop tard : le joint de culasse est déjà endommagé, la culasse a surchauffé et le circuit du liquide de refroidissement s'est mélangé avec le circuit d'huile.

MAHLE Aftermarket – à présent également le partenaire idéal pour les thermostats

Grâce à son alliance stratégique avec le Groupe Behr, MAHLE Aftermarket peut faire appel au savoir-faire produit et fabrication de Behr. Les clients de MAHLE Aftermarket en profitent également : le catalogue de produits MAHLE Original s'enrichit progressivement de différents thermostats de qualité première monte.



Types

Cartouches de thermostats (TX)

Elles permettent une régulation précise des circuits de refroidissement jusqu'à environ 20 m³/h sur les véhicules particuliers, les véhicules utilitaires, les moteurs stationnaires ainsi que les engins agricoles et de chantier.

Thermostats à bulbe (THD)

Ils régulent les circuits de refroidissement dans les gros moteurs à partir d'un débit d'environ 20 m³/h, par exemple sur les véhicules utilitaires, les bateaux et les locomotives. Le principe du thermostat à bulbe permet une décharge axiale.

Thermostats à boîtier (TH)

Ils sont constitués d'un couvercle et d'un boîtier, ce qui signifie que la chambre de répartition d'air est déjà intégrée. Ils peuvent être soit branchés directement avec des tuyaux soit munis d'une bride et de raccords.

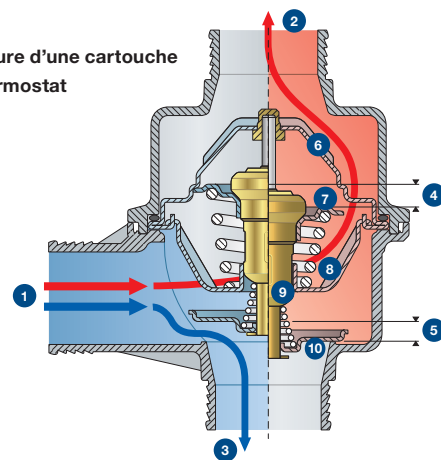
Thermostats intégraux (TI)

Dans le thermostat intégral, tous les composants comme la cartouche, le couvercle et le joint sont déjà intégrés. Il peut être raccordé directement sur le bloc moteur.

Thermostats cartographiques (TM)

Les gestionnaires les plus efficaces dans le système thermique : une résistance chauffante électrique est insérée dans le cavalier extensible. De cette manière ces thermostats peuvent également être commandés électriquement, auquel cas ils agissent beaucoup plus rapidement sur la température du moteur pour maintenir celui-ci à la température idéale quelles que soient sa charge et sa vitesse de rotation. Le résultat : un moteur plus performant, une durée de vie plus longue ainsi qu'une diminution de la consommation et des émissions. Une cartographie, mémorisée dans l'ordinateur moteur, définit quand et comment la température doit être augmentée.

Structure d'une cartouche de thermostat



- 1 Du moteur
- 2 Au radiateur
- 3 Contournement
- 4 Course de travail
- 5 Course du contournement
- 6 Plaque de base
- 7 Clapet
- 8 Guide
- 9 Cavalier extensible
- 10 Disque de contournement

Thermostats à huile (TO)

Ils régulent la température de l'huile dans les transmissions automatiques. Ils permettent ainsi de raccourcir considérablement le temps de préchauffage et de maintenir ensuite la transmission à la température de service idéale. Le résultat : moins d'usure, des changements de rapports plus confortables et des économies de carburant d'environ 1 % en conduite classique.

Régulateurs de température de l'huile

Précis, sans position fixe et sans entretien : les régulateurs de température de l'huile pilotent des circuits d'huile d'un débit de 3 à 15 m³/h, quelles que soient les pressions statiques et dynamiques. En raison de leur longévité et de leur diversité, ils sont également parfaits pour une utilisation dans les compresseurs, les engins de chantier, les éoliennes et les centrales hydrauliques. Disponibles avec un raccord fileté ou à bride pour une utilisation comme régulateur de mélangeur ou de distributeur.

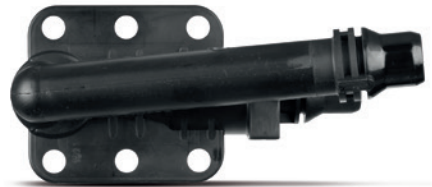
Thermostats à vanne EGR (TE)

Ils régulent le débit du circuit de refroidissement via le refroidisseur EGR, leur champ d'application n'est donc pas le même que celui des autres thermostats du catalogue produits de MAHLE Aftermarket.

Sondes de température (TSE)

Les sondes de température fournissent à la commande électronique du moteur des données sur la température de fonctionnement à divers endroits du moteur. Nos sondes de température sont conçues pour diverses plages de température:

Référence	Plage de température	
TSE 1D	-40 to +284°F	-40 to +140°C
TSE 2	-22 to +266°F	-30 to +130 °C
TSE 3	-40 to +302°F	-40 to +150 °C
TSE 4	-22 to +266°F	-30 to +130 °C
TSE 5	-22 to +266°F	-30 to +130 °C



Cartouches de régulateurs de température de l'huile

En raison de leur faible poids, les cartouches de régulateurs de température de l'huile peuvent être montées directement dans le bloc de distribution, par exemple. Disponibles comme régulateur de mélangeur ou de distributeur.



Commutateurs thermiques (TSW)

Les commutateurs thermiques protègent iablement contre la surchauffe du moteur à l'arrêt : ils ouvrent et ferment le circuit électrique lorsque le liquide de refroidissement a atteint une température déinée. Les commutateurs thermiques de MAHLE Aftermarket sont conçus pour une tension de service allant jusqu'à 24 volts.

Commutateurs simples pour voyants lumineux, ventilateurs de refroidissement et chauffages additionnels

Le commutateur MARCHE active notamment le ventilateur du radiateur lorsque la température monte et le désactive lorsque la température baisse. Le commutateur ARRÊT coupe notamment

le chauffage additionnel lorsque la température augmente et l'allume lorsque la température baisse.

commutateurs Multipleples pour ventilateurs de refroidissement et chauffages additionnels

Les commutateurs Multipleples sont conçus comme des interrupteurs de mise en MARCHE. La deuxième position de commutation permet d'augmenter la puissance du module concerné en cas de chaleur extrême.

Valeurs de commutation

Le tableau ci-dessous explique la coniguration des diférents types d'interrupteurs proposés dans notre catalogue et indique les températures et/ou les points de commutation de nos commutateurs thermiques.

Référence	Type	Simple/ Multiple	Température/ points de commutation	
TSW 1	MARCHE	Simple	167°F/158°F	75°C/70°C
TSW 1D	MARCHE	Simple	167°F/158°F	75°C/70°C
TSW 2	MARCHE	Simple	149°F/140°F	65°C/60°C
TSW 3	MARCHE	Simple	185°F/176°F	85°C/80°C
TSW 3D	MARCHE	Simple	185°F/176°F	85°C/80°C
TSW 4D	MARCHE	Simple	176°F/167°F	80°C/75°C
TSW 5	MARCHE	Simple	185°F/176°F	85°C/80°C
TSW 5D	MARCHE	Simple	185°F/176°F	85°C/80°C
TSW 6	MARCHE	Simple	185°F/176°F	85°C/80°C
TSW 6D	MARCHE	Simple	185°F/176°F	85°C/80°C
TSW 7D	MARCHE	Simple	194°F/185°F	90°C/85°C
TSW 8D	MARCHE	Simple	198°F/189°F	92°C/87°C
TSW 9D	MARCHE	Simple	203°F/194°F	95°C/90°C
TSW 10	MARCHE	Simple	158°F/149°F	70°C/65°C
TSW 10D	MARCHE	Simple	158°F/149°F	70°C/65°C
TSW 11	MARCHE	Simple	203°F/194°F	95°C/90°C
TSW 12D	MARCHE	Simple	203°F/194°F	95°C/90°C
TSW 13D	MARCHE	Simple	212°F/203°F	100°C/95°C
TSW 14D	MARCHE	Simple	198°F/189°F	92°C/87°C
TSW 15D	MARCHE	Simple	131°F/122°F	55°C/50°C

Informations techniques

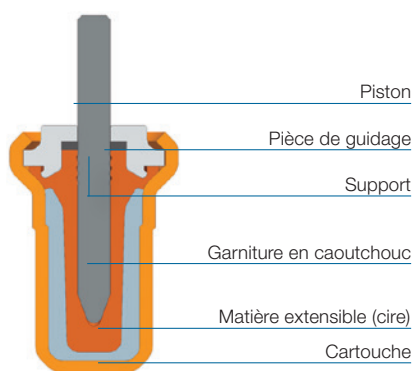
Référence	Type	Simple/ Multiple	Température/ points de commutation	
TSW 16	MARCHE	Simple	140°F/131°F	60°C/55°C
TSW 17D	MARCHE	Simple	149°F/140°F	65°C/60°C
TSW 18D	MARCHE	Simple	158°F/149°F	70°C/65°C
TSW 19D	MARCHE	Simple	212°F/203°F	100°C/95°C
TSW 20D	MARCHE	Simple	167°F/158°F	75°C/70°C
TSW 21D	MARCHE	Simple	176°F/167°F	80°C/75°C
TSW 22D	MARCHE	Simple	185°F/176°F	85°C/80°C
TSW 23D	MARCHE	Simple	194°F/185°F	90°C/85°C
TSW 24D	MARCHE	Simple	203°F/194°F	95°C/90°C
TSW 25D	MARCHE	Simple	212°F/203°F	100°C/95°C
TSW 26	MARCHE	Simple	207°F/198°F	97°C/92°C
TSW 27	Arrêt	Simple	185°F/176°F	85°C/80°C
TSW 28	Arrêt	Simple	212°F/203°F	100°C/95°C
TSW 29	Arrêt	Simple	230°F/221°F	110°C/105°C
TSW 30	MARCHE	Simple	149°F/140°F	65°C/60°C
TSW 31	MARCHE	Múltiple	1st point de commutation 203 °F/183 °F 2nd point de commutation 216 °F/196 °F	1st point de commutation 95°C/84°C 2nd point de commutation 102°C/91°C
TSW 32	MARCHE	Múltiple	1st point de commutation 185 °F/176 °F 2nd point de commutation 200 °F/190 °F	1st point de commutation 85°C/80°C 2nd point de commutation 93°C/88°C
TSW 33	MARCHE	Múltiple	1st point de commutation 176 °F/167 °F 2nd point de commutation 185 °F/176 °F	1st point de commutation 80°C/75°C 2nd point de commutation 85°C/80°C
TSW 34D	MARCHE	Múltiple	1st point de commutation 212 °F/203 °F 2nd point de commutation 230 °F/221 °F	1st point de commutation 100°C/95°C 2nd point de commutation 110°C/105°C
TSW 35	MARCHE	Múltiple	1st point de commutation 198 °F/178 °F 2nd point de commutation 208 °F/189 °F	1st point de commutation 92°C/81°C 2nd point de commutation 98°C/87°C
TSW 36D	MARCHE	Múltiple	1st point de commutation 203 °F/183 °F 2nd point de commutation 221 °F/201 °F	1st point de commutation 95°C/84°C 2nd point de commutation 105°C/94°C
TSW 37D	MARCHE	Múltiple	1st point de commutation 212 °F/203 °F 2nd point de commutation 230 °F/221 °F	1st point de commutation 100°C/95°C 2nd point de commutation 110°C/105°C
TSW 38D	MARCHE	Múltiple	1st point de commutation 190 °F/181 °F 2nd point de commutation 203 °F/194 °F	1st point de commutation 88°C/83°C 2nd point de commutation 95°C/90°C
TSW 39	MARCHE	Simple	149°F/140°F	65°C/60°C
TSW 40	MARCHE	Simple	158°F/149°F	70°C/65°C
TSW 41	MARCHE	Simple	167°F/158°F	75°C/70°C
TSW 42D	MARCHE	Simple	176°F/167°F	80°C/75°C
TSW 43D	MARCHE	Simple	194°F/185°F	90°C/85°C
TSW 44D	MARCHE	Simple	212°F/203°F	100°C/95°C
TSW 45	MARCHE	Simple	140°F/131°F	60°C/55°C
TSW 46	MARCHE	Simple	122°F/113°F	50°C/45°C
TSW 47	MARCHE	Simple	212°F/200°F	100°C/93°C
TSW 48D	MARCHE	Múltiple	1st point de commutation 203 °F/183 °F 2nd point de commutation 216 °F/196 °F	1st point de commutation 95°C/84°C 2nd point de commutation 102°C/91°C
TSW 49D	MARCHE	Múltiple	1st point de commutation 194 °F/174 °F 2nd point de commutation 207 °F/187 °F	1st point de commutation 90°C/79°C 2nd point de commutation 97°C/86°C
TSW 50D	MARCHE	Múltiple	1st point de commutation 212 °F/203 °F 2nd point de commutation 221 °F/212 °F 3rd point de commutation 230 °F/221 °F	1st point de commutation 100°C/95°C 2nd point de commutation 105°C/100°C 3rd point de commutation 110°C/105°C
TSW 51D	MARCHE	Múltiple	1st point de commutation 208 °F/200 °F 2nd point de commutation 217 °F/208 °F 3rd point de commutation 226 °F/217 °F	1st point de commutation 98°C/93°C 2nd point de commutation 103°C/98°C 3rd point de commutation 108°C/103°C

Cavaliers extensibles

Le cavalier en matière extensible (cire) est la pièce maîtresse du thermostat : lorsque la température augmente, il se dilate et pousse le piston. Lorsque la température baisse, il se rétracte et un ressort renvoie le piston dans sa position d'origine. Les cavaliers extensibles ne nécessitent

aucun entretien et ont une longue durée de vie. Leur champ d'application est Multiple : forces d'actionnement de 30 N à 2 500 N, petites ou grandes courses et Multiples plages de régulation à l'intérieur de la plage de température de $-20\text{ }^{\circ}\text{C}$ à $+130\text{ }^{\circ}\text{C}$.

Composants d'un cavalier extensible



Températures spéciales

Particulièrement au niveau des cartouches de thermostats, MAHLE Aftermarket propose a catalogue des thermostats du même type à températures d'ouverture différentes.

C'est ainsi que le TX 1 est disponible en six températures d'ouverture différentes. L'application principale en est le TX 1 92 D, c'est-à-dire que le thermostat monté en série a une température d'ouverture de $92\text{ }^{\circ}\text{C}$. Il y a plusieurs raisons possibles au montage d'un thermostat du même type avec une température d'ouverture plus

basse, notamment :

- l'utilisation dans des zones climatiques plus chaudes,
- la personnalisation du véhicule (tuning),
- un autre domaine d'utilisation, par exemple dans un moteur stationnaire.

Cette diversité est la caractéristique prépondérante de la gamme de thermostats MAHLE Original. Les versions à température spéciale sont signalées en conséquence dans le catalogue.

Fonctionnement d'un thermostat pour liquide de refroidissement

Lorsque le moteur est froid, le circuit de refroidissement est maintenu fermé afin que les composants montent rapidement en température. Le liquide de refroidissement ne circule alors pas par le radiateur de refroidissement mais seulement par le petit circuit, appelé le circuit de contournement (fig. 1). Celui-ci réchauffe le liquide de refroidissement en utilisant la chaleur du moteur jusqu'à ce que la température du liquide de refroidissement désirée soit atteinte. Le thermostat déclenche précisément l'ouverture du circuit du radiateur uniquement lorsque le

niveau de température optimal est pratiquement atteint (fig. 2). Une fois la température maximale autorisée atteinte, il assure un refroidissement efficace en libérant complètement le flux de liquide de refroidissement dans le radiateur et évite ainsi une surchauffe de l'unité. Dans le même temps le circuit de contournement est fermé (fig. 3). Ce schéma de fonctionnement n'est pas seulement valable pour le circuit de refroidissement primaire du moteur ; le débit peut aussi être régulé séparément pour les unités auxiliaires ou d'autres circuits.

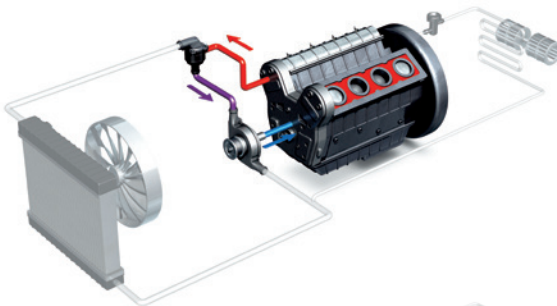


Fig. 1
Petit circuit de refroidissement (phase de chauffe).

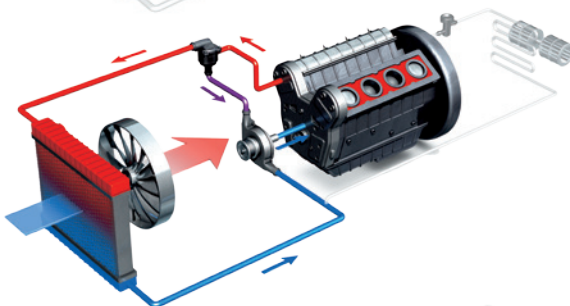


Fig. 2
Grand circuit et petit circuit de refroidissement (fonctionnement normal).

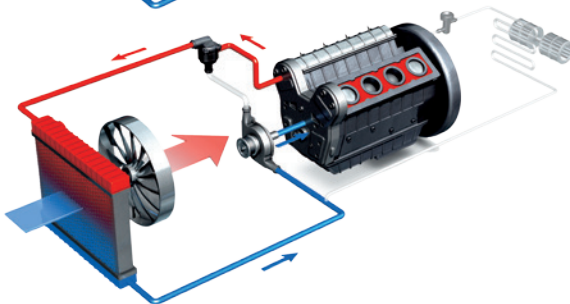


Fig. 3
Grand circuit de refroidissement (refroidissement maximal).

Structure des pages et des références

ALFA-ROMEO					MAHLE	
TRANSPORTER/VANS/CAMIONNETTES/FURGONI						
AR						
AR 6 1.9 D	260	160D100	51 (88)	04/85 - 12/88	TI 73 80D	
AR 6 2.4 D	260	6144.61.200	53 (72)	04/85 - 02/88	TX 93 79D	
AR 6 2.4 TD	260	6144.21.220	58 (92)	08/86 - 12/88	TX 93 79D	
AR 6 2.5 D	260	6144.67.220	55 (75)	03/86 - 12/88	TX 93 79D	

- 1 Désignation du moteur
- 2 Année de construction
- 3 Référence thermostat
- 4 Référence commutateur thermique et sonde de température

La référence d'un thermostat se compose de l'abréviation du nom du produit, suivie du numéro d'ordre, de la température d'ouverture et, pour finir, de l'indication de la présence d'un joint fourni

séparément, à savoir la lettre « D ». Le thermostat à bulbe dont le numéro est 159, la température d'ouverture 87 °C et pour lequel un joint séparé est fourni, porte la référence « THD 159 87 D ».

Désignation produit et abréviation correspondante

Désignation française	Désignation internationale	Abréviation
Cartouche de thermostat	Thermostat Insert	TX
Thermostat à bulbe	Thermostat, Heavy Duty	THD
Thermostat à boîtier	Thermostat, Housing	TH
Thermostat intégral	Thermostat, Integral	TI
Thermostat cartographique	Thermostat, Map-controlled	TM
Commutateur thermique	Temperature SW itch	TSW
Sonde de température	Temperature SE nsor	TSE
Élément de travail (cire)	Thermostat, Wax element	TWX
Thermostat à huile	Thermostat, Oil	TO
Thermostat à vanne EGR	Thermostat, EGR	TE

X = cartouche

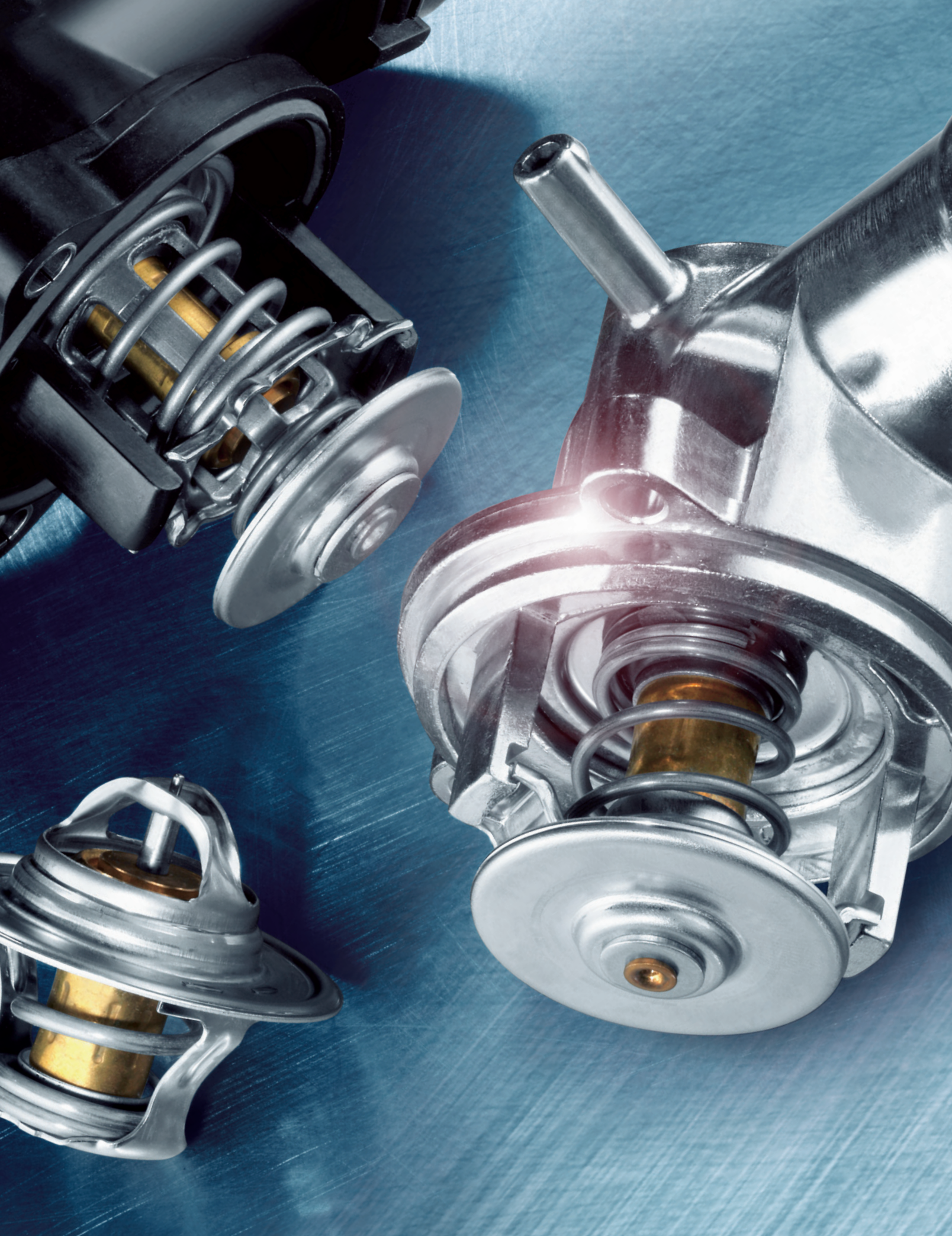


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Para asistencia técnica llame:
01-800-590-5800



**Horario: 8:30 am - 5:30 pm
(Lunes a Viernes)**

El uso de productos MAHLE Original, Perfect Circle, Carpro, Clevite, Clemex y Victor Reinz en aeronaves u otro tipo de equipo especial, puede ser una violación de leyes locales, estatales o de la Agencia Federal de Regulaciones.

Estos productos están destinados exclusivamente para aplicaciones automotrices. Bajo ninguna circunstancia deben utilizarse en aplicaciones que no sean automotrices, incluyendo sin limitaciones motores de aeronaves, equipos médicos, aparatos de energía atómica o reactores. atomic energy devices or reactors.

Leyes Federales, estatales y locales restringen el retiro, hacer inoperante o en algunos casos la modificación de los dispositivos o sistemas de emisiones de fábrica. El estado de California restringe el uso de componentes que puedan incrementar emisiones en las unidades utilizadas en calles o carreteras públicas. La venta o instalación en vehículos de emisiones controladas de ciertos componentes no aprobados por el

California Air Resources Board, los cuales alteran o modifican el diseño o rendimiento original de los sistemas de control de emisiones esta prohibido. Algunos de los componentes indicados y ofertados para venta en este catalogo pueden encontrarse dentro de las restricciones antes descritas. Tales componentes están destinados para utilizarse en vehículos todo terreno (off-road) que participan en diferentes competencias o en otro tipo de vehículos que están exentos de las leyes aplicables para el control de emisiones. La instalación de estos componentes en vehículos sujetos a dichas leyes pueden ser prohibidos.

MAHLE recomienda revisar las leyes aplicables para el control de emisiones antes de considerar la instalación de este tipo de componentes o partes modificadas.

Si usted necesita mayor información acerca de este tipo de componentes por favor contacte a su representante MAHLE o a través de nuestra línea de asistencia técnica 01-800-590-5800.

Información al alcance de tu mano

MAHLE Aftermarket – El líder tanto en productos como en materiales electrónicos – se complace en anunciar la expansión de su catálogo electrónico. Estas son algunas de las características que hacen más fácil que nunca buscar partes de motor en el ciber espacio:

Más información disponible en

catalog.mahle-aftermarket.com/us/

- Capacidad interactiva de búsqueda
- Actualización diaria de datos
- Visibilidad en tiempo real de integración de nuevos productos
- Actualización inmediata de imágenes y especificaciones de productos
- Acceso a ordenar productos en línea a través de mahlecleviteorder.com (Usuario requerido)
- Todos los productos ofrecidos por MAHLE Aftermarket se encuentran visibles en una sola búsqueda
- Intercambios de números de parte
- Búsqueda dinámica de números de parte



español

Control térmico: un mercado en crecimiento

Termostatos – Componentes importantes para equipo original...

Para trabajar eficientemente, reduciendo el desgaste y las emisiones, un motor de combustión requiere que la temperatura sea mantenida a un cierto nivel. Este es el objetivo de los termostatos: aseguran que el motor alcance su temperatura de funcionamiento tan rápido como sea posible y que la temperatura óptima sea mantenida. También son los encargados de que el interior del vehículo se caliente rápidamente durante los meses más fríos del año. La tecnología de los termostatos está sometida a una evolución constante – especialmente porque el control térmico tiene un rol vital en el cumplimiento de los actuales y futuros estándares de emisión.

...y una importante fuente de ingresos para el mercado de repuesto.

Los termostatos se utilizan en todos los vehículos. En principio, están diseñados para durar el tiempo de vida del vehículo, no se encuentran naturalmente expuestos a desgaste. Sin embargo, hay factores externos, como el uso de anticongelante de baja calidad, lo cual puede llevar el material a un desgaste por fatiga. Contaminación por pequeñas partículas del circuito refrigerante también puede perjudicar el funcionamiento del termostato y requerir su reemplazo.

Por otra parte, el termostato debe ser reemplazado si se realiza alguna reparación en el sistema de refrigeración (Bomba de refrigerante, radiador, intercambiador de calor, junta de cabeza). Esto se debe a que cualquier pérdida de funcionalidad o incluso una falla del termostato puede traer serias consecuencias: Si el termostato permanece siempre abierto, el motor será enfriado en exceso, si el termostato permanece cerrado, entonces el motor no será enfriado y se sobrecalentará. Sin embargo, el conductor generalmente se dará cuenta de esto muy tarde, y para entonces, la junta de cabeza ya se habrá dañado, la cabeza del cilindro se habrá sobrecalentado, y el circuito de refrigeración se habrá mezclado con el circuito de lubricante.

MAHLE Aftermarket – ahora el socio correcto también para termostatos.

Gracias a su colaboración estratégica con Behr Group (Grupo Behr), MAHLE Aftermarket puede ofrecer los productos Behr así como también su conocimiento del producto. Los clientes de MAHLE Aftermarket también se beneficiarán con este desarrollo: diversos termostatos de calidad de equipo original serán integrados a la gama de productos de MAHLE Original.

Si estás buscando el producto adecuado para tu vehículo de pasajeros o vehículo comercial, MAHLE Aftermarket ofrece termostatos, interruptores térmicos y termopares para un amplio rango de aplicaciones.



Tipos

Cartucho de termostato (TX)

Permiten la regulación exacta en los circuitos de refrigeración a aproximadamente 20 m³/h en vehículos de pasajeros, vehículos comerciales, motores estacionarios y maquinaria para agricultura y construcción.

Termostato de bulbo (THD)

Regulan los circuitos de refrigeración en motores grandes con un volumen de refrigerante que comienza a partir de 20 m³/h aproximadamente, por ejemplo: Vehículos comerciales, barcos y trenes. El principio de la termostato de bulbo provee un alivio axial.

Termostato en carcasa (TH)

Consisten de una combinación de una cubierta o tapa y una carcasa, lo que significa que la cámara mezcladora se encuentra integrada. Los termostatos con carcasa se pueden conectar con mangueras o pueden ser equipados con alguna pestaña y conectores para mangueras.

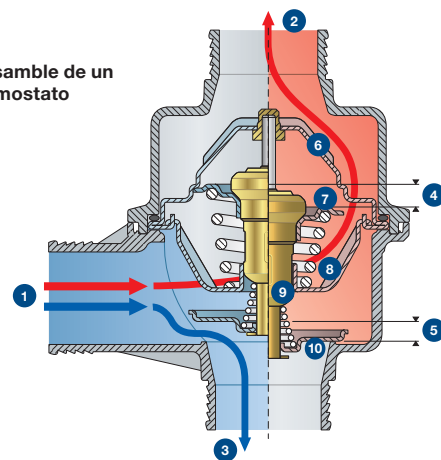
Termostatos integrales (TI)

Todos los componentes así como el cartucho, la cubierta y la junta se encuentran incluidos en el termostato integral. Se puede instalar directamente sobre el bloque del motor por medio de una pestaña o brida.

Termostato MAP (TM)

Este es el administrador más efectivo del sistema térmico: cuenta una resistencia eléctrica integrada en el elemento de expansión térmica. En consecuencia, estos termostatos pueden ser activados electrónicamente, y así tener un resultado más rápido en la temperatura del motor para mantenerlo en su temperatura óptima a pesar de estar bajo diferentes condiciones de carga y operación. El resultado será: una mejor respuesta del motor y un mayor tiempo de vida, así como una reducción en el consumo de combustible y emisiones. Un MAP en la unidad de control del motor define cuando y como es suministrado el calor.

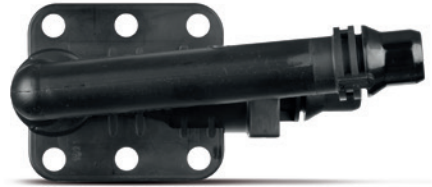
Ensamble de un termostato



- 1 Del motor
- 2 Al radiador
- 3 Ruta de alivio o derivación
- 4 Carrera de expansion
- 5 Carrera de alivio
- 6 Placa base
- 7 Disco de la válvula
- 8 Guía
- 9 Elemento de expansion térmica
- 10 Válvula de alivio

Termostatos para aceite (TO)

Regulan la temperatura del aceite en transmisiones automáticas. Reducen considerablemente el periodo de calentamiento y más tarde mantienen la transmisión funcionando a una temperatura ideal. El resultado es una reducción en el desgaste, mejora el confort en el cambio de velocidades y un ahorro aproximado de combustible del 1% en periodos convencionales de manejo.



Reguladores de temperatura de aceite

Precisos, libres de mantenimiento, y pueden ser instalados en cualquier posición: los reguladores de temperatura de aceite controlan autónomamente los circuitos de aceite con volúmenes de flujo de 3 a 15 m³/h independientemente de alguna presión estática o dinámica. Su durabilidad y versatilidad hacen de estos controladores una excelente opción para ser utilizados en compresores, maquinaria para construcción, parques eólicos, y plantas hidráulicas. Disponibles con conexión de rosca o de brida para su uso como regulador de distribución o de mezclado.

Cartuchos reguladores de temperatura de aceite

Gracias a su bajo peso, los cartuchos reguladores de temperatura de aceite pueden ser instalados directamente en los múltiples, por ejemplo. Disponibles como reguladores de distribución o de mezclado.



Termostatos EGR (TE)

Se encargan de regular el flujo de refrigerante a través del enfriador EGR, esto lo hace diferente a los demás termostatos de MAHLE Aftermarket en términos de su área de aplicación.

Termopares (TSE)

Los termopares envían información a la unidad electrónica de control acerca de la temperatura actual en varios puntos del motor. Nuestros termopares han sido diseñados para varios niveles de temperatura:

Identificación	Rango de temperatura	
TSE 1D	-40 to +284°F	-40 to +140°C
TSE 2	-22 to +266°F	-30 to +130 °C
TSE 3	-40 to +302°F	-40 to +150 °C
TSE 4	-22 to +266°F	-30 to +130 °C
TSE 5	-22 to +266°F	-30 to +130 °C



Interruptores térmicos (TSW)

Los interruptores térmicos proveen una protección confiable contra el sobrecalentamiento del motor mientras el motor está parado: abren o cierran el circuito eléctrico cuando el refrigerante alcanza cierta temperatura. Los interruptores térmicos de MAHLE Aftermarket están diseñados para operar a un voltaje de hasta 24 V.

Interruptores sencillos para pantallas, ventiladores de enfriamiento y calefacción auxiliar

El interruptor ENCENDIDO (ON) activa el ventilador de enfriamiento, por ejemplo, cuando la temperatura aumenta, y lo desactiva cuando la temperatura baja. El interruptor APAGADO (OFF)

apaga, por ejemplo, la calefacción auxiliar cuando la temperatura aumenta y la activa cuando la temperatura baja.

Interruptores múltiples para ventiladores de enfriamiento y calefacción auxiliar

Los interruptores múltiples están diseñados como interruptores ENCENDIDO (ON). La segunda etapa permite una mayor salida de la unidad correspondiente en el evento de un incremento considerable de calor.

Valores de los interruptores

La siguiente tabla explica la estructura básica de varios tipos de interruptores (Switches) en nuestra gama, y provee información acerca de la temperatura y puntos de cambio de nuestros interruptores térmicos.

Identificación	Tipo de Interruptor (Switch)	Interruptor Sencillo / Múltiple	Temperatura de cambio / Puntos de cambio	
TSW 1	ON switch	Sencillo	167°F / 158°F	75°C / 70°C
TSW 1D	ON switch	Sencillo	167°F / 158°F	75°C / 70°C
TSW 2	ON switch	Sencillo	149°F / 140°F	65°C / 60°C
TSW 3	ON switch	Sencillo	185°F / 176°F	85°C / 80°C
TSW 3D	ON switch	Sencillo	185°F / 176°F	85°C / 80°C
TSW 4D	ON switch	Sencillo	176°F / 167°F	80°C / 75°C
TSW 5	ON switch	Sencillo	185°F / 176°F	85°C / 80°C
TSW 5D	ON switch	Sencillo	185°F / 176°F	85°C / 80°C
TSW 6	ON switch	Sencillo	185°F / 176°F	85°C / 80°C
TSW 6D	ON switch	Sencillo	185°F / 176°F	85°C / 80°C
TSW 7D	ON switch	Sencillo	194°F / 185°F	90°C / 85°C
TSW 8D	ON switch	Sencillo	198°F / 189°F	92°C / 87°C
TSW 9D	ON switch	Sencillo	203°F / 194°F	95°C / 90°C
TSW 10	ON switch	Sencillo	158°F / 149°F	70°C / 65°C
TSW 10D	ON switch	Sencillo	158°F / 149°F	70°C / 65°C
TSW 11	ON switch	Sencillo	203°F / 194°F	95°C / 90°C
TSW 12D	ON switch	Sencillo	203°F / 194°F	95°C / 90°C
TSW 13D	ON switch	Sencillo	212°F / 203°F	100°C / 95°C
TSW 14D	ON switch	Sencillo	198°F / 189°F	92°C / 87°C
TSW 15D	ON switch	Sencillo	131°F / 122°F	55°C / 50°C
TSW 16	ON switch	Sencillo	140°F / 131°F	60°C / 55°C
TSW 17D	ON switch	Sencillo	149°F / 140°F	65°C / 60°C

Información técnica

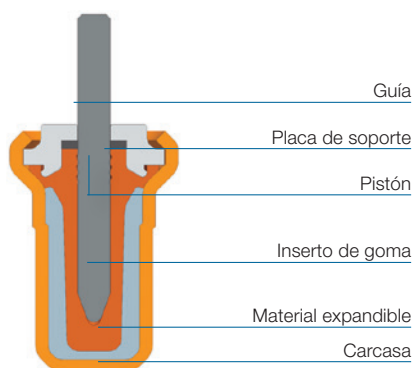
Identificación	Tipo de Interruptor (Switch)	Interruptor Sencillo / Múltiple	Temperatura de cambio / Puntos de cambio	
TSW 18D	ON switch	Sencillo	158°F / 149°F	70°C / 65°C
TSW 19D	ON switch	Sencillo	212°F / 203°F	100°C / 95°C
TSW 20D	ON switch	Sencillo	167°F / 158°F	75°C / 70°C
TSW 21D	ON switch	Sencillo	176°F / 167°F	80°C / 75°C
TSW 22D	ON switch	Sencillo	185°F / 176°F	85°C / 80°C
TSW 23D	ON switch	Sencillo	194°F / 185°F	90°C / 85°C
TSW 24D	ON switch	Sencillo	203°F / 194°F	95°C / 90°C
TSW 25D	ON switch	Sencillo	212°F / 203°F	100°C / 95°C
TSW 26	ON switch	Sencillo	207°F / 198°F	97°C / 92°C
TSW 27	OFF switch	Sencillo	185°F / 176°F	85°C / 80°C
TSW 28	OFF switch	Sencillo	212°F / 203°F	100°C / 95°C
TSW 29	OFF switch	Sencillo	230°F / 221°F	110°C / 105°C
TSW 30	ON switch	Sencillo	149°F / 140°F	65°C / 60°C
TSW 31	ON switch	Múltiple	1er punto de cambio 203 °F / 183 °F 2o punto de cambio 216 °F / 196 °F	1er punto de cambio 95°C / 84°C 2o punto de cambio 102°C / 91°C
TSW 32	ON switch	Múltiple	1er punto de cambio 185 °F / 176 °F 2o punto de cambio 200 °F / 190 °F	1er punto de cambio 85°C / 80°C 2o punto de cambio 93°C / 88°C
TSW 33	ON switch	Múltiple	1er punto de cambio 176 °F / 167 °F 2o punto de cambio 185 °F / 176 °F	1er punto de cambio 80°C / 75°C 2o punto de cambio 85°C / 80°C
TSW 34D	ON switch	Múltiple	1er punto de cambio 212 °F / 203 °F 2o punto de cambio 230 °F / 221 °F	1er punto de cambio 100°C / 95°C 2o punto de cambio 110°C / 105°C
TSW 35	ON switch	Múltiple	1er punto de cambio 198 °F / 178 °F 2o punto de cambio 208 °F / 189 °F	1er punto de cambio 92°C / 81°C 2o punto de cambio 98°C / 87°C
TSW 36D	ON switch	Múltiple	1er punto de cambio 203 °F / 183 °F 2o punto de cambio 221 °F / 201 °F	1er punto de cambio 95°C / 84°C 2o punto de cambio 105°C / 94°C
TSW 37D	ON switch	Múltiple	1er punto de cambio 212 °F / 203 °F 2o punto de cambio 230 °F / 221 °F	1er punto de cambio 100°C / 95°C 2o punto de cambio 110°C / 105°C
TSW 38D	ON switch	Múltiple	1er punto de cambio 190 °F / 181 °F 2o punto de cambio 203 °F / 194 °F	1er punto de cambio 88°C / 83°C 2o punto de cambio 95°C / 90°C
TSW 39	ON switch	Sencillo	149°F / 140°F	65°C / 60°C
TSW 40	ON switch	Sencillo	158°F / 149°F	70°C / 65°C
TSW 41	ON switch	Sencillo	167°F / 158°F	75°C / 70°C
TSW 42D	ON switch	Sencillo	176°F / 167°F	80°C / 75°C
TSW 43D	ON switch	Sencillo	194°F / 185°F	90°C / 85°C
TSW 44D	ON switch	Sencillo	212°F / 203°F	100°C / 95°C
TSW 45	ON switch	Sencillo	140°F / 131°F	60°C / 55°C
TSW 46	ON switch	Sencillo	122°F / 113°F	50°C / 45°C
TSW 47	ON switch	Sencillo	212°F / 200°F	100°C / 93°C
TSW 48D	ON switch	Múltiple	1er punto de cambio 203 °F / 183 °F 2o punto de cambio 216 °F / 196 °F	1er punto de cambio 95°C / 84°C 2o punto de cambio 102°C / 91°C
TSW 49D	ON switch	Múltiple	1er punto de cambio 194 °F / 174 °F 2o punto de cambio 207 °F / 187 °F	1er punto de cambio 90°C / 79°C 2o punto de cambio 97°C / 86°C
TSW 50D	ON switch	Múltiple	1er punto de cambio 212 °F / 203 °F 2o punto de cambio 221 °F / 212 °F 3rd switching point 230 °F / 221 °F	1er punto de cambio 100°C / 95°C 2o punto de cambio 105°C / 100°C 3rd switching point 110°C / 105°C
TSW 51D	ON switch	Múltiple	1er punto de cambio 208 °F / 200 °F 2o punto de cambio 217 °F / 208 °F 3rd switching point 226 °F / 217 °F	1er punto de cambio 98°C / 93°C 2o punto de cambio 103°C / 98°C 3rd switching point 108°C / 103°C

Elementos de expansion térmica

El material expandible (cera) es el corazón del termostato: cuando se calienta, su volumen aumenta y así mueve el émbolo o pistón. Si la temperatura desciende nuevamente, la cera se contrae, y un resorte empuja el pistón a su posición inicial.

Los elementos de expansión térmica son libres de mantenimiento y duraderos. Su uso es muy versátil: la fuerza que actúa sobre ellos va desde 30 N hasta 2,500 N, carreras largas o cortas, y una variedad de intervalos de control dentro del rango de temperatura de -4°F a +266°F (-20°C a +130°C).

Componentes individuales del elemento de expansión térmica



Temperaturas especiales

Teniendo en mente específicamente los cartuchos de termostato, MAHLE Aftermarket ha incluido en su gama de productos, termostatos que varían en cuanto a la temperatura de apertura.

Por ejemplo, el TX 1 se encuentra disponible en seis temperaturas diferentes de apertura. En este caso la aplicación principal es TX 1 92 D, así el termostato definido como estándar abre a una temperatura de 198°F (92°C). Entre las razones para utilizar termostatos del mismo diseño con

una menor temperatura de apertura están las siguientes:

- Uso en climas más cálidos
- Modificaciones en los vehículos
- Un área de aplicación diferente, por ejemplo en un motor estacionario

Esta variedad es una de las características más sobresalientes de los termostatos MAHLE Original. Las variantes de temperatura especiales están indicadas en el catálogo.

Como funciona un termostato para refrigerante

En un motor frío, el circuito de refrigeración se mantiene cerrado para lograr que los componentes se calienten rápidamente. El refrigerante no pasa por el radiador pero si a través de un circuito de menor tamaño conocido como circuito de alivio o derivación (Fig. 1). De esta manera el refrigerante se calienta con calor del motor hasta que el refrigerante alcanza una temperatura definida. Cuando el refrigerante comienza a alcanzar su temperatura óptima, el termostato permite un flujo

parcial hacia el radiador (Fig. 2). Si la temperatura máxima permitida es alcanzada, el termostato envía todo el flujo de refrigerante hacia el radiador para un enfriamiento efectivo y así prevenir que el motor se sobrecaliente. Al mismo tiempo, el circuito de derivación es cerrado (Fig. 3). Este diagrama funcional no aplica solamente para el circuito primario de refrigeración del motor; el flujo a las unidades auxiliares y otros circuitos también pueden ser controladas por separado.

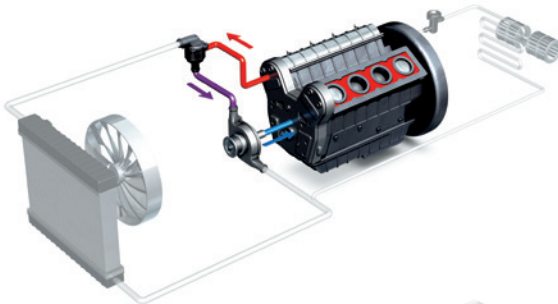


Fig. 1
Circuito de refrigeración de derivación (Fase de calentamiento)

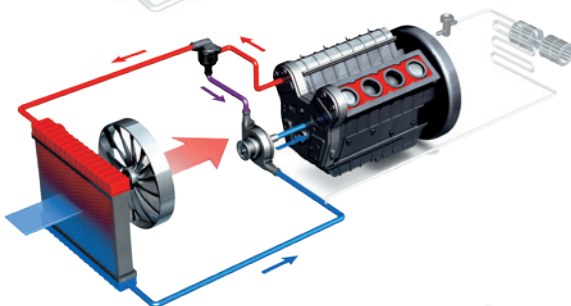


Fig. 2
Circuito de refrigeración principal y de derivación (Operación normal)

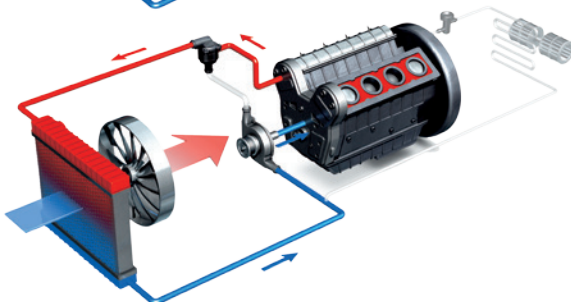


Fig. 3
Circuito de refrigeración principal (Máximo flujo de refrigerante)

Estructura de las páginas y codificación de números de parte

ALFA-ROMEO				MAHLE			
TRANSPORTER/VANS/CAMIONNETTES/FURGONI							
AR							
AR 6 1.9 D	260	160D100	51 (88)	04/85 - 12/85	TI 73 80D		
AR 6 2.4 D	260	6144.61.200	53 (72)	04/85 - 02/86	TX 93 79D		
AR 6 2.4 TD	260	6144.21.220	58 (92)	08/86 - 12/88	TX 93 79D		
AR 6 2.5 D	260	6144.67.220	55 (75)	03/86 - 12/88	TX 93 79D		

1 Designación de motor

2 Año de fabricación

3 Número de parte de termostato

4 Número de parte del interruptor térmico y termopar

La abreviación de la descripción se encuentra seguida por un número secuencial, temperatura de apertura, y, finalmente, información sobre alguna junta incluida – identificable con la letra

“D”. El Termostato de bulbo con el número de serie 159, una temperatura de apertura de 189°F (87°C) y con junta incluida es identificado como “THD 159 87 D”.

Identificación de producto y sus abreviaturas

Asignación en español	Asignación Internacional	Abreviatura
Cartucho de termostato	Thermostat Insert	TX
Termostato de bulbo	Thermostat, Heavy Duty	THD
Termostato en carcasa	Thermostat, Housing	TH
Termostato integral	Thermostat, Integral	TI
Termostato MAP	Thermostat, Map -controlled	TM
Interruptor térmico	Temperature SW itch	TSW
Termopar	Temperature SE nsor	TSE
Elemento operacional	Thermostat, Wax element	TWX
Termostato de aceite	Thermostat, Oil	TO
Termostato EGR	Thermostat, EGR	TE

X = Insert



CL

CL;2.2L L4	1997	F22B1	TX 144 78D	
CL;2.3L L4	1999 - 1998	F23A1	TX 144 78D	
CL;3.0L V6	1999 - 1997	J30A1	TX 146 78D	

ILX

ILX;1.5L L4	2014 - 2013	LEA2	TX 144 78D	
ILX	2013		TX 144 78D	
ILX;2.0L L4 122 CID	2014 - 2013	R20A5	TX 161 82D	

INTEGRA

INTEGRA;1.6L L4	1989 - 1986	D16A1	TX 144 78D	
INTEGRA;1.7L L4	1993 - 1992	B17A1	TX 144 78D	
INTEGRA;1.8L L4	2001 - 1997	B18C5	TX 144 78D	
INTEGRA;1.8L L4	2001 - 1994	B18B1	TX 144 78D	
INTEGRA;1.8L L4	2001 - 1994	B18C1	TX 144 78D	
INTEGRA;1.8L L4	1993 - 1990	B18A1	TX 144 78D	

LEGEND

LEGEND;2.5L V6	1987 - 1986	C25A1	TX 144 78D	
LEGEND;2.7L V6	1990 - 1987	C27A1	TX 144 78D	
LEGEND;3.2L V6	1995 - 1991	C32A1	TX 146 78D	

MDX

MDX;3.5L V6	2006 - 2003	J35A5	TX 146 78D	
MDX;3.5L V6	2002 - 2001	J35A3	TX 146 78D	
MDX;3.7L V6	2013 - 2007	J37A1	TX 146 78D	

NSX

NSX;3.0L V6	2005 - 1991	C30A1	TX 146 78D	
NSX;3.2L V6	2005 - 1997	C32B1	TX 146 78D	

RL

RL;3.5L V6	2008 - 2005	J35A8	TX 146 78D	
RL;3.5L V6	2004 - 1996	C35A1	TX 146 78D	
RL;3.7L V 6	2012 - 2009	J37A2	TX 146 78D	

RSX

RSX;2.0L L4 122 CID	2006 - 2005	K20Z1	TI 241 78	
RSX;2.0L L4 122 CID	2004 - 2002	K20A2	TI 241 78	
RSX;2.0L L4 122 CID	2006 - 2002	K20A3	TI 241 78	

TL

TL;3.2L V6	1998 - 1996	C32A6	TX 146 78D	
TL;3.5L V 6	2014 - 2009	J35Z6	TX 146 78D	
TL;3.5L V6	2008 - 2007	J35A8	TX 146 78D	
TL;3.7L V 6	2014 - 2009	J37A4	TX 146 78D	



TSX

TSX;3.5L V 6	2014 - 2010	J35Z6	TX 146 78D	
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ZDX

ZDX;3.7L V6	2013 - 2010	J37A5	TX 146 78D	
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AUDI

CARS

80

80;2.0L L4	1990 - 1988	3A	TX 15 87D	TSW 46
80;2.3L L5	1992 - 1991	NG	TX 25 87D	TSW 46

80 QUATTRO

80 QUATTRO;2.3L L5	1992 - 1988	NG	TX 25 87D	TSW 46
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90

90;2.0L L4	1988	3A	TX 15 87D	TSW 46
90;2.3L L5	1991 - 1988	NG	TX 25 87D	TSW 46
90;2.8L V6	1995	AAH	TX 34 82D	TSW 46
90;2.8L V6	1995	AFC	TX 34 82D	TSW 46
90;2.8L V6	1994	AFC	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	TSW 46
90;2.8L V6	1994 - 1993	AAH	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	TSW 46

90 QUATTRO

90 QUATTRO;2.3L L5	1992 - 1990	7A	TX 25 87D	TSW 46
90 QUATTRO;2.3L L5	1989 - 1988	NG	TX 25 87D	TSW 46
90 QUATTRO;2.8L V6	1995	AFC	TX 34 82D	TSW 46
90 QUATTRO;2.8L V6	1994 - 1993	AAH	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	TSW 46

100

100;2.3L L5	1991 - 1989	NF	TX 25 87D	TSW 46
100;2.8L V6	1994 - 1992	AAH	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	TSW 46

100 QUATTRO

100 QUATTRO;2.3L L5	1991 - 1989	NF	TX 25 87D	TSW 46
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100 QUATTRO

100 QUATTRO;2.8L V6	1994 - 1992	AAH	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	TSW 46
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200

200;2.2L L5	1991 - 1989	MC	TX 25 87D	TSW 46
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200 QUATTRO

200 QUATTRO;2.2L L5	1991	3B	TX 25 87D	
200 QUATTRO;2.2L L5	1991 - 1989	MC	TX 25 87D	TSW 46

4000

4000;1.6L L4 97 CID	1980	YG	TX 15 87D	
		YH	TX 15 87D	
4000;1.7L L4	1983 - 1981	WT	TX 15 87D	
4000	1987		TX 15 87D	
4000;1.8L L4	1986 - 1985	MG	TX 15 87D	
4000;1.8L L4	1984	JN	TX 15 87D	
4000	1986 - 1985		TX 25 87D	
4000;2.2L L5	1984 - 1980	WE	TX 25 87D	

4000 QUATTRO

4000 QUATTRO;2.2L L5	1987 - 1985	JT	TX 15 87D	
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5000

5000;2.2L L5	1987 - 1985	KZ	TX 25 87D	
5000;2.2L L5	1984	WU	TX 25 87D	
5000;2.2L L5	1983 - 1978	WE	TX 25 87D	

5000 QUATTRO

5000 QUATTRO;2.3L L5	1988 - 1987	NF	TX 25 87D	
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A3

A3;2.0L L4 120 CID	2013 - 2010	CBEA	TI 33 87	
A3;2.0L L4 121 CID	2008 - 2006	BPY	TI 6 87	

A3 QUATTRO

A3 QUATTRO;3.2L V6 195 CID	2009 - 2008	CBRA	TX 30 80D	
A3 QUATTRO;3.2L V 6 195 CID	2007 - 2006	BUB	TX 30 80D	
A3 QUATTRO	2006		TX 30 80D	

A4

A4;1.8L L4	2006	AMB	TM 3 100	
A4;1.8L L4	2005	AMB	TI 7 87 From 5400001 TM 3 100 To 5400000	



A4

A4;1.8L L4	2004 - 2002	AMB	TM 3 100	
A4;1.8L L 4	2001	AWM	TX 14 87D	
A4;1.8L L4	2000	ATW	TX 14 87D	
A4;1.8L L4	1999 - 1997	AEB	TX 14 87D	TSE 1D
A4;2.0L L4 121 CID	2014	CAED	TX 117 95D	
A4;2.0L L4 121 CID	2013 - 2009	CAEB	TX 117 95D	
A4;2.0L L 4 121 CID	2009 - 2007	BWT	TI 7 87	
A4;2.0L L 4 121 CID	2006	BPG	TI 7 87	
A4;2.0L L 4 121 CID	2005	BPG	TI 7 87 From 5400001 TM 3 100 To 5400000	
A4;2.8L V 6	2001 - 2000	ATQ	TX 30 71D Alternate Temperature TX 30 87D Alternate Temperature TX 30 92D OE Temperature	TSE 1D
A4;2.8L V6	1999 - 1998	AHA	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	
A4;2.8L V6	1997	AFC	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	
		AHA	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	
A4;2.8L V6	1996	AFC	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	
A4;3.0L V6	2005	BGN	TI 205 92D	
A4;3.0L V6	2004 - 2002	AVK	TI 205 92D	
A4;3.2L V6	2008 - 2006	BKH	TI 7 87	

A4 QUATTRO

A4 QUATTRO;1.8L L4	2005	AMB	TI 7 87 From 5400001 TM 3 100 To 5400000	
A4 QUATTRO;1.8L L4	2004 - 2002	AMB	TM 3 100	
A4 QUATTRO;1.8L L 4	2001	AWM	TX 14 87D	
A4 QUATTRO;1.8L L4	2000	AEB	TX 14 87D	
		ATW	TX 14 87D	
A4 QUATTRO;1.8L L4	2000	ATW	TX 14 87D	
A4 QUATTRO;1.8L L4	1999 - 1997	AEB	TX 14 87D	TSE 1D
A4 QUATTRO;2.0L L4 121 CID	2014 - 2013	CAEB	TX 117 95D	
		CAED	TX 117 95D	
		CPMA	TX 117 95D	
		CPMB	TX 117 95D	
A4 QUATTRO;2.0L L4 121 CID	2012 - 2009	CAEB	TX 117 95D	
A4 QUATTRO;2.0L L 4 121 CID	2009 - 2007	BWT	TI 7 87	



A4 QUATTRO

A4 QUATTRO;2.0L L 4 121 CID	2006	BPG	TI 7 87	
A4 QUATTRO;2.0L L 4 121 CID	2005	BPG	TI 7 87 From 5400001 TM 3 100 To 5400000	
A4 QUATTRO;2.8L V 6	2001 - 2000	ATQ	TX 30 71D Alternate Temperature TX 30 87D Alternate Temperature TX 30 92D OE Temperature	TSE 1D
A4 QUATTRO;2.8L V6	1999 - 1998	AHA	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	
A4 QUATTRO;2.8L V6	1997 - 1996	AFC	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	
A4 QUATTRO;3.0L V6	2006 - 2005	BGN	TI 205 92D	
A4 QUATTRO;3.0L V6	2004 - 2002	AVK	TI 205 92D	

A5

A5;2.0L L4 121 CID	2014	CAED	TX 117 95D	
A5;2.0L L4 121 CID	2013 - 2012	CAEB	TX 117 95D	

A5 QUATTRO

A5 QUATTRO;2.0L L4 121 CID	2014 - 2013	CAEB CAED CPMA CPMB	TX 117 95D TX 117 95D TX 117 95D TX 117 95D	
A5 QUATTRO;2.0L L4 121 CID	2012	CAEB	TX 117 95D	

A6

A6;2.0L L4 121 CID	2013 - 2012	CAEB	TH 5 80 Auto Trans Oil Thermostat	
A6;2.8L V 6	2001 - 2000	ATQ	TX 30 71D Alternate Temperature TX 30 87D Alternate Temperature TX 30 92D OE Temperature	
A6;2.8L V6	1999 - 1998	AHA	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	
A6;2.8L V6	1995	AAH	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	TSW 46
A6;2.8L V6	1997 - 1995	AFC	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	TSW 46
A6;3.0L V6	2004 - 2002	AVK	TI 205 92D	TSE 1D



A6 QUATTRO

A6 QUATTRO;2.0L L4 121 CID	2013	CAEB	TH 5 80 Auto Trans Oil Thermostat	
A6 QUATTRO;2.7L V6	2004 - 2003	BEL	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	TSE 1D
A6 QUATTRO;2.7L V6	2002	APB	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	TSE 1D
A6 QUATTRO;2.7L V6	2001 - 2000	APB	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	
A6 QUATTRO;2.8L V 6	2001 - 2000	ATQ	TX 30 71D Alternate Temperature TX 30 87D Alternate Temperature TX 30 92D OE Temperature	
A6 QUATTRO;2.8L V6	1999 - 1998	AHA	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	
A6 QUATTRO;2.8L V6	1998 - 1995	AFC	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	TSW 46
A6 QUATTRO;3.0L V6	2004 - 2002	AVK	TI 205 92D	TSE 1D
A6 QUATTRO;4.2L V8	2004 - 2002	AWN	TX 34 82D Alternate Temperature TX 34 87D OE Temperature	TSE 1D
A6 QUATTRO;4.2L V8	2001	AWN	TX 34 82D Alternate Temperature TX 34 87D OE Temperature	
A6 QUATTRO;4.2L V8	2000	ART	TX 34 82D OE Temperature TX 34 87D Alternate Temperature	

A8

A8;3.7L V8	1999 - 1997	AEW	TX 34 82D	
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A8 QUATTRO

A8 QUATTRO;4.2L V8	2010 - 2007	BVJ	TH 5 80 Auto Trans Oil Thermostat	
A8 QUATTRO;4.2L V8	2006	BGK	TX 34 82D OE Temperature TX 34 87D Alternate Temperature	
A8 QUATTRO;4.2L V8	2005 - 2004	BFM	TX 34 82D OE Temperature TX 34 87D Alternate Temperature	



A8 QUATTRO

A8 QUATTRO;4.2L V8	2003 - 2001	AKB	TX 34 82D OE Temperature TX 34 87D Alternate Temperature TX 34 82D OE Temperature TX 34 87D Alternate Temperature	
A8 QUATTRO;4.2L V8	2000	AKB	TX 34 82D OE Temperature TX 34 87D Alternate Temperature	
A8 QUATTRO;4.2L V8	1999 - 1997	ABZ	TX 34 82D	

ALLROAD QUATTRO

ALLROAD QUATTRO;2.7L V6	2005 - 2003	BEL	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	
ALLROAD QUATTRO;2.7L V6	2002 - 2001	APB	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	

CABRIOLET

CABRIOLET;2.8L V6	1998 - 1995	AFC	TX 30 71D Alternate Temperature TX 30 87D Alternate Temperature	TSW 46
CABRIOLET;2.8L V6	1994	AAH	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	TSW 46

COUPE

COUPE;2.2L L5	1987 - 1984	KX	TX 25 87D	TSW 46
COUPE;2.1L L 5	1984 - 1981	WE	TX 25 87D	
COUPE;2.3L L5	1987	NG	TX 25 87D	TSW 46

COUPE QUATTRO

COUPE QUATTRO;2.3L L5	1991 - 1990	7A	TX 25 87D	TSW 46
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FOX

FOX;1.5L L4 90 CID	1974	XV XW XY XZ	TX 13 80D TX 13 80D TX 13 80D TX 13 80D	
FOX;1.5L L4 90 CID	1973	ZD ZE	TX 13 80D TX 13 80D	
FOX;1.6L L4 97 CID	1979 - 1977	YG YH	TX 13 80D TX 13 80D	
FOX;1.6L L4 97 CID	1976	YG YH YK	TX 13 80D TX 13 80D TX 13 80D	



FOX

FOX;1.6L L4 97 CID	1975	YG	TX 13 80D	
		YH	TX 13 80D	

Q7

Q7;3.0L V6 181 CID	2014 - 2013	CNRB	TO 9 75 Auto Trans Oil Thermostat	
Q7;3.0L V6	2014 - 2013	CTWB	TO 9 75 Auto Trans Oil Thermostat	
Q7;3.0L V6	2014 - 2013	CTWA	TO 9 75 Auto Trans Oil Thermostat	
Q7;3.0L V6	2012	CJWE	TO 9 75 Auto Trans Oil Thermostat	
Q7;3.0L V6	2011	CJWC	TO 9 75 Auto Trans Oil Thermostat	
Q7;3.0L V6	2012 - 2011	CJWB	TO 9 75 Auto Trans Oil Thermostat	
Q7;3.0L V6 181 CID	2012 - 2009	CATA	TO 9 75 Auto Trans Oil Thermostat	
Q7;3.6L V6 219 CID	2010 - 2007	BHK	TO 9 75 Auto Trans Oil Thermostat	
Q7;4.2L V8	2010 - 2007	BAR	TO 9 75 Auto Trans Oil Thermostat	

QUATTRO

QUATTRO;2.2L L5	1986 - 1983	WX	TX 25 87D	TSW 46
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R8

R8;4.2L V8	2014	CNDA	TO 9 75 Auto Trans Oil Thermostat	
R8;4.2L V8	2012 - 2011	CNDA	TO 9 75 Auto Trans Oil Thermostat	
R8;4.2L V8	2010 - 2008	BYH	TO 9 75 Auto Trans Oil Thermostat	
R8;5.2L V10	2014	CTYA	TO 9 75 Auto Trans Oil Thermostat	
R8;5.2L V10	2014	CTPA	TO 9 75 Auto Trans Oil Thermostat	
R8;5.2L V10	2012	CMPA	TO 9 75 Auto Trans Oil Thermostat	
R8;5.2L V10	2012 - 2010	BUJ	TO 9 75 Auto Trans Oil Thermostat	

RS6

RS6;4.2L V8	2004	BCY	TX 34 82D OE Temperature TX 34 87D Alternate Temperature	
RS6;4.2L V8	2003	BCY	TX 34 82D Alternate Temperature TX 34 87D OE Temperature	

S4

S4;2.2L L5	1994 - 1992	AAN	TX 25 87D	
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S4

S4;2.7L V6	2002 - 2000	APB	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	TSE 1D
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S6

S6;2.2L L5	1996 - 1995	AAN	TX 25 87D	
S6;4.2L V8	2003 - 2002	BBD	TX 34 82D Alternate Temperature TX 34 87D OE Temperature	TSE 1D
S6;5.2L V10	2011 - 2007	BXA	TH 5 80 Auto Trans Oil Thermostat	

S8

S8;4.2L V8	2003 - 2001	AYS	TX 34 82D OE Temperature TX 34 87D Alternate Temperature	
S8;5.2L V10	2009 - 2007	BSM	TH 5 80 Auto Trans Oil Thermostat	

TT

TT;1.8L L4	2001	ATC AWP	TX 14 87D TX 14 87D	
TT;1.8L L4	2006 - 2001	AWP	TX 14 87D	
TT;1.8L L4	2001 - 2000	ATC AWP	TX 14 87D TX 14 87D	
TT;2.0L L4 121 CID	2009	BPY	TH 5 75 Auto Trans Oil Thermostat TI 6 87	
		CCTA	TH 5 75 Auto Trans Oil Thermostat	
TT;2.0L L4 121 CID	2008	BPY	TI 6 87	

TT QUATTRO

TT QUATTRO;1.8L L4	2006 - 2003	BEA	TX 14 80D	
TT QUATTRO;1.8L L4	2002	AMU	TX 14 87D	
TT QUATTRO;1.8L L4	2002 - 2001	AMU AWP	TX 14 87D TX 14 87D	
TT QUATTRO;1.8L L4	2000	ATC	TX 14 87D	
TT QUATTRO;1.8L L4	2000	AMU ATC	TX 14 87D TX 14 87D	
TT QUATTRO;2.0L L4 121 CID	2014 - 2012	CDMA	TI 6 80	
TT QUATTRO;2.0L L4 121 CID	2014 - 2011	CETA	TH 5 75 Auto Trans Oil Thermostat	
TT QUATTRO;2.0L L4 121 CID	2010 - 2009	CCTA	TH 5 75 Auto Trans Oil Thermostat	
TT QUATTRO;2.0L L4 121 CID	2011 - 2009	CDMA	TH 5 75 Auto Trans Oil Thermostat TI 6 80	
TT QUATTRO;3.2L V6 195 CID	2009 - 2008	CBRA	TX 30 80D	
TT QUATTRO;3.2L V6 195 CID	2006 - 2004	BHE	TX 30 80D	



V8 QUATTRO

V8 QUATTRO;3.6L V8	1991 - 1990	PT	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	
V8 QUATTRO;4.2L V8	1994 - 1992	ABH	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	

BMW

1 SERIES M

1 SERIES M;3.0L L6	2011	N54B30A	TM 14 97	
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3

318 I	1992 - 1988		TX 30 87D	
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7

740 I,LI	2012		TM 21 97	
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325

325;2.7L L6	1988 - 1986	M20	TX 27 71D Alternate Temperature TX 27 80D OE Temperature	
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2500

2500;2.5L L6 152 CID	1971 - 1969	M30B25	TX 27 71D Alternate Temperature TX 27 80D OE Temperature	
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2800

2800;2.8L L6 170 CID	1974 - 1969	M30B28	TX 17 75D Alternate Temperature TX 17 80D OE Temperature	
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128I

128I;3.0L L6	2013 - 2009	N52B30A	TM 14 97	
128I;3.0L L 6	2013 - 2008	N51 B30 A N52B30A	TM 14 97 TM 14 97	

135I

135I;3.0L L6	2010 - 2008	N54B30A	TM 14 97	
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2800CS

2800CS;2.8L L6 170 CID	1971 - 1969	M30B28	TX 17 75D Alternate Temperature TX 17 80D OE Temperature	
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3.0CS

3.0CS;3.0L L6 182 CID	1974 - 1971	M30B30	TX 17 75D Alternate Temperature TX 17 80D OE Temperature	
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3.0CSI

3.0CSI;3.0L L6 182 CID	1974 - 1971	M30B30	TX 17 75D Alternate Temperature TX 17 80D OE Temperature	
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3.0CSL

3.0CSL;3.0L L6 182 CID	1971	M30B30	TX 17 75D Alternate Temperature TX 17 80D OE Temperature	
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3.0S

3.0S;3.0L L6 182 CID	1974 - 1971	M30B30	TX 17 75D Alternate Temperature TX 17 80D OE Temperature	
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3.0SI

3.0SI	1976 - 1975		TX 17 75D Alternate Temperature TX 17 80D OE Temperature	
3.0SI;3.0L L6 182 CID	1971	M30B30	TX 17 75D Alternate Temperature TX 17 80D OE Temperature	

318i

318i;1.8L L 4	1995	M42	TX 28 92D	
318i;1.8L L 4	1994 - 1991	M42	TX 28 88D OE Temperature TX 28 92D Alternate Temperature	
318i;1.9L L4	1999 - 1996	M44	TI 24 95	

318IS

318IS;1.8L L 4	1995	M42	TX 28 92D	
318IS;1.8L L 4	1994 - 1991	M42	TX 28 88D OE Temperature TX 28 92D Alternate Temperature	
318IS;1.9L L4	1999 - 1996	M44	TI 24 95	

**318Ti**

318Ti;1.8L L 4	1995	M42	TX 28 92D	
318Ti;1.9L L4	1999 - 1996	M44	TI 24 95	

320i

320i;2.0L L4 121 CID	2014 - 2013	N20B20A	TM 25 108	
320i;2.0L L6 121 CID	1995 - 1992	M50 B20	TX 28 92D	
320i;2.2L L6 132 CID	2005 - 2001	M54	TO 7 80 Auto Trans Oil Thermostat	

320i XDRIVE

320i XDRIVE;2.0L L4 121 CID	2013	N20B20A	TM 25 108	
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323Ci

323Ci;2.5L L6 152 CID	2000	M52	TM 13 97	
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323i

323i;2.5L L6 152 CID	2000	M52	TM 13 97	
323i;2.5L L6 152 CID	1999 - 1998	M52	TX 28 92D	

325Ci

325Ci;2.5L L6 152 CID	2006 - 2004	M54	TM 13 97	
325Ci;2.5L L6 152 CID	2005 - 2004	M54	TM 13 97	
		M56	TM 13 97	
325Ci;2.5L L6 152 CID	2006 - 2003	M54	TM 13 97	
		M56	TM 13 97	
325Ci;2.5L L6 152 CID	2002 - 2001	M54	TM 13 97	

325E

325E;2.7L L6	1987 - 1984	M20	TX 27 71D Alternate Temperature TX 27 80D OE Temperature	
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325ES

325ES;2.7L L6	1987 - 1986	M20	TX 27 71D Alternate Temperature TX 27 80D OE Temperature	
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325i

325i;2.5L L6 152 CID	2005 - 2003	M54	TM 13 97	
		M56	TM 13 97	
325i;2.5L L6 152 CID	2002 - 2001	M54	TM 13 97	
325i;2.5L L6 152 CID	1995 - 1994	M50TU	TX 28 88D OE Temperature TX 28 92D Alternate Temperature	



325i

325i;2.5L L6 152 CID	1993	M20	TX 27 71D Alternate Temperature TX 27 80D OE Temperature TX 28 88D OE Temperature TX 28 92D Alternate Temperature	
325i;2.5L L6 152 CID	1992	M20	TX 27 71D Alternate Temperature TX 27 80D OE Temperature TX 28 88D OE Temperature TX 28 92D Alternate Temperature	
325i;2.5L L6 152 CID	1991 - 1987	M20	TX 27 71D Alternate Temperature TX 27 80D OE Temperature	
325i;3.0L L6	2006	N52	TM 14 97	

325iS

325iS;2.5L L6 152 CID	1995 - 1993	M50TU	TX 28 88D OE Temperature TX 28 92D Alternate Temperature	
325iS;2.5L L6 152 CID	1992	M50	TX 28 88D OE Temperature TX 28 92D Alternate Temperature	
325iS;2.5L L6 152 CID	1991 - 1987	M20	TX 27 71D Alternate Temperature TX 27 80D OE Temperature	

325iX

325iX;2.5L L6 152 CID	1991 - 1988	M20	TX 27 71D Alternate Temperature TX 27 80D OE Temperature	
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325Xi

325Xi;2.5L L6 152 CID	2005 - 2001	M54	TM 13 97	
325Xi;3.0L L6	2006	N52	TM 14 97	

328Ci

328Ci;2.8L L6	2000	M52	TM 13 97	
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328i

328i;2.8L L6	2000	M52	TM 13 97	
328i;2.8L L6	1999 - 1996	M52	TX 28 92D	
328i;3.0L L 6	2013 - 2007	N51 B30 A N52	TM 14 97 TM 14 97	

**328I XDRIVE**

328I XDRIVE;2.0L L4 121 CID	2014	N20B20A	TM 25 108	
328I XDRIVE;3.0L L6	2013 - 2011	N51B30A	TM 14 97	
		N52	TM 14 97	
328I XDRIVE;3.0L L6	2013 - 2011	N52	TM 14 97	
328I XDRIVE;3.0L L6	2013 - 2009	N51 B30 A	TM 14 97	
		N52	TM 14 97	

328XI

328XI;3.0L L6	2007	N51 B30 A	TM 14 97	
		N52	TM 14 97	
328XI;3.0L L6	2008 - 2007	N51 B30 A	TM 14 97	
		N52	TM 14 97	
328XI;3.0L L6	2007	N52	TM 14 97	

330CI

330CI;3.0L L6	2006 - 2001	M54	TM 13 97	
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330I

330I;3.0L L6	2006	N52	TM 14 97	
330I;3.0L L6	2005 - 2001	M54	TM 13 97	

330XI

330XI;3.0L L6	2006	N52	TM 14 97	
330XI;3.0L L6	2005 - 2001	M54	TM 13 97	

335D

335D;3.0L L6	2011 - 2009	M57T2D30	TI 234 88	
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335I

335I;3.0L L6	2010 - 2007	N54B30A	TM 14 97	
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335I XDRIVE

335I XDRIVE;3.0L L6	2010 - 2009	N54B30A	TM 14 97	
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335IS

335IS;3.0L L6	2013 - 2011	N54B30A	TM 14 97	
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335XI

335XI;3.0L L6	2008 - 2007	N54B30A	TM 14 97	
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524TD

524TD;2.4L L6	1986 - 1985	M21	TX 21 80D	
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525i

525i;2.5L L6 152 CID	2005 - 2002	M54	TO 5 82 Auto Trans Oil Thermostat TM 13 97	
525i;2.5L L6 152 CID	2001	M54	TM 13 97	
525i;2.5L L6 152 CID	1995 - 1991	M50	TX 28 88D OE Temperature TX 28 92D Alternate Temperature	
525i;2.5L L6 152 CID	1990 - 1989	M20	TX 27 71D Alternate Temperature TX 27 80D OE Temperature	
525i;3.0L L6	2007 - 2006	N52	TO 5 82 Auto Trans Oil Thermostat TM 14 97	

525iT

525iT;2.5L L6 152 CID	1993	M50	TX 28 88D	
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525Xi

525Xi;3.0L L6	2007 - 2006	N52	TO 5 82 Auto Trans Oil Thermostat TM 14 97	
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528E

528E;2.7L L6	1988 - 1987	M20	TX 27 71D Alternate Temperature TX 27 80D OE Temperature	
528E;2.7L L6	1986 - 1984	M20	TX 21 80D	
528E;2.7L L6	1983 - 1982	M20	TX 27 71D Alternate Temperature TX 27 80D OE Temperature	

528i

528i;2.8L L 6	2000	M52 TU	TM 13 97	
528i;2.8L L6	1998 - 1997	M52	TX 28 92D	
528i;2.8L L6	1981 - 1979	M30	TX 17 75D Alternate Temperature TX 17 80D OE Temperature	
528i;3.0L L6	2011	N52B30A	TM 21 97	
528i;3.0L L6	2010 - 2008	N52B30A	TO 5 82 Auto Trans Oil Thermostat TM 14 97	

528i XDRIVE

528i XDRIVE;3.0L L6	2010 - 2009	N52B30A	TM 14 97	
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528Xi

528Xi;3.0L L6	2008	N52B30A	TO 5 82 Auto Trans Oil Thermostat TM 14 97	
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530I

530I;3.0L L6	2007 - 2006	N52	TO 5 82 Auto Trans Oil Thermostat TM 14 97	
530I;3.0L L6	2005 - 2002	M54	TO 5 82 Auto Trans Oil Thermostat TM 13 97	
530I;3.0L L6	2001	M54	TM 13 97	
530I;3.0L L6	1978 - 1975	M30	TX 17 75D Alternate Temperature TX 17 80D OE Temperature	

530XI

530XI;3.0L L6	2007 - 2006	N52	TO 5 82 Auto Trans Oil Thermostat TM 14 97	
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533I

533I;3.2L L6	1984 - 1983	M30	TX 17 75D Alternate Temperature TX 17 80D OE Temperature TX 27 71D Alternate Temperature	
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535I

535I;3.0L L6	2013 - 2011	N55B30A	TM 21 103	
535I;3.0L L6	2010 - 2008	N54B30A	TM 14 97	
535I;3.5L L6	1993 - 1986	M30	TX 27 71D Alternate Temperature TX 27 80D OE Temperature	
535I;3.5L L6	1985	M30	TX 17 75D Alternate Temperature TX 17 80D OE Temperature TX 27 71D Alternate Temperature	

535I GT

535I GT;3.0L L6	2013 - 2010	N55B30A	TM 21 103	
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535I GT XDRIVE

535I GT XDRIVE;3.0L L6	2013 - 2011	N55B30A	TM 21 103	
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535I XDRIVE

535I XDRIVE;3.0L L6	2013 - 2011	N55B30A	TM 21 103	
535I XDRIVE;3.0L L6	2010 - 2009	N54B30A	TM 14 97	



535IS

535IS;3.5L L6	1988	M30	TX 27 71D Alternate Temperature TX 27 80D OE Temperature	
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535XI

535XI;3.0L L6	2008	N54B30A	TM 14 97	
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540I

540I;4.0L V8	1995	M60	TO 11 86 Auto Trans Oil Thermostat	
540I;4.4L V8	2003 - 1999	M62	TO 11 86 Auto Trans Oil Thermostat TM 12 105	
540I;4.4L V8	1998 - 1997	M62	TO 11 86 Auto Trans Oil Thermostat TM 11 105	

545I

545I;4.4L V8	2005 - 2004	N62	TO 5 82 Auto Trans Oil Thermostat TM 27 105	
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550I

550I;4.8L V8	2010 - 2006	N62B48B	TO 5 82 Auto Trans Oil Thermostat TM 27 105	
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630CSI

630CSI;3.0L L6	1978 - 1977	M30	TX 17 75D Alternate Temperature TX 17 80D OE Temperature TX 27 71D Alternate Temperature	
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633CSI

633CSI;3.2L L6	1984 - 1978	M30	TX 17 75D Alternate Temperature TX 17 80D OE Temperature TX 27 71D Alternate Temperature	
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635CSI

635CSI;3.5L L6	1989 - 1985	M30	TX 27 71D Alternate Temperature TX 27 80D OE Temperature	
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640I

640I;3.0L L6	2014 - 2012	N55B30A	TM 42 103	
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640I GRAN COUPE

640I GRAN COUPE;3.0L L6	2014 - 2013	N55B30A	TM 42 103	
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645CI

645CI;4.4L V8	2005 - 2004	N62	TO 5 82 Auto Trans Oil Thermostat TM 27 105	
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650I

650I;4.8L V8	2010 - 2006	N62B48B	TO 5 82 Auto Trans Oil Thermostat TM 27 105	
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650I GRAN COUPE

650I GRAN COUPE;4.4L V8	2013	N63B44B	TM 27 105	
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733I

733I;3.2L L6	1984 - 1978	M30	TX 17 75D Alternate Temperature TX 17 80D OE Temperature	
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735I

735I;3.5L L6	1992 - 1985	M30	TX 27 71D Alternate Temperature TX 27 80D OE Temperature	
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735IL

735IL;3.5L L6	1992 - 1988	M30	TX 27 71D Alternate Temperature TX 27 80D OE Temperature	
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740I

740I;3.0L L6	2012 - 2011	N54B30A	TM 21 97	
740I;4.4L V8	2001 - 1999	M62	TO 11 86 Auto Trans Oil Thermostat TM 12 105	
740I;4.4L V8	1998 - 1997	M62	TO 11 86 Auto Trans Oil Thermostat TM 11 105	

740IL

740IL;4.0L V8	1995	M60	TO 11 86 Auto Trans Oil Thermostat	
740IL;4.4L V8	2001 - 1999	M62	TO 11 86 Auto Trans Oil Thermostat TM 12 105	
740IL;4.4L V8	1998 - 1997	M62	TO 11 86 Auto Trans Oil Thermostat TM 11 105	
740IL;4.4L V8	1996	M62	TO 11 86 Auto Trans Oil Thermostat	



740LI

740LI;3.0L L6	2014 - 2013	N55B30A	TM 42 103	
740LI;3.0L L6	2012 - 2011	N54B30A	TM 21 97	

740LI XDRIVE

740LI XDRIVE;3.0L L6	2014 - 2013	N55B30A	TM 42 103	
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745i

745i;4.4L V8	2005 - 2002	N62	TO 5 82 Auto Trans Oil Thermostat TM 27 105	
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745LI

745LI;4.4L V8	2005 - 2002	N62	TO 5 82 Auto Trans Oil Thermostat TM 27 105	
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750i

750i;4.4L V8	2013	N63B44B	TM 27 105	
750i;4.8L V8	2008 - 2006	N62B48	TO 5 82 Auto Trans Oil Thermostat TM 27 105	

750i XDRIVE

750i XDRIVE;4.4L V8	2013	N63B44B	TM 27 105	
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750iL

750iL;5.0L V12	1994 - 1988	M70	TX 36 85D	
750iL;5.4L V12	2001 - 1999	M73N	TO 11 86 Auto Trans Oil Thermostat TM 16 105	
750iL;5.4L V12	1998	M73 M73N	TO 11 86 Auto Trans Oil Thermostat TO 11 86 Auto Trans Oil Thermostat TM 16 105	
750iL;5.4L V12	1998	M73	TO 11 86 Auto Trans Oil Thermostat	

750LI

750LI;4.4L V8	2013	N63B44B	TM 27 105	
750LI;4.8L V8	2008 - 2006	N62B48	TO 5 82 Auto Trans Oil Thermostat TM 27 105	

750LI XDRIVE

750LI XDRIVE;4.4L V8	2013	N63B44B	TM 27 105	
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**760I**

760I;6.0L V12	2006 - 2004	N73	TO 5 82 Auto Trans Oil Thermostat TM 27 105	
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760LI

760LI;6.0L V12	2013 - 2010	N74B60A	TM 27 105	
760LI;6.0L V12	2008 - 2003	N73	TO 5 82 Auto Trans Oil Thermostat TM 27 105	

850CI

850CI;5.0L V12	1994 - 1993	M70	TX 36 85D	
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850CSI

850CSI;5.6L V12	1995 - 1994	S70	TX 36 85D	
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ACTIVEHYBRID 5

ACTIVEHYBRID 5;3.0L L6	2013 - 2012	N55B30A	TM 21 103	
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ACTIVEHYBRID 7

ACTIVEHYBRID 7;3.0L L6	2014 - 2013	N55B30A	TM 42 103	
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ALPINA B7

ALPINA B7;4.4L V8	2013	N63M20A	TM 27 105	
ALPINA B7;4.4L V8	2012 - 2011	N63M10A	TM 27 105	
ALPINA B7;4.4L V8	2008 - 2007	N62B44	TM 27 105	

ALPINA B7 XDRIVE

ALPINA B7 XDRIVE;4.4L V8	2013	N63M20A	TM 27 105	
ALPINA B7 XDRIVE;4.4L V8	2012 - 2011	N63M10A	TM 27 105	

ALPINA B7L

ALPINA B7L;4.4L V8	2013	N63M20A	TM 27 105	
ALPINA B7L;4.4L V8	2012 - 2011	N63M10A	TM 27 105	

ALPINA B7L XDRIVE

ALPINA B7L XDRIVE;4.4L V8	2013	N63M20A	TM 27 105	
ALPINA B7L XDRIVE;4.4L V8	2012 - 2011	N63M10A	TM 27 105	

BAVARIA

BAVARIA;2.8L L6 170 CID	1974 - 1972	M30B28	TX 17 75D Alternate Temperature TX 17 80D OE Temperature	
BAVARIA;3.0L L6 182 CID	1974 - 1972	M30B30	TX 17 75D Alternate Temperature TX 17 80D OE Temperature	



L6

L6;3.5L L6	1987	M30	TX 27 71D Alternate Temperature TX 27 80D OE Temperature	
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L7

L7;3.5L L6	1987 - 1986	M30	TX 27 71D Alternate Temperature TX 27 80D OE Temperature	
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M3

M3;3.0L L6	1995 - 1994	S50	TX 28 92D	
M3;3.2L L6	1999 - 1996	S52	TX 28 88D	
M3;4.0L V8	2013 - 2008	S65B40A	THD 1 79	

M5

M5;3.5L L6	1988	S38	TX 21 80D	
M5;3.6L L6	1993 - 1991	S38	TX 37 79	
M5;4.4L V8	2013	S63B44B	TM 27 105	
M5;5.0L V10	2010 - 2006	S85B50A	THD 1 79	
M5;5.0L V8	2003 - 2000	S62	TX 37 79	

M6

M6;4.4L V8	2013 - 2012	S63B44B	TM 27 105	
M6;5.0L V10	2010 - 2006	S85B50A	THD 1 79	

X3

X3;2.5L L6 152 CID	2005 - 2004	M54	TM 13 97	
X3;3.0L L6	2010 - 2009	N52	TM 14 97	
X3;3.0L L6	2008 - 2007	N52	TO 7 75 Auto Trans Oil Thermostat TM 14 97	
X3;3.0L L6	2006 - 2004	M54	TM 13 97	

X5

X5;3.0L L6	2013 - 2011	N55B30A	TO 6 93 Auto Trans Oil Thermostat	
X5;3.0L L6	2013 - 2009	M57T2D30	TO 6 93 Auto Trans Oil Thermostat TI 234 88	
X5;3.0L L6	2010 - 2007	N52B30A	TO 6 93 Auto Trans Oil Thermostat TM 30 97	
X5;3.0L L6	2006 - 2001	M54	TM 13 97	
X5;4.4L V8	2013 - 2010	S63B44A	TM 27 105	
X5;4.4L V8	2006 - 2004	N62	TO 4 82 Auto Trans Oil Thermostat TM 27 105	
X5;4.4L V8	2003 - 2000	M62	TO 4 82 Auto Trans Oil Thermostat TM 12 105	



X5

X5;4.6L V8	2003 - 2002	M62	TO 4 82 Auto Trans Oil Thermostat TM 12 105	
X5;4.8L V8	2010 - 2007	N62B48B	TO 6 93 Auto Trans Oil Thermostat TO 12 100 Engine Oil Thermostat TM 27 105	
X5;4.8L V8	2006 - 2004	N62B48	TO 4 82 Auto Trans Oil Thermostat TM 27 105	

X6

X6;3.0L L6	2012 - 2011	N55B30A	TO 6 93 Auto Trans Oil Thermostat	
X6;3.0L L6	2010 - 2008	N54B30A	TO 6 93 Auto Trans Oil Thermostat TM 30 97	
X6;4.4L V8	2013 - 2011	S63B44A	TO 6 93 Auto Trans Oil Thermostat TM 27 105	
X6;4.4L V8	2010	S63B44A	TM 27 105	

Z3

Z3;1.9L L4	1998 - 1996	M44	TI 24 95	
Z3;2.5L L6 152 CID	2002 - 2001	M54	TM 13 97	
Z3;2.5L L6 152 CID	2000	M52	TM 13 97	
Z3;2.8L L 6	2000	M52 TU	TM 13 97	
Z3;2.8L L6	1998 - 1997	M52	TX 28 92D	
Z3;3.0L L6	2002 - 2001	M54	TM 13 97	
Z3;3.2L L6	2000 - 1998	S52	TX 28 88D	

Z4

Z4;2.5L L6 152 CID	2005 - 2003	M54	TM 13 97	
Z4;3.0L L6	2011 - 2009	N52B30A	TM 14 97	
Z4;3.0L L6	2012 - 2009	N54B30A	TM 14 97	
Z4;3.0L L6	2008 - 2006	N52	TM 14 97	
Z4;3.0L L6	2005 - 2003	M54	TM 13 97	

Z8

Z8	2003		TM 12 105	
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BMW

CARS

**Z8**

Z8;5.0L V8	2003 - 2000	S62	TX 37 79	
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BUICK

CARS

LACROSSE

LACROSSE;2.4L L4 145 CID	2013 - 2010	LAF	TX 122 82	
		LUK	TX 122 82	

RAINIER

RAINIER;4.2L L6 256 CID	2007 - 2004	VIN: S	TI 226 88	
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REGAL

REGAL;2.0L L4 122 CID	2013 - 2011	LHU	TX 122 82	
REGAL;2.4L L4 145 CID	2013 - 2011	LAF	TX 122 82	
		LEA	TX 122 82	
		LUK	TX 122 82	

VERANO

VERANO;2.0L L4 122 CID	2013	LHU	TX 122 82	
VERANO;2.4L L4 145 CID	2013 - 2012	LEA	TX 122 82	

CADILLAC

CARS

ESCALADE

ESCALADE;5.7L V8 350 CID	2000 - 1999	VIN: R	TX 52 92	
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CHEVROLET

VANS

ASTRO

ASTRO;4.3L V6 262 CID	2005 - 2002	VIN: X	TX 52 92	
ASTRO;4.3L V6 262 CID	2001 - 1996	VIN: W	TX 52 92	

EXPRESS 1500

EXPRESS 1500;4.3L V6 262 CID	2014 - 2003	VIN: X	TX 52 92	
		LU3	TX 52 92	
EXPRESS 1500;4.3L V6 262 CID	2002 - 2000	VIN: W	TX 52 92	
EXPRESS 1500;5.0L V8 305 CID	2002 - 1996	VIN: M	TX 52 92	

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EXPRESS 1500

EXPRESS 1500;5.7L V8 350 CID	2002 - 1996	VIN: R	TX 52 92	
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EXPRESS 2500

EXPRESS 2500;4.3L V6 262 CID	2005 - 2003	VIN: X	TX 52 92	
EXPRESS 2500;4.3L V6 262 CID	2002 - 1996	VIN: W	TX 52 92	
EXPRESS 2500;5.0L V8 305 CID	2002 - 1996	VIN: M	TX 52 92	
EXPRESS 2500;5.7L V8 350 CID	2002 - 1996	VIN: R	TX 52 92	

EXPRESS 3500

EXPRESS 3500;5.7L V8 350 CID	2002 - 1996	VIN: R	TX 52 92	
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P30

P30;4.3L V6 262 CID	1999 - 1996	VIN: W	TX 52 92	
P30;5.7L V8 350 CID	1999 - 1996	VIN: R	TX 52 92	

CARS

BLAZER

BLAZER;4.3L V6 262 CID	2005 - 2003	VIN: X	TX 52 92	
BLAZER;4.3L V6 262 CID	2002 - 1996	VIN: W	TX 52 92	

C1500

C1500;4.3L V6 262 CID	1998 - 1996	VIN: W	TX 52 92	
C1500;5.0L V8 305 CID	1999 - 1996	VIN: M	TX 52 92	
C1500;5.7L V8 350 CID	1999 - 1996	VIN: R	TX 52 92	

C1500 SUBURBAN

C1500 SUBURBAN;5.7L V8 350 CID	1999 - 1996	VIN: R	TX 52 92	
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C2500

C2500;5.0L V8 305 CID	1998 - 1996	VIN: M	TX 52 92	
C2500;5.7L V8 350 CID	2000 - 1996	VIN: R	TX 52 92	

C2500 SUBURBAN

C2500 SUBURBAN;5.7L V8 350 CID	1999 - 1996	VIN: R	TX 52 92	
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C3500

C3500;5.7L V8 350 CID	2000 - 1996	VIN: R	TX 52 92	
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CAPTIVA SPORT

CAPTIVA SPORT;2.4L L4 145 CID	2013 - 2012	LEA	TX 122 82	
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CAVALIER

CAVALIER;2.2L L4 134 CID	2005 - 2002	VIN: 6	TX 122 82	
		L61	TX 122 82	



CLASSIC

CLASSIC;2.2L L4 134 CID	2005 - 2004	L61	TX 122 82	
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COBALT

COBALT;2.0L L4 122 CID	2010 - 2007	VIN: P	TX 122 82	
		VIN: X	TX 122 82	
COBALT;2.2L L4 134 CID	2010 - 2005	L61	TX 122 82	
		LAP	TX 122 82	
COBALT;2.4L L4 145 CID	2008 - 2006	VIN: B	TX 122 82	

COLORADO

COLORADO;2.8L L4 169 CID	2006 - 2004	VIN: 8	TI 222 88	
COLORADO;2.9L L4 178 CID	2012 - 2007	VIN: 9	TI 222 88	
COLORADO;3.5L L5 211 CID	2006 - 2004	VIN: 6	TI 222 88	
COLORADO;3.7L L5 223 CID	2012 - 2007	VIN: E	TI 222 88	

EQUINOX

EQUINOX;2.4L L4 145 CID	2013 - 2010	LAF	TX 122 82	
		LEA	TX 122 82	

HHR

HHR;2.0L L4 122 CID	2010 - 2008	VIN: X	TX 122 82	
		LNF	TX 122 82	
HHR;2.2L L4 134 CID	2011 - 2007	VIN: D	TX 122 82	
		LE8	TX 122 82	
HHR;2.4L L4 145 CID	2011 - 2006	VIN: P	TX 122 82	
		LE9	TX 122 82	

K1500

K1500;4.3L V6 262 CID	1998 - 1996	VIN: W	TX 52 92	
K1500;5.0L V8 305 CID	1999 - 1996	VIN: M	TX 52 92	
K1500;5.7L V8 350 CID	1999 - 1996	VIN: R	TX 52 92	

K1500 SUBURBAN

K1500 SUBURBAN;5.7L V8 350 CID	1999 - 1996	VIN: R	TX 52 92	
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K2500

K2500;5.0L V8 305 CID	1998 - 1997	VIN: M	TX 52 92	
K2500;5.7L V8 350 CID	2000 - 1996	VIN: R	TX 52 92	

K2500 SUBURBAN

K2500 SUBURBAN;5.7L V8 350 CID	1999 - 1996	VIN: R	TX 52 92	
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K3500

K3500;5.7L V8 350 CID	2000 - 1996	VIN: R	TX 52 92	
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MALIBU

MALIBU;2.2L L4 134 CID	2008 - 2004	L61	TX 122 82	
MALIBU;2.4L L4 145 CID	2013 - 2008	VIN: 5	TX 122 82	
		VIN: B	TX 122 82	
		VIN: Z	TX 122 82	
		LE5	TX 122 82	
		LE9	TX 122 82	
		LUK	TX 122 82	

NOVA

NOVA;1.6L L4 98 CID	1987 - 1985	VIN: 4	TX 159 82	
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S10

S10;4.3L V6 262 CID	2004 - 2003	VIN: X	TX 52 92	
S10;4.3L V6 262 CID	2002 - 2000	VIN: W	TX 52 92	
S10;4.3L V6 262 CID	1998 - 1996	VIN: W	TX 52 92	
		VIN: X	TX 52 92	
S10;4.3L V6 262 CID	1999 - 1996	VIN: W	TX 52 92	
		VIN: X	TX 52 92	
S10;4.3L V6 262 CID	1998 - 1996	VIN: W	TX 52 92	

SILVERADO 1500

SILVERADO 1500;4.3L V6 262 CID	2012 - 2003	VIN: X	TX 52 92	
SILVERADO 1500;4.3L V6 262 CID	2002	VIN: W	TX 52 92	
		VIN: X	TX 52 92	
SILVERADO 1500;4.3L V6 262 CID	2001 - 1999	VIN: W	TX 52 92	

TAHOE

TAHOE;5.7L V8 350 CID	2000 - 1996	VIN: R	TX 52 92	
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TRACKER

TRACKER;1.6L L4 98 CID	1998	VIN: 6	TX 7 88D	
TRACKER;1.6L L4 98 CID	1991 - 1989	VIN: U	TX 7 88D	

TRAILBLAZER

TRAILBLAZER;4.2L L6 256 CID	2009 - 2002	VIN: S	TI 226 88	
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TRAILBLAZER EXT

TRAILBLAZER EXT;4.2L L6 256 CID	2006 - 2002	VIN: S	TI 226 88	
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CHRYSLER

TOWN & COUNTRY

TOWN & COUNTRY;3.6L V6 220 CID	2013 - 2011	ERB	TI 237 95	
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VOYAGER

VOYAGER;2.4L L4 148 CID	2001 - 2000	VIN: B	TX 18 79D	
VOYAGER;3.0L V6 181 CID	2000	VIN: 3	TX 18 79D	
VOYAGER;3.3L V6 201 CID	2002	VIN: 3	TX 18 79D	
VOYAGER;3.3L V6 201 CID	2003 - 2001	VIN: 3	TX 18 79D	
		VIN: R	TX 18 79D	
VOYAGER;3.3L V6 201 CID	2000	VIN: G	TX 18 79D	
		VIN: R	TX 18 79D	
VOYAGER;3.3L V6 201 CID	2000	VIN: G	TX 18 79D	

CARS

200

200;3.6L V6 220 CID	2013 - 2011	ERB	TI 237 95	
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300

300;3.6L V6 220 CID	2013 - 2011	ERB	TI 235 95	
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CROSSFIRE

CROSSFIRE;3.2L V6	2006	EGZ	TI 45 87D	
CROSSFIRE;3.2L V6 195 CID	2008 - 2004	VIN: L	TI 45 87D	

DAEWOO

CARS

LEGANZA

LEGANZA;2.2L L4	2002 - 2001	VIN: 2	TI 9 87	
LEGANZA;2.2L L4	2000 - 1999	X22SE	TI 9 87	

NUBIRA

NUBIRA;2.0L L4	2002 - 2001	X 20 SE	TI 9 87	
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NUBIRA

NUBIRA;2.0L L4	2000 - 1999	VIN: Z	TI 9 87	
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DAIMLER-BENZ

see/voir/véase MERCEDES-BENZ

DODGE

VANS

CARAVAN

CARAVAN;2.5L L4 153 CID	1995	VIN: K	TX 18 79D	
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GRAND CARAVAN

GRAND CARAVAN;3.6L V6 220 CID	2013 - 2011	ERB	TI 237 95	
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SPRINTER 2500

SPRINTER 2500;2.7L L5 165 CID	2006 - 2003	OM612	TH 11 87	
		OM647	TH 11 87	
SPRINTER 2500;3.0L V6	2009 - 2007	EXM	TM 28 87	
SPRINTER 2500;3.5L V6	2008 - 2007	EG2	TM 29 100D	

SPRINTER 3500

SPRINTER 3500;2.7L L5 165 CID	2006 - 2003	OM612	TH 11 87	
		OM647	TH 11 87	
SPRINTER 3500;3.0L V6	2009 - 2007	EXM	TM 28 87	
SPRINTER 3500;3.5L V6	2008 - 2007	EG2	TM 29 100D	

CARS

AVENGER

AVENGER;3.6L V6 220 CID	2013 - 2011	ERB	TI 237 95	
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CHALLENGER

CHALLENGER;3.6L V6 220 CID	2013 - 2011	ERB	TI 235 95	
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CHARGER

CHARGER;3.6L V6 220 CID	2013 - 2011	ERB	TI 235 95	
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DURANGO

DURANGO;3.6L V6 220 CID	2013 - 2011	ERB	TI 236 95	
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JOURNEY

JOURNEY;3.6L V6 220 CID	2013 - 2011	ERB	TI 237 95	
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FORD

AEROSTAR

AEROSTAR;4.0L V6 245 CID	1997 - 1990	VIN: X	TX 7 88D	
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TRANSIT CONNECT

TRANSIT CONNECT;2.0L L 4 121 CID	2013 - 2010	VIN: N	TI 200 90	
TRANSIT CONNECT;2.5L L4 152 CID	2014	VIN: 7	TI 200 82	

BRONCO II

BRONCO II;2.9L V6 177 CID	1990 - 1986	VIN: T	TX 7 88D	
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EDGE

EDGE;2.0L L4 122 CID	2014 - 2012	VIN: 9	TI 230 82	
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ESCAPE

ESCAPE;2.0L L4 122 CID	2014 - 2013	VIN: 9	TI 202 82	
ESCAPE;2.3L L4 140 CID	2008	VIN: Z	TI 200 90	
ESCAPE;2.3L L4 140 CID	2007	VIN: H	TI 200 82	
ESCAPE;2.3L L4 140 CID	2007	VIN: Z	TI 200 82	
ESCAPE;2.3L L4 140 CID	2006 - 2005	VIN: Z	TI 200 90	
ESCAPE;2.5L L4 152 CID	2012 - 2009	VIN: 3	TI 200 82	
ESCAPE;2.5L L4 152 CID	2014 - 2009	VIN: 7	TI 200 82	

EXPLORER

EXPLORER;2.0L L4 122 CID	2015 - 2013	VIN: 9	TI 202 82	
EXPLORER;2.0L L4 122 CID	2012	VIN: 9	TI 230 82	
EXPLORER;4.0L V6 245 CID	2003 - 2002	VIN: E	TX 31 92D	
		VIN: K	Insert Type TX 31 92D Insert Type	
EXPLORER;4.0L V6 245 CID	2003 - 2002	VIN: E	TX 31 92D	
			Insert Type	
EXPLORER;4.0L V6 245 CID	2001	VIN: E	TH 7 92	
			Includes Housing and Insert	
			TX 31 92D	
			Insert Type	
		VIN: K	TH 7 92	
			Includes Housing and Insert	
			TX 31 92D	
			Insert Type	



EXPLORER

EXPLORER;4.0L V6 245 CID	2001	VIN: E	TH 7 92 Includes Housing and Insert TX 31 92D Insert Type	
		VIN: K	TH 7 92 Includes Housing and Insert TX 31 92D Insert Type	
EXPLORER;4.0L V6 245 CID	2000	VIN: X	TX 7 88D	
EXPLORER;4.0L V6 245 CID	2001 - 2000	VIN: E	TH 7 92 Includes Housing and Insert TX 31 92D Insert Type	
EXPLORER;4.0L V6 245 CID	2000 - 1997	VIN: E	TH 7 92 Includes Housing and Insert TX 31 92D Insert Type	
		VIN: X	TX 7 88D	
EXPLORER;4.0L V6 245 CID	1997	VIN: E	TH 7 92 Includes Housing and Insert TX 31 92D Insert Type	
EXPLORER;4.0L V6 245 CID	1997 - 1991	VIN: X	TX 7 88D	

EXPLORER SPORT TRAC

EXPLORER SPORT TRAC;4.0L V6 245 CID	2003 - 2001	VIN: E	TX 31 92D Insert Type	
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FOCUS

FOCUS;2.0L L4 122 CID	2014 - 2013	VIN: 9	TI 202 82	
FOCUS;2.0L L4 121 CID	2014 - 2012	VIN: 2	TI 202 90	
		VIN: 9	TI 202 90	
FOCUS;2.0L L4 121 CID	2012	VIN: 2	TI 202 90	
		VIN: 9	TI 202 90	
FOCUS;2.0L L 4 121 CID	2011 - 2005	VIN: N	TI 200 82 Without sensor TM 17 98 With Sensor	
FOCUS;2.3L L4 140 CID	2007 - 2003	VIN: Z	TI 200 82	

FUSION

FUSION;2.0L L4 122 CID	2015 - 2013	VIN: 9	TI 202 82	
FUSION;2.3L L4 140 CID	2009 - 2006	VIN: Z	TI 200 82	
FUSION;2.5L L4 152 CID	2014 - 2013	VIN: 7	TI 200 82	
FUSION;2.5L L4 152 CID	2012 - 2010	VIN: 3	TI 200 82	
FUSION;2.5L L4 152 CID	2012 - 2010	VIN: A	TI 200 82	

RANGER

RANGER;2.3L L4 140 CID	2011 - 2007	VIN: D	TI 200 82	
RANGER;2.3L L4 140 CID	2006 - 2004	VIN: D	TI 200 90	
RANGER;2.3L L4 140 CID	2003 - 2001	VIN: D	TM 17 98 With Sensor	
RANGER;2.9L V6 177 CID	1990 - 1986	VIN: T	TX 7 88D	
RANGER;4.0L V6 245 CID	2001	VIN: E	TH 7 92 Includes Housing and Insert	

FORD

CARS

MAHLE



RANGER

RANGER;4.0L V6 245 CID	2000 - 1990	VIN: X	TX 7 88D	
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TAURUS

TAURUS;2.0L L4 122 CID	2015 - 2013	VIN: 9	TI 202 82	
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GENERAL MOTORS

see/voir/véase GMC

GMC

VANS

P3500

P3500;4.3L V6 262 CID	1999 - 1996	VIN: W	TX 52 92	
P3500;5.7L V8 350 CID	1999 - 1996	VIN: R	TX 52 92	

SAFARI

SAFARI;4.3L V6 262 CID	2005 - 2002	VIN: X	TX 52 92	
SAFARI;4.3L V6 262 CID	2001 - 1996	VIN: W	TX 52 92	

SAVANA 1500

SAVANA 1500;4.3L V6 262 CID	2014 - 2003	VIN: X	TX 52 92	
		LU3	TX 52 92	
SAVANA 1500;4.3L V6 262 CID	2002 - 1996	VIN: W	TX 52 92	
SAVANA 1500;5.0L V8 305 CID	2002 - 1996	VIN: M	TX 52 92	
SAVANA 1500;5.7L V8 350 CID	2002 - 1996	VIN: R	TX 52 92	

SAVANA 2500

SAVANA 2500;4.3L V6 262 CID	2005 - 2003	VIN: X	TX 52 92	
SAVANA 2500;4.3L V6 262 CID	2002 - 1999	VIN: W	TX 52 92	
SAVANA 2500;5.0L V8 305 CID	2002 - 1996	VIN: M	TX 52 92	
SAVANA 2500;5.7L V8 350 CID	2002 - 1996	VIN: R	TX 52 92	

SAVANA 3500

SAVANA 3500;5.7L V8 350 CID	2002 - 1996	VIN: R	TX 52 92	
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CARS

C1500

C1500;4.3L V6 262 CID	1998 - 1996	VIN: W	TX 52 92	
C1500;5.0L V8 305 CID	1999 - 1996	VIN: M	TX 52 92	
C1500;5.7L V8 350 CID	1999 - 1996	VIN: R	TX 52 92	

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C1500 SUBURBAN

C1500 SUBURBAN;5.7L V8 350 CID	1999 - 1996	VIN: R	TX 52 92	
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C2500

C2500;5.0L V8 305 CID	1998 - 1996	VIN: M	TX 52 92	
C2500;5.7L V8 350 CID	2000 - 1996	VIN: R	TX 52 92	

C2500 SUBURBAN

C2500 SUBURBAN;5.7L V8 350 CID	1999 - 1996	VIN: R	TX 52 92	
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C3500

C3500;5.7L V8 350 CID	2000 - 1996	VIN: R	TX 52 92	
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CANYON

CANYON;2.8L L4 169 CID	2006 - 2004	VIN: 8	TI 222 88	
CANYON;2.9L L4 178 CID	2012 - 2007	VIN: 9	TI 222 88	
CANYON;3.5L L5 211 CID	2006 - 2004	VIN: 6	TI 222 88	
CANYON;3.7L L5 223 CID	2012 - 2007	VIN: E	TI 222 88	

ENVOY

ENVOY;4.2L L6 256 CID	2009 - 2002	VIN: S	TI 226 88	
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ENVOY XL

ENVOY XL;4.2L L6 256 CID	2006 - 2002	VIN: S	TI 226 88	
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ENVOY XUV

ENVOY XUV;4.2L L6 256 CID	2005 - 2004	VIN: S	TI 226 88	
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JIMMY

JIMMY;4.3L V6 262 CID	2001 - 1996	VIN: W	TX 52 92	
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K1500

K1500;4.3L V6 262 CID	1998 - 1996	VIN: W	TX 52 92	
K1500;5.0L V8 305 CID	1999 - 1996	VIN: M	TX 52 92	
K1500;5.7L V8 350 CID	1999 - 1996	VIN: R	TX 52 92	

K1500 SUBURBAN

K1500 SUBURBAN;5.7L V8 350 CID	1999 - 1996	VIN: R	TX 52 92	
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K2500

K2500;5.7L V8 350 CID	2000 - 1996	VIN: R	TX 52 92	
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K2500 SUBURBAN

K2500 SUBURBAN;5.7L V8 350 CID	1999 - 1996	VIN: R	TX 52 92	
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K3500

K3500;5.7L V8 350 CID	2000 - 1996	VIN: R	TX 52 92	
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SIERRA 1500

SIERRA 1500;4.3L V6 262 CID	2013 - 2003	VIN: X	TX 52 92	
SIERRA 1500;4.3L V6 262 CID	2002	VIN: W	TX 52 92	
		VIN: X	TX 52 92	
SIERRA 1500;4.3L V6 262 CID	2001 - 1999	VIN: W	TX 52 92	

SONOMA

SONOMA;4.3L V6 262 CID	2004 - 2003	VIN: X	TX 52 92	
SONOMA;4.3L V6 262 CID	2002 - 2000	VIN: W	TX 52 92	
SONOMA;4.3L V6 262 CID	1999 - 1996	VIN: W	TX 52 92	
		VIN: X	TX 52 92	

TERRAIN

TERRAIN;2.4L L4 145 CID	2013 - 2010	LAF	TX 122 82	
		LEA	TX 122 82	

YUKON

YUKON;5.7L V8 350 CID	2000 - 1996	VIN: R	TX 52 92	
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HONDA

ODYSSEY

ODYSSEY;3.5L V6	2014 - 2011	J35Z8	TX 146 78D	
ODYSSEY;3.5L V 6	2010 - 2005	J35A6	TX 146 78D	
ODYSSEY;3.5L V6	2010 - 2005	J35A7	TX 146 78D	
ODYSSEY;3.5L V 6	2004 - 2002	J35A4	TX 146 78D	

ACCORD

ACCORD;2.2L L4	1997 - 1994	F22B1	TX 144 78D	
ACCORD;2.2L L4	1997 - 1994	F22B2	TX 144 78D	
ACCORD;2.2L L 4	1991	F22A1	TX 144 78D	
		F22A4	TX 144 78D	
		F22A6	TX 144 78D	
ACCORD;2.2L L4	1993 - 1991	F22A6	TX 144 78D	
ACCORD;2.2L L 4	1990	F22A1	TX 144 78D	
		F22A4	TX 144 78D	
ACCORD;2.2L L 4	1993 - 1990	F22A1	TX 144 78D	
ACCORD;2.3L L4	1998	F23A1	TX 144 78D	
ACCORD;2.3L L4	2002 - 1998	F23A1	TX 144 78D	
		F23A4	TX 144 78D	



ACCORD

ACCORD;2.3L L4	2002 - 1998	F23A5	TX 144 78D	
ACCORD;2.4L L4	2007 - 2006	K24A8	TI 238 78	
ACCORD;2.4L L4	2005 - 2003	K24A4	TI 238 78	
ACCORD;2.7L V6	1997	C27A4	TX 146 78D	
ACCORD	1996 - 1995		TX 146 78D	
ACCORD;3.0L V6	2007 - 2006	J30A5	TX 146 78D	
ACCORD;3.0L V6	2005	J30A1	TX 146 78D	
		J30A4	TX 146 78D	
ACCORD;3.0L V6	2007 - 2005	JNA1	TX 146 78D	
ACCORD;3.0L V6	2005 - 2003	J30A4	TX 146 78D	
ACCORD;3.0L V6	2002 - 1998	J30A1	TX 146 78D	
ACCORD;3.5L V6	2012 - 2008	J35Z2	TX 146 78D	
ACCORD;3.5L V6	2012 - 2008	J35Z2	TX 146 78D	
		J35Z3	TX 146 78D	

ACCORD CROSSTOUR

ACCORD CROSSTOUR;3.5L V6	2011 - 2010	J35Z2	TX 146 78D	
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CIVIC

CIVIC;1.3L L4	2005 - 2003	LDA1	TX 161 82D	
CIVIC	1987 - 1985		TX 144 78D	
CIVIC;1.3L L4 82 CID	1984	EV1	TX 144 78D	
CIVIC;1.5L L4	2014 - 2012	LEA2	TX 144 78D	
CIVIC;1.5L L4	1995 - 1992	D15B7	TX 144 78D	
CIVIC;1.5L L4	1995 - 1992	D15B8	TX 144 78D	
CIVIC;1.5L L 4	1991 - 1988	D15B2		
CIVIC;1.5L L 4	1987 - 1984	D15B6	TX 144 78D	
		D15B7	TX 144 78D	
		D15Z1	TX 144 78D	
		L15A1	TX 144 78D	
		L15A7	TX 144 78D	
		L15A7-08	TX 144 78D	
		L15A7-09	TX 144 78D	
		LEA1	TX 144 78D	
CIVIC;1.6L L4	2000 - 1999	B16A2	TX 144 78D	
CIVIC;1.6L L4 97 CID	2000 - 1998	D16B5	TX 144 78D	
CIVIC;1.6L L4	2000 - 1996	D16Y5	TX 144 78D	
CIVIC;1.6L L4 97 CID	2000 - 1996	D16Y7	TX 144 78D	
CIVIC;1.6L L4 97 CID	2000 - 1996	D16Y8	TX 144 78D	
CIVIC;1.6L L4 97 CID	1995 - 1992	D16Z6	TX 144 78D	
CIVIC;1.6L L4 97 CID	1991 - 1988	D16A6	TX 144 78D	
CIVIC;1.7L L4	2005 - 2001	D17A1	TX 144 78D	
CIVIC;1.7L L4	2005 - 2001	D17A2	TX 144 78D	
CIVIC;1.7L L4	2005 - 2001	D17A6	TX 144 78D	
CIVIC;1.7L L4	2005 - 2001	D17A7	TX 144 78D	
CIVIC;1.8L L4	2014 - 2012	R18Z1	TX 161 82D	
CIVIC;1.8L L4	2014 - 2012	R18A9	TX 161 82D	
CIVIC;1.8L L4	2011 - 2006	R18A1	TX 161 82D	



CIVIC

CIVIC;1.8L L4	2011 - 2006	R18A4	TX 161 82D	
CIVIC;2.0L L4 122 CID	2005 - 2002	K20A3	TI 241 78	

CIVIC DEL SOL

CIVIC DEL SOL;1.6L L4 97 CID	1997 - 1996	D16Y7	TX 144 78D	
CIVIC DEL SOL;1.6L L4	1997 - 1996	B16A2	TX 144 78D	
CIVIC DEL SOL;1.6L L4 97 CID	1997 - 1996	D16Y8	TX 144 78D	

CR-V

CR-V;2.0L L4	2001 - 1999	B20Z2	TX 144 78D	
CR-V;2.0L L4	1998 - 1997	B20B4	TX 144 78D	
CR-V;2.4L L4	2006 - 2002	K24A1	TI 241 78	

CR-X

CRX;1.5L L4	1991 - 1990	D15B6	TX 144 78D	
CRX;1.5L L4	1991 - 1988	D15B2		
CRX;1.6L L4 97 CID	1991 - 1988	D16A6	TX 144 78D	

CR-Z

CR-Z;1.5L L4 91 CID	2014 - 2011	LEA1	TX 144 78D	
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CROSSTOUR

CROSSTOUR;3.5L V6	2012	J35Z2	TX 146 78D	
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ELEMENT

ELEMENT;2.4L L4	2011 - 2007	K24A8	TI 238 78	
ELEMENT;2.4L L4	2006 - 2003	K24A4	TI 238 78	

FIT

FIT;1.5L L4	2013 - 2009	L15A7	TX 144 78D	
FIT;1.5L L4	2008 - 2007	L15A1	TX 144 78D	

INSIGHT

INSIGHT;1.3L L4	2014 - 2010	LDA3	TX 144 78D	
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PILOT

PILOT;3.5L V6	2014 - 2009	J35Z4	TX 146 78D	
PILOT;3.5L V6	2008	J35A9	TX 146 78D	
PILOT;3.5L V6	2008 - 2006	J35A9	TX 146 78D	
		J35Z1	TX 146 78D	
PILOT;3.5L V6	2005	J35A6	TX 146 78D	
PILOT;3.5L V6	2004 - 2003	J35A4	TX 146 78D	

PRELUDE

PRELUDE;2.2L L4	2001 - 1997	H22A4	TX 146 78D	
PRELUDE;2.2L L4	1996 - 1993	H22A1	TX 146 78D	



PRELUDE

PRELUDE;2.2L L 4	1996 - 1992	F22A1	TX 144 78D	
PRELUDE;2.3L L4	1996 - 1992	H23A1	TX 144 78D	

RIDGELINE

RIDGELINE;3.5L V 6	2014 - 2009	J35Z5	TX 146 78D	
RIDGELINE;3.5L V 6	2008 - 2006	J35A9	TX 146 78D	

S2000

S2000;2.0L L 4	2003 - 2000	F20C1	TX 146 78D	
S2000;2.2L L4	2009 - 2004	F22C1	TX 146 78D	

WAGOVAN

WAGOVAN	1986		TX 144 78D	
WAGOVAN;1.5L L4	1984	EW1	TX 144 78D	

HYUNDAI

ENTOURAGE

ENTOURAGE;3.8L V6	2008 - 2007	VIN: 3	TX 142 82D	
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ACCENT

ACCENT;1.5L L4	1997 - 1996	VIN: N	TX 78 83	
ACCENT;1.6L L4	2011 - 2001	VIN: C	TX 78 83	

AZERA

AZERA;3.3L V6	2011 - 2007	VIN: D	TX 142 82D	
AZERA;3.8L V6	2011 - 2006	VIN: F	TX 142 82D	

ELANTRA

ELANTRA;1.8L L4	1998 - 1996	VIN: M	TX 78 83	
		G4CN	TX 78 83	
ELANTRA;2.0L L4	2012 - 2009	VIN: E	TX 78 83	
ELANTRA;2.0L L4	2010 - 2006	VIN: D	TX 78 83	
ELANTRA	2005 - 2004		TX 78 83	
ELANTRA;2.0L L4	2003 - 2000	G4CP	TX 78 83	

GENESIS

GENESIS 3.8;3.8L V6	2014 - 2012	VIN: D	TX 142 82D	
GENESIS 3.8;3.8L V6	2011 - 2009	VIN: E	TX 142 82D	



GENESIS COUPE

GENESIS COUPE;2.0L L4 122 CID	2014 - 2010	VIN: D G4KF	TX 78 83 TX 78 83	
GENESIS COUPE;3.8L V6	2014 - 2013	VIN: J	TX 142 82D	
GENESIS COUPE;3.8L V6	2012 - 2010	VIN: H	TX 142 82D	
GENESIS COUPE 3.8;3.8L V6	2012 - 2010	VIN: H	TX 142 82D	

SANTA FE

SANTA FE;2.4L L4	2012 - 2010	VIN: B	TX 78 83	
SANTA FE;3.3L V6	2009 - 2007	VIN: E	TX 142 82D	
SANTA FE;3.5L V6	2012 - 2010	VIN: G	TX 142 82D	

SONATA

SONATA;2.0L L4 122 CID	2014 - 2011	VIN: B	TX 78 83	
SONATA;2.4L L4	2014 - 2006	VIN: C	TX 78 83	
SONATA;3.3L V6	2010 - 2006	VIN: F	TX 142 82D	

TIBURON

TIBURON;2.0L L4	2008 - 2006	VIN: D	TX 78 83	
TIBURON	2005 - 2003		TX 78 83	
TIBURON;2.0L L4	2001 - 1998	G4CP	TX 78 83	

TUCSON

TUCSON;2.0L L4	2013 - 2011	VIN: B	TX 78 83	
TUCSON;2.0L L4	2009 - 2006	VIN: B	TX 78 83	
TUCSON	2005		TX 78 83	
TUCSON;2.4L L4	2013 - 2010	VIN: C	TX 78 83	

VERACRUZ

VERACRUZ;3.8L V6	2012 - 2007	VIN: C	TX 142 82D	
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INFINITI

FX45

FX45;4.5L V8	2008 - 2003	VK45DE	TX 147 82D Lower TX 168 95 Control Valve	
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FX50

FX50;5.0L V8	2013 - 2009	VK50VE	TX 147 82D	
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I30

I30;3.0L V6 182 CID	2001 - 2000	VQ30DE	TX 168 95 Control Valve	
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M45

M45;4.5L V 8	2010 - 2006	VK45DE	TX 147 82D Lower TX 168 95 Control Valve	
M45;4.5L V8	2004 - 2003	VK45DE	TX 147 82D Lower TX 168 95 Control Valve	

M56

M56;5.6L V8	2013 - 2011	VK56VDS	TX 147 82D	
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Q45

Q45;4.5L V 8	2006 - 2002	VK45DE	TX 147 82D Lower TX 168 95 Control Valve	
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Q70

Q70 5.6;5.6L 8	2014	VK56VD	TX 147 82D	
		VK56VDS	TX 147 82D	

QX4

QX4;3.5L V6	2003 - 2001	VQ35DE	TX 168 95 Control Valve	
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QX56

QX56;5.6L V8	2013 - 2011	VK56VD	TX 147 82D	
QX56;5.6L V8	2010 - 2004	VK56DE	TX 147 82D	

QX60

QX60;2.5L L4	2014	QR25DER	TX 145 82D	
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QX70

QX70;5.0L V8	2014	VK50VE	TX 147 82D	
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QX80

QX80;5.6L V8	2014	VK56VD	TX 147 82D	
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ISUZU

AMIGO

AMIGO;2.2L L4	2000 - 1999	X22SE	TI 9 87	
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RODEO

RODEO;2.2L L4	2003 - 1998	X22SE	TI 9 87	
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RODEO SPORT

RODEO SPORT;2.2L L4	2003 - 2001	X22SE	TI 9 87	
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TROOPER

TROOPER;2.8L V6	1991 - 1989	VIN: R	TX 113 88D	
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JEEP

CHEROKEE

CHEROKEE;2.5L L4 150 CID	2000 - 1991	VIN: P	TX 18 79D	
CHEROKEE;2.5L L4 150 CID	1990 - 1989	VIN: E	TX 18 79D	
CHEROKEE;2.5L L4 150 CID	1988	VIN: H	TX 18 79D	
CHEROKEE;2.5L L4 150 CID	1989	VIN: E	TX 18 79D	

GRAND CHEROKEE

GRAND CHEROKEE;3.6L V6 220 CID	2013 - 2011	ERB	TI 236 95	
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WRANGLER

WRANGLER;3.6L V6 220 CID	2013 - 2012	ERB	TI 236 95	
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KIA MOTORS

SEDONA

SEDONA;3.5L V6	2014	VIN: 7	TX 142 82D	
SEDONA;3.5L V6	2012 - 2011	VIN: 7	TX 142 82D	
SEDONA;3.8L V6	2010 - 2007	VIN: 3	TX 142 82D	
SEDONA	2006		TX 142 82D	

AMANTI

AMANTI;3.8L V6	2009 - 2007	VIN: 5	TX 142 82D	
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BORREGO

BORREGO;3.8L V6	2009	VIN: 1	TX 142 82D	
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FORTE

FORTE;2.0L L4 122 CID	2013 - 2010	VIN: 2	TX 78 83	
FORTE;2.4L L4	2013 - 2010	VIN: 3	TX 78 83	



FORTE KOUP

FORTE KOUP;2.0L L4 122 CID	2013 - 2010	VIN: 2	TX 78 83	
FORTE KOUP;2.4L L4	2013 - 2010	VIN: 3	TX 78 83	

MAGENTIS

MAGENTIS;2.4L L4	2008 - 2007	VIN: 3	TX 78 83	
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OPTIMA

OPTIMA;2.0L L4 122 CID	2013 - 2011	VIN: 6	TX 78 83	
OPTIMA;2.4L L4	2014 - 2011	VIN: 7	TX 78 83	
OPTIMA;2.4L L4	2010 - 2009	VIN: 8	TX 78 83	
OPTIMA;2.4L L4	2008 - 2006	VIN: 3	TX 78 83	

RIO

RIO;1.6L L4	2011 - 2008	VIN: 3	TX 78 83	
RIO	2007 - 2006		TX 78 83	

RIO5

RIO5;1.6L L4	2011 - 2008	VIN: 3	TX 78 83	
RIO5	2007 - 2006		TX 78 83	

RONDO

RONDO;2.4L L4	2010	VIN: 8	TX 78 83	
		VIN: 9	TX 78 83	
RONDO;2.4L L4	2010 - 2009	VIN: 8	TX 78 83	
RONDO;2.4L L4	2008 - 2007	VIN: 5	TX 78 83	

SORENTO

SORENTO;2.4L L4	2013 - 2012	VIN: 1	TX 78 83	
		VIN: 6	TX 78 83	
SORENTO;2.4L L4	2014 - 2012	VIN: 1	TX 78 83	
		VIN: 6	TX 78 83	
SORENTO;2.4L L4	2013 - 2011	VIN: 1	TX 78 83	
SORENTO;3.3L V6	2009	VIN: 5	TX 142 82D	
SORENTO	2008		TX 142 82D	
SORENTO;3.5L V6	2013 - 2011	VIN: 2	TX 142 82D	
SORENTO;3.8L V6	2009	VIN: 6	TX 142 82D	
SORENTO	2008 - 2007		TX 142 82D	

SOUL

SOUL;2.0L L4	2011 - 2010	VIN: 2	TX 78 83	
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SPECTRA

SPECTRA;2.0L L4	2009 - 2008	VIN: 1	TX 78 83	
		VIN: 2	TX 78 83	
SPECTRA	2007 - 2004		TX 78 83	



SPECTRA5

SPECTRA5;2.0L L4	2009 - 2008	VIN: 1	TX 78 83	
		VIN: 2	TX 78 83	
SPECTRA5	2007 - 2005		TX 78 83	

SPORTAGE

SPORTAGE;2.0L L4 122 CID	2013 - 2011	VIN: 6	TX 78 83	
SPORTAGE;2.0L L4	2010	VIN: 2	TX 78 83	
		VIN: 4	TX 78 83	
SPORTAGE;2.0L L4	2009	VIN: 4	TX 78 83	
SPORTAGE	2008 - 2005		TX 78 83	
SPORTAGE;2.0L L4 122 CID	2001 - 2000	FED	TX 76 88D	
SPORTAGE;2.4L L4	2014	VIN: C	TX 78 83	
SPORTAGE;2.4L L4	2013 - 2011	VIN: 2	TX 78 83	

LEXUS

GS300

GS300;3.0L L6	2005 - 2000	2JZGE	TX 73 82D	
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GS400

GS400;4.0L V8	2000 - 1998	1UZFE	TX 148 82	
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GS430

GS430;4.3L V8	2007 - 2001	3UZFE	TX 148 82	
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GX470

GX470;4.7L V8 285 CID	2009 - 2003	2UZFE	TX 148 82	
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IS300

IS300;3.0L L6	2005 - 2001	2JZGE	TX 73 82D	
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LS400

LS400;4.0L V8	2000 - 1997	1UZFE	TX 148 82	
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LS430

LS430;4.3L V8	2006 - 2001	3UZFE	TX 148 82	
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LX470

LX470;4.7L V8 285 CID	2007 - 1998	2UZFE	TX 148 82	
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SC300

SC300;3.0L L6	2000	2JZGE	TX 73 82D	
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SC400

SC400;4.0L V8	2000 - 1997	1UZFE	TX 148 82	
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SC430

SC430;4.3L V8	2010 - 2002	3UZFE	TX 148 82	
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LINCOLN

MKC

MKC;2.0L L4 122 CID	2015	VIN: 9	TI 202 82	
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MKT

MKT;2.0L L4 122 CID	2014 - 2013	VIN: 9	TI 202 82	
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MAZDA

MPV

MPV	1998 - 1996		TX 160 82	
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2

2;1.5L L4 91 CID	2014 - 2011	MZR	TX 160 82	
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3

3;2.0L L4 122 CID	2014 - 2012	VIN: 7	TX 169 82	
		VIN: 8	TX 169 82	
		VIN: P	TX 169 82	
3;2.5L L4 152 CID	2014	VIN: 3	TX 169 82	

6

6;2.5L L4 152 CID	2014	VIN: 5	TX 169 82	
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626

626	2002 - 1993		TX 160 82	
626	2002 - 1993		TX 160 82	

B4000

B4000;4.0L V6	2000 - 1994	VIN: X	TX 7 88D	
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CX-5

CX-5;2.0L L4 122 CID	2014 - 2013	VIN: E	TX 169 82	
CX-5;2.5L L4 152 CID	2014	VIN: Y	TX 169 82	

MIATA

MIATA	2005 - 2001		TX 76 88D	
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MILLENNIA

MILLENNIA	2002 - 1995		TX 160 82	
MILLENNIA	2001 - 1995		TX 160 82	

MX-3

MX-3	1994 - 1992		TX 160 82	
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MX-6

MX-6	1997 - 1993		TX 160 82	
MX-6	1997 - 1993		TX 160 82	

NAVAJO

NAVAJO;4.0L V6	1994 - 1991	VIN: X	TX 7 88D	
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PROTEGE

PROTEGE	2003 - 1999		TX 76 88D	
PROTEGE	2000 - 1999		TX 160 82	
PROTEGE	2003 - 2001		TX 160 82	

PROTEGE5

PROTEGE5	2003 - 2002		TX 160 82	
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MERCEDES-BENZ

180

180;1.9L L4 116 CID	1957 - 1956	121.923	TX 18 79D	
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200

200	1968		TX 18 79D	
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220

220;2.2L L4 134 CID	1973 - 1968	115.920	TX 18 79D	
220	1973 - 1968		TX 18 79D	

250

250;2.5L L6 152 CID	1972 - 1968	130.923	TX 18 79D	
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250

250	1970 - 1968	TX 18 79D	
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600

600	1972 - 1964	TX 18 79D	
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190B

190B;1.9L L4 116 CID	1961 - 1959	121.920	TX 18 79D	
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190C

190C	1965 - 1963		TX 18 79D	
190C;1.9L L4 116 CID	1965 - 1961	121.924	TX 18 79D	

190D

190D	1987		TX 29 80D	TSE 5 TSW 47 With Integrated Temperature Regulator
190D 2.2	1985 - 1984		TX 29 85D	TSE 5 TSW 34D Radiator Fan Clutch With A/T From Eng 004791
190D 2.5	1989 - 1986		TX 29 80D	TSE 5 TSW 47 With Integrated Temperature Regulator

190DC

190DC;2.0L L4 121 CID	1965 - 1963	121.940	TX 18 79D	
190DC	1965 - 1963		TX 18 79D	

190E

190E 2.3	1993 - 1991			TSW 47 With Integrated Temperature Regulator
190E 2.3	1988			TSW 47 With Integrated Temperature Regulator
190E 2.3	1987 - 1986		TX 18 87D	TSW 34D Radiator Fan Clutch With A/T Thru Eng 058477 TSW 47 With Integrated Temperature Regulator
190E 2.3	1985			TSW 34D Radiator Fan Clutch With A/T Thru Eng 058477 TSW 47 With Integrated Temperature Regulator
190E 2.3	1984			TSW 47 With Integrated Temperature Regulator
190E 2.3-16	1987 - 1986		TX 18 87D	TSW 34D Radiator Fan Clutch With A/T Thru Eng 058477 TSW 47 With Integrated Temperature Regulator



190E

190E 2.6	1993			TSW 47 With Integrated Temperature Regulator
190E 2.6	1992 - 1987		TX 18 87D	TSW 47 With Integrated Temperature Regulator

190SL

190SL;1.9L L4 116 CID	1963 - 1960	121.928	TX 3 79D	
190SL;1.9L L4 116 CID	1959 - 1955	121.920	TX 3 79D	

200D

200D;2.0L L4 121 CID	1973 - 1969	615.913	TX 18 79D	
200D;2.0L L4 121 CID	1968	121.940	TX 18 79D	
		615.913	TX 18 79D	
200D;2.0L L4 121 CID	1967 - 1966	121.940	TX 18 79D	
200D	1968 - 1966		TX 18 79D	

220D

220D;2.2L L4 134 CID	1973 - 1968	615.912	TX 18 79D	
		OM615.947	TX 18 79D	
220D;2.2L L4 134 CID	1973 - 1968	OM615.947	TX 18 79D	
220D	1973 - 1968		TX 18 79D	

240D

240D	1983 - 1976		TX 20 80D	
240D	1975 - 1974		TX 18 79D	

250SE

250SE;2.5L L6 152 CID	1968 - 1966	129.980	TX 103 30 For Injection Pump	
		129.981	TX 103 30 For Injection Pump	

250SEC

250SEC;2.5L L6 152 CID	1968 - 1966	129.980	TX 103 30 For Injection Pump	
		129.981	TX 103 30 For Injection Pump	

250SL

250SL;2.5L L6 152 CID	1968 - 1966	129.982	TX 103 30 For Injection Pump	
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260E

260E	1989 - 1987			TSW 44D
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280SE

280SE 4.5	1973		TX 19 75D	
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280SEC

280SEC;2.8L L6 169 CID	1970 - 1968	130.980	TX 103 30 For Injection Pump	
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280SEL

280SEL;2.8L L6 169 CID	1971 - 1968	130.980	TX 103 30 For Injection Pump	
280SEL	1973 - 1972		TX 19 75D	

280SL

280SL;2.8L L6 169 CID	1971 - 1968	130.980	TX 103 30 For Injection Pump	
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300CD

300CD	1985 - 1978		TX 20 80D	
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300CE

300CE	1992 - 1988		TX 18 87D	TSW 44D
300CE	1993		TX 18 87D	

300D

300D	1985 - 1975		TX 20 80D	
300D 2.5	1993 - 1990		TX 29 80D	

300E

300E	1993		TX 18 87D	TSE 3 TSW 44D
300E	1992 - 1986		TX 18 87D	TSW 44D
300E	1993		TX 18 87D	TSE 3
300E 2.6	1992 - 1990		TX 18 87D	
300E 2.8	1993		TX 18 87D	TSE 3

300SD

300SD	1985 - 1978		TX 20 80D	
300SD	1993 - 1992		TX 29 80D	

300SE

300SE	1991 - 1988		TX 18 87D	TSW 44D
300SE	1993 - 1992		TX 18 87D	

300SEL

300SEL	1969 - 1968		TX 103 30 For Injection Pump	
300SEL	1991 - 1988		TX 18 87D	TSW 44D
300SEL	1973 - 1972		TX 19 75D	
300SEL	1971 - 1970		TX 18 79D	

300SL

300SL	1993 - 1991		TX 18 87D	
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300TD

300TD	1985 - 1980	TX 20 80D	
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300TE

300TE	1993 - 1988	TX 18 87D	TSW 44D
300TE	1993	TX 18 87D	

380SE

380SE	1985 - 1984	TX 22 84D	
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380SEC

380SEC	1983 - 1982	TX 22 84D	
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380SEL

380SEL	1983 - 1981	TX 22 84D	
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380SL

380SL	1985 - 1981	TX 22 84D	
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400E

400E	1993 - 1992	TI 48 80D 2nd Design TX 26 71D1 1st Design; Alternate Temperature TX 26 80D 1st Design; OE Temperature	
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400SE

400SE	1992	TI 48 80D 2nd Design TX 26 71D1 1st Design; Alternate Temperature TX 26 80D 1st Design; OE Temperature	
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400SEL

400SEL	1993	TI 48 80D 2nd Design TX 26 71D1 Alternate Temperature TX 26 80D 1st Design; OE Temperature	
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420SEL

420SEL	1991 - 1986	TX 26 71D1 Alternate Temperature TX 26 80D OE Temperature	
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450SE

450SE	1976 - 1973	TX 19 75D	
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450SEL

450SEL	1980 - 1973	TX 19 75D	
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450SL

450SL	1980 - 1973	TX 19 75D	
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500E

500E	1993 - 1992	TI 48 80D 2nd Design TX 26 71D1 1st Design; Alternate Temperature TX 26 80D 1st Design; OE Temperature	
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500SEC

500SEC	1993	TI 48 80D 2nd Design TX 26 71D1 1st Design; Alternate Temperature TX 26 80D 1st Design; OE Temperature	
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500SEL

500SEL	1993 - 1992	TI 48 80D 2nd Design TX 26 71D1 1st Design; Alternate Temperature TX 26 80D 1st Design; OE Temperature	
500SEL	1985 - 1984	TX 22 84D	

500SL

500SL	1993 - 1992	TI 48 80D 2nd Design TX 26 71D1 1st Design; Alternate Temperature TX 26 80D 1st Design; OE Temperature	
500SL	1991 - 1990	TX 26 71D1 Alternate Temperature TX 26 80D OE Temperature	



560SEC

560SEC	1991 - 1986	TX 26 71D1 Alternate Temperature TX 26 80D OE Temperature	
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560SEL

560SEL	1991 - 1986	TX 26 71D1 Alternate Temperature TX 26 80D OE Temperature	
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560SL

560SL	1989 - 1986	TX 26 71D1 Alternate Temperature TX 26 80D OE Temperature	
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600SEC

600SEC	1993	TI 208 87D	
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600SEL

600SEL	1993 - 1992	TI 208 87D	
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600SL

600SL	1993	TI 208 87D	
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C220

C220	1996	TI 21 87	
C220	1995 - 1994	TI 21 87	TSE 3

C230

C230	2005 - 2003	TX 106 90D	
C230;2.3L L4	2000 - 1999	111.975	TI 21 87
C230;2.3L L4	1998	111.974	TI 21 87
C230	1997	TI 21 87	

C240

C240;2.6L V6	2005 - 2003	112.916	TI 45 87D
C240;2.6L V6	2005 - 2002	112.912	TI 45 87D
C240	2001	TI 45 87D	

C280

C280;2.8L V6	2000 - 1999	112.920	TI 45 87D
C280	1998	TI 45 87D	
C280	1995		TSE 3
C280	1994	TX 18 87D	TSE 3

C32 AMG

C32 AMG	2004 - 2002	TI 45 87D	
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C320

C320;3.2L V6	2005 - 2003	112.953	TI 45 87D	
C320;3.2L V6	2004 - 2002	112.946	TI 45 87D	
C320	2001		TI 45 87D	

C43 AMG

C43 AMG;4.3L V8	2000 - 1999	113.944	TI 45 87D	
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C55 AMG

C55 AMG;5.5L V8 335 CID	2006	113.988	TI 45 87D	
C55 AMG	2005		TI 45 87D	

CL500

CL500	2005		TI 45 87D	
CL500;5.0L V8	2004 - 2000	113.960	TI 45 87D	
CL500;5.0L V8	1999	119.980	TI 48 80D	

CL55 AMG

CL55 AMG;5.5L V8 335 CID	2006	113.991	TI 45 87D	
CL55 AMG	2005 - 2001		TI 45 87D	

CL550

CL550;5.5L V8	2010 - 2009	273.968	TM 29 100D	
CL550;5.5L V8	2008 - 2007	273.961	TM 29 100D	

CL600

CL600	1998		TI 208 87D	
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CLK320

CLK320	2005 - 2004		TI 45 87D	
CLK320;3.2L V6	2003	112.940	TI 45 87D	
		112.955	TI 45 87D	
CLK320;3.2L V6	2002 - 1998	112.940	TI 45 87D	

CLK430

CLK430;4.3L V8	2003 - 1999	113.943	TI 45 87D	
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CLK500

CLK500;5.0L V8	2006	113.968	TI 45 87D	
CLK500	2005 - 2003		TI 45 87D	

CLK55 AMG

CLK55 AMG;5.5L V8 335 CID	2006	113.987	TI 45 87D	
CLK55 AMG	2005 - 2001		TI 45 87D	



CLS500

CLS500	2006		TI 45 87D	
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CLS55 AMG

CLS55 AMG	2006		TI 45 87D	
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E300

E300	1997 - 1995		TX 29 80D Alternate Temperature TX 29 85D OE Temperature	
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E320

E320;3.0L V6	2009 - 2007	642.920	TM 28 87	
E320;3.2L L6	2006 - 2005	648.961	TI 31 92	
E320;3.2L V6	2005 - 2004	112.949	TI 45 87D	
E320;3.2L V6	2005 - 2004	112.954	TI 45 87D	
E320;3.2L V6	2003	112.941	TI 45 87D	
		112.949	TI 45 87D	
E320;3.2L V6	2003 - 1999	112.941	TI 45 87D	
E320	1998		TI 45 87D	
E320	1995 - 1994		TX 18 87D	

E420

E420	1997		TI 48 80D	
E420	1995 - 1994		TI 48 80D 2nd Design TX 26 71D1 1st Design; Alternate Temperature TX 26 80D 1st Design; OE Temperature	

E430

E430;4.3L V8	2002 - 1998	113.940	TI 45 87D	
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E500

E500;5.0L V8	2006	113.967	TI 45 87D	
E500;5.0L V8	2006 - 2004	113.969	TI 45 87D	
E500	2005 - 2003		TI 45 87D	
E500	1994		TI 48 80D 2nd Design TX 26 71D1 1st Design; Alternate Temperature TX 26 80D 1st Design; OE Temperature	

E55 AMG

E55 AMG;5.5L V8 335 CID	2006	113.990	TI 45 87D	
E55 AMG	2005 - 2004		TI 45 87D	



E55 AMG

E55 AMG;5.5L V8 335 CID	2003	113.990	TI 45 87D	
E55 AMG	2002 - 1999		TI 45 87D	

E550

E550;5.5L V8	2011 - 2010	273.966	TM 29 100D	
		273.971	TM 29 100D	
E550;5.5L V8	2011 - 2010	273.970	TM 29 100D	

G500

G500;5.0L V8	2008 - 2006	113.962	TI 45 87D	
G500	2005 - 2002		TI 45 87D	

G55 AMG

G55 AMG;5.5L V8 335 CID	2011 - 2006	113.993	TI 45 87D	
G55 AMG	2004 - 2003		TI 45 87D	

G550

G550;5.5L V8	2011 - 2009	273.963	TM 29 100D	
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GL450

GL450;4.6L V8	2011 - 2007	273.923	TM 29 100D	
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GL550

GL550;5.5L V8	2011 - 2008	273.963	TM 29 100D	
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ML320

ML320;3.2L V6	2003 - 1999	112.942	TI 45 87D	
ML320	1998		TI 45 87D	

ML350

ML350	2005 - 2003		TI 45 87D	
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ML430

ML430;4.3L V8	2001 - 1999	113.942	TI 45 87D	
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ML500

ML500;5.0L V8	2007	113.964	TI 45 87D	
ML500	2006 - 2002		TI 45 87D	

ML55 AMG

ML55 AMG	2003 - 2000		TI 45 87D	
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ML550

ML550;5.5L V8	2011 - 2008	273.963	TM 29 100D	
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R500

R500;5.0L V8	2007	113.971	TI 45 87D	
R500	2006		TI 45 87D	

S320

S320;3.2L L6	1999	104.994	TX 18 87D	
S320	1998		TX 18 87D	
S320;3.2L L6	1995	104.994	TX 18 87D	

S350

S350	1995		TX 29 80D	TSE 2
S350	1994		TX 29 80D	
S350	2006		TI 45 87D	

S420

S420;4.2L V8	1999	119.981	TI 48 80D 2nd Design TX 26 71D1 1st Design; Alternate Temperature TX 26 80D 1st Design; OE Temperature	
S420	1998 - 1994		TI 48 80D 2nd Design TX 26 71D1 1st Design; Alternate Temperature TX 26 80D 1st Design; OE Temperature	

S430

S430;4.3L V8	2003	113.941	TI 45 87D	
S430;4.3L V8	2006 - 2003	113.948	TI 45 87D	
S430	2002 - 2000		TI 45 87D	

S500

S500;5.0L V8	2006 - 2003	113.966	TI 45 87D	
S500;5.0L V8	2006 - 2000	113.960	TI 45 87D	
S500;5.0L V8	1999 - 1996	119.980	TI 48 80D 2nd Design TX 26 71D1 1st Design; Alternate Temperature TX 26 80D 1st Design; OE Temperature	
S500	1995 - 1994		TI 48 80D 2nd Design TX 26 71D1 1st Design; Alternate Temperature TX 26 80D 1st Design; OE Temperature	



S55 AMG

S55 AMG	2006 - 2003		TI 45 87D	
S55 AMG;5.5L V8 335 CID	2002 - 2001	113.986	TI 45 87D	

S550

S550;5.5L V8	2011 - 2007	273.961	TM 29 100D	
S550;5.5L V8	2011 - 2007	273.968	TM 29 100D	

S600

S600;6.0L V12	1999	120.982	TI 208 87D	
S600	1998 - 1994		TI 208 87D	

SL320

SL320	1997 - 1996		TX 18 87D	
SL320	1995 - 1994		TX 18 87D	TSE 3

SL500

SL500;5.0L V8	2006	113.963	TI 45 87D	
SL500	2005 - 2003		TI 45 87D	
SL500;5.0L V8	2002 - 1999	113.961	TI 45 87D	
SL500	1998 - 1994		TI 48 80D 2nd Design TX 26 71D1 1st Design; Alternate Temperature TX 26 80D 1st Design; OE Temperature	

SL55 AMG

SL55 AMG;5.5L V8 335 CID	2008 - 2007	113.995	TI 45 87D	
SL55 AMG;5.5L V8 335 CID	2006	113.992	TI 45 87D	
SL55 AMG	2005 - 2003		TI 45 87D	

SL550

SL550;5.5L V8	2011	273.965	TM 29 100D	
SL550;5.5L V8	2009 - 2007	273.965	TM 29 100D	

SL600

SL600;6.0L V12	2002 - 1999	120.983	TI 208 87D	
SL600	1998 - 1994		TI 208 87D	

SLK230

SLK230;2.3L L4	2004 - 2001	111.983	TI 21 87	
SLK230;2.3L L4	2000 - 1999	111.973	TI 21 87	
SLK230	1998		TI 21 87	

SLK32 AMG

SLK32 AMG	2004 - 2002		TI 45 87D	
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SLK320

SLK320	2004 - 2001		TI 45 87D	
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MERCURY

MARINER

MARINER;2.3L L4 140 CID	2008	VIN: Z	TI 200 90	
MARINER;2.3L L4 140 CID	2007	VIN: Z	TI 200 82	
MARINER;2.3L L4 140 CID	2008 - 2006	VIN: H	TI 200 82	
MARINER;2.3L L4 140 CID	2006 - 2005	VIN: Z	TI 200 90	
MARINER;2.5L L4 152 CID	2011 - 2009	VIN: 3	TI 200 82	
MARINER;2.5L L4 152 CID	2011 - 2009	VIN: 7	TI 200 82	

MILAN

MILAN;2.3L L4 140 CID	2009 - 2006	VIN: Z	TI 200 82	
MILAN;2.5L L4 152 CID	2011 - 2010	VIN: 3	TI 200 82	
MILAN;2.5L L4 152 CID	2011 - 2010	VIN: A	TI 200 82	

MOUNTAINEER

MOUNTAINEER;4.0L V6 245 CID	2001 - 1998	VIN: E	TH 7 92 Includes Housing and Insert TX 31 92D Insert Type	
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MITSUBISHI

ECLIPSE

ECLIPSE;2.4L L4	2010 - 2006	4G69	TX 70 82	
ECLIPSE;3.0L V6 181 CID	2005 - 2003	6G72	TX 147 82D	
ECLIPSE;3.8L V6 230 CID	2011 - 2006	VIN: T	TX 147 82D	

GALANT

GALANT;2.4L L4	2010 - 2005	4G69	TX 70 82	
GALANT	2004		TX 70 82	
GALANT;3.8L V6 230 CID	2009 - 2007	6G75	TX 147 82D	

LANCER

LANCER;2.0L L4 122 CID	2011 - 2008	4B11	TX 171 82	
LANCER;2.4L L4 144 CID	2010 - 2009	4B12	TX 171 82	
LANCER;2.4L L4	2006 - 2005	4G69	TX 70 82	
LANCER	2004		TX 70 82	



MONTERO

MONTERO	2005 - 2003		TX 147 82D	
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OUTLANDER

OUTLANDER;2.4L L4 144 CID	2010 - 2008	4B12	TX 171 82	
OUTLANDER;2.4L L4	2006 - 2005	4G69	TX 70 82	
OUTLANDER	2004		TX 70 82	
OUTLANDER;3.0L V6 182 CID	2011 - 2007	6B31	TX 147 82D	

NISSAN

NV2500

NV2500;5.6L V8	2014 - 2012	VK56DE	TX 147 82D	
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NV3500

NV3500;5.6L V8	2014 - 2012	VK56DE	TX 147 82D	
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200SX

200SX;1.6L L4 97 CID	1998 - 1995	GA16DE	TX 159 82	
200SX	1987		TX 14 80D	
200SX;1.8L L4	1986 - 1984	CA18ET	TX 14 80D	
200SX;2.0L L4	1998 - 1995	SR20DE	TX 170 77	
200SX;2.0L L4	1988 - 1984	CA20E	TX 14 80D	

240SX

240SX;2.4L L4	1998 - 1995	KA24DE	TX 170 77	
240SX;2.4L L4	1994 - 1989	KA24DE	TX 170 77	
		KA24E	TX 170 77	

ALTIMA

ALTIMA;2.4L L4	2001 - 1993	KA24DE	TX 170 77	
ALTIMA;2.5L L4	2014	QR25DE	TX 145 82D	
ALTIMA;2.5L L4	2013 - 2002	QR25DE	TX 145 82D Thermostat TX 168 95 Control Valve	

ARMADA

ARMADA;5.6L V8	2014 - 2005	VK56DE	TX 147 82D	
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AXXESS

AXXESS;2.4L L4	1990	KA24E	TX 170 77	
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CUBE

CUBE;1.8L L4	2012	MR18DE	TX 168 95 Control Valve To 11/2011	
CUBE;1.8L L4	2011 - 2009	MR18DE	TX 168 95 Control Valve	

D21

D21;2.4L L4	1994 - 1990	KA 24 E	TX 170 77	
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FRONTIER

FRONTIER;2.4L L4	2000 - 1998	KA24DE	TX 170 77	
FRONTIER;2.5L L4	2014 - 2005	QR25DE	TX 145 82D	

JUKE

JUKE;1.6L L4	2013	MR16DDT	TX 168 95 Control Valve to 12/2012	
JUKE;1.6L L4	2012 - 2011	MR16DDT	TX 168 95 Control Valve	

MAXIMA

MAXIMA;3.0L V6 182 CID	2001 - 2000	VQ30DE	TX 168 95 Control Valve	
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NX

NX;1.6L L4	1993 - 1991	GA16DE	TX 159 82	
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PATHFINDER

PATHFINDER;2.5L L4	2014	QR25DER	TX 145 82D	
PATHFINDER;3.5L V6	2004 - 2001	VQ35DE	TX 168 95 Control Valve	
PATHFINDER;5.6L V8	2012 - 2008	VK56DE	TX 147 82D	
PATHFINDER;5.6L V8	2004	VK56DE	TX 147 82D	

PICK UP

PICKUP;2.4L L4	1997 - 1995	KA 24 E	TX 170 77	
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PULSAR NX

PULSAR NX;1.5L L4	1984	E15T	TX 14 80D	
PULSAR NX;1.6L L4 97 CID	1990 - 1989	GA16I	TX 159 82	
PULSAR NX;1.6L L4	1988 - 1987	E16I	TX 14 80D	
PULSAR NX;1.6L L4	1986 - 1984	E16	TX 14 80D	
PULSAR NX;1.8L L4	1989 - 1988	CA18DE	TX 14 80D	

ROGUE

ROGUE;2.5L L4	2014	QR25DE	TX 145 82D Thermostat	
ROGUE;2.5L L4	2013 - 2008	QR25DE	TX 145 82D Thermostat TX 168 95 Control Valve	



ROGUE SELECT

ROGUE ELECT;2.5L L4	2014	QR25DE	TX 145 82D Thermostat TX 168 95 Control Valve	
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SENTRA

ENTRA;2.0L L4 122 CID	2012 - 2007	MR20DE	TX 168 95 Control Valve	
ENTRA;2.5L L4	2004	QR25DE	TX 145 82D Thermostat TX 168 95 Control Valve	
SENTRA;1.6L L4	1999 - 1991	GA16DE	TX 159 82	
SENTRA;1.6L L4 97 CID	1990 - 1989	GA16I	TX 159 82	
SENTRA;1.6L L4	1988 - 1987	E16I	TX 14 80D	
SENTRA;1.6L L4 97 CID	1987 - 1986	E16S	TX 14 80D	
SENTRA;1.6L L4	1985 - 1984	E16	TX 14 80D	
SENTRA;2.0L L4 122 CID	2012 - 2007	MR20DE	TX 168 95 Control Valve	
SENTRA;2.0L L4	1994 - 1991	SR20DE	TX 170 77	
SENTRA;2.5L L4	2012 - 2002	QR25DE	TX 145 82D Thermostat TX 168 95 Control Valve	

STANZA

STANZA;2.0L L4	1989 - 1984	CA20E	TX 14 80D	
STANZA;2.4L L4	1992 - 1990	KA24E	TX 170 77	

TITAN

TITAN;5.6L V8	2014 - 2004	VK56DE	TX 147 82D	
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VERSA

VERSA;1.8L L4	2010 - 2007	MR18DE	TX 168 95 Control Valve	
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XTERRA

XTERRA;2.4L L4	2004 - 2000	KA24DE	TX 170 77	
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OLDSMOBILE

ALERO

ALERO;2.2L L4 134 CID	2004 - 2002	L61	TX 122 82	
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BRAVADA

BRAVADA;4.2L L6 256 CID	2004 - 2002	VIN: S	TI 226 88	
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BRAVADA

BRAVADA;4.3L V6 262 CID	2001 - 1996	VIN: W	TX 52 92	
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PLYMOUTH

VOYAGER

VOYAGER;2.5L L4 153 CID	1995	VIN: K	TX 18 79D	
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PONTIAC

G5

G5;2.2L L4 134 CID	2010 - 2007	L61	TX 122 82	
		LAP	TX 122 82	
G5;2.4L L4 145 CID	2008 - 2007	VIN: B	TX 122 82	

G6

G6;2.4L L4 145 CID	2010 - 2006	VIN: B	TX 122 82	
		LE9	TX 122 82	

GRAND AM

GRAND AM;2.2L L4 134 CID	2005 - 2002	L61	TX 122 82	
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SOLSTICE

SOLSTICE;2.0L L4 122 CID	2009 - 2007	VIN: X	TX 122 82	
SOLSTICE;2.4L L4 145 CID	2009 - 2006	VIN: B	TX 122 82	

SUNFIRE

SUNFIRE;2.2L L4 134 CID	2005 - 2002	L61	TX 122 82	
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PORSCHE

911

911;3.0L H6	1982 - 1979	VIN: 2	TO 1 83	
		VIN: A	Engine Oil Thermostat	
			TO 1 83	
			Engine Oil Thermostat	
911;3.2L H6	1989 - 1984	VIN: B	TO 1 83	
			Engine Oil Thermostat	



911

911	1985 - 1984		TO 1 83 Engine Oil Thermostat	
911;3.3L H6	1991	VIN: A	TO 2 83 Engine Oil Thermostat	
911;3.3L H6	1989 - 1986	VIN: B	TO 3 83 Engine Oil Thermostat	
911	1983 - 1981		TO 2 83 Engine Oil Thermostat	
911;3.6L H6	1993	VIN: B	TO 1 83 Engine Oil Thermostat	
911;3.6L H6	1994 - 1991	VIN: B	TO 3 83 Engine Oil Thermostat	
		VIN: C	TO 3 83 Engine Oil Thermostat	

928

928;5.4L V8	1994 - 1993	VIN: A	TX 13 80D	
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944

944;2.5L L4	1988 - 1984	VIN: A	TX 6 83	
944;3.0L L4	1991	VIN: B	TX 13 80D	

968

968;3.0L L4	1995 - 1992	VIN: A	TX 13 80D	
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CAYENNE

CAYENNE;3.2L V6 195 CID	2006 - 2004	VIN: A	TX 30 80D	
CAYENNE;4.8L V8	2010 - 2008	M48.01	THD 2 89	
CAYENNE;4.8L V8	2010 - 2008	M48.51	THD 2 89	

SAAB

9-3

9-3;2.0L L4	2001 - 2000	B205L	TX 10 88D	
9-3;2.0L L4	2003 - 2000	B205R	TX 10 88D	
9-3;2.3L L4 140 CID	2002 - 2000	B235R	TX 10 88D	

9-5

9-5;2.3L L4 140 CID	2005	B235E	TX 10 88D	
9-5;2.3L L4 140 CID	2009 - 2005	B235R	TX 10 88D	
9-5;2.3L L4 140 CID	2005 - 2004	B235L	TX 10 88D	
9-5	2004		TX 10 88D	
9-5;2.3L L4 140 CID	2003 - 2000	B235E	TX 10 88D	



9-5

9-5;2.3L L4 140 CID	2003 - 2000	B235R	TX 10 88D	
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SATURN

CARS

AURA

AURA;2.4L L4 145 CID	2009 - 2007	VIN: 5	TX 122 82	
		VIN: B	TX 122 82	

ION

ION;2.0L L4 122 CID	2007	VIN: P	TX 122 82	
ION;2.2L L4 134 CID	2007 - 2003	L61	TX 122 82	
ION;2.4L L4 145 CID	2007 - 2006	VIN: B	TX 122 82	

L100

L100;2.2L L4 134 CID	2002 - 2001	L61	TX 122 82	
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L200

L200;2.2L L4 134 CID	2003 - 2001	L61	TX 122 82	
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L300

L300;2.2L L4 134 CID	2004	L61	TX 122 82	
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LS

LS;2.2L L4 134 CID	2000	L61	TX 122 82	
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LS1

LS1;2.2L L4 134 CID	2000	L61	TX 122 82	
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LW1

LW1;2.2L L4 134 CID	2000	L61	TX 122 82	
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LW200

LW200;2.2L L4 134 CID	2003 - 2001	L61	TX 122 82	
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SKY

SKY;2.0L L4 122 CID	2010 - 2007	VIN: X	TX 122 82	
SKY;2.4L L4 145 CID	2010 - 2007	VIN: B	TX 122 82	

VUE

VUE;2.2L L4 134 CID	2007 - 2005	VIN: D	TX 122 82	
VUE	2003 - 2002		TX 122 82	



VUE

VUE;2.4L L4 145 CID	2010 - 2007	VIN: P	TX 122 82	
		VIN: Z	TX 122 82	
VUE	2004		TX 122 82	

SCION

XB

XB;1.5L L4	2006 - 2004	1NZFE	TX 73 82D	
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XA

XA;1.5L L4	2006 - 2004	1NZFE	TX 73 82D	
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SUBARU

B9 TRIBECA

B9 TRIBECA;3.0L H 6	2007 - 2006	EZ30D	TX 143 78D	
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BAJA

BAJA;2.5L H 4	2006 - 2004	EJ255	TX 143 78D	
BAJA;2.5L H 4	2006 - 2003	EJ253	TX 143 78D	

FORESTER

FORESTER;2.5L H 4	2010 - 2005	EJ253	TX 143 78D	
FORESTER;2.5L H 4	2013 - 2004	EJ255	TX 143 78D	
FORESTER;2.5L H 4	2004 - 2000	EJ251	TX 143 78D	
FORESTER;2.5L H 4	1999	EJ253	TX 143 78D	

IMPREZA

IMPREZA;1.8L H4	1996	VIN: 1	TX 143 78D	
		VIN: 2	TX 143 78D	
IMPREZA;1.8L H4	1997 - 1993	VIN: 2	TX 143 78D	
IMPREZA;2.0L H4	2005 - 2002	EJ205	TX 143 78D	
IMPREZA;2.2L H4	2001 - 2000	EJ222	TX 143 78D	
IMPREZA;2.2L H4	1999	EJ222	TX 143 78D	
		EJ223	TX 143 78D	
IMPREZA;2.2L H4	1998	EJ22EZ	TX 143 78D	
IMPREZA;2.2L H4	1997	EJ22E	TX 143 78D	
		EJ22EZ	TX 143 78D	
IMPREZA;2.2L H4	1996 - 1995	EJ22E	TX 143 78D	



IMPREZA

IMPREZA;2.5L H 4	2014 - 2006	EJ255	TX 143 78D	
IMPREZA;2.5L H 4	2011 - 2005	EJ253	TX 143 78D	
IMPREZA;2.5L H 4	2014 - 2004	EJ257	TX 143 78D	
IMPREZA;2.5L H4	2004 - 2000	EJ251	TX 143 78D	
IMPREZA;2.5L H 4	1999	EJ253	TX 143 78D	
IMPREZA;2.5L H4	1998	EJ25D	TX 143 78D	

JUSTY

JUSTY;1.2L L3	1991 - 1987	VIN: 7	TX 113 88D	
		VIN: 8	TX 113 88D	

LEGACY

EGACY;2.2L H4	1999 - 1997	EJ22E	TX 143 78D	
		EJ22EZ	TX 143 78D	
EGACY;2.2L H4	1998 - 1997	EJ22EZ	TX 143 78D	
EGACY;2.2L H4	1996	EJ22E	TX 143 78D	
		EJ22EZ	TX 143 78D	
EGACY;2.2L H4	1995	EJ22E	TX 143 78D	
EGACY;2.2L H4	1994 - 1990	VIN: 6	TX 143 78D	
EGACY;2.5L H 4	2004 - 2001	EJ253	TX 143 78D	
EGACY;2.5L H4	2000	EJ251	TX 143 78D	
		EJ252	TX 143 78D	
EGACY;2.5L H4	1999	EJ25D	TX 143 78D	
LEGACY;2.2L H4	1999 - 1997	EJ22E	TX 143 78D	
		EJ22EZ	TX 143 78D	
LEGACY;2.2L H4	1998 - 1997	EJ22EZ	TX 143 78D	
LEGACY;2.2L H4	1996	EJ22E	TX 143 78D	
		EJ22EZ	TX 143 78D	
LEGACY;2.2L H4	1995	EJ22E	TX 143 78D	
LEGACY;2.2L H4	1994 - 1990	VIN: 6	TX 143 78D	
LEGACY;2.5L H 4	2009 - 2005	EJ255	TX 143 78D	
LEGACY;2.5L H 4	2009 - 2001	EJ253	TX 143 78D	
LEGACY;2.5L H4	2000	EJ251	TX 143 78D	
		EJ252	TX 143 78D	
LEGACY;2.5L H4	1999	EJ25D	TX 143 78D	
LEGACY;2.5L H4	1998 - 1996	VIN: 6	TX 143 78D	
LEGACY;3.0L H 6	2009 - 2008	EZ30D	TX 143 78D	
LEGACY;3.6L H6	2014 - 2010	EZ36D	TX 143 78D	

OUTBACK

OUTBACK;2.5L H 4	2009 - 2005	EJ255	TX 143 78D	
OUTBACK;2.5L H 4	2009 - 2001	EJ253	TX 143 78D	
OUTBACK;2.5L H4	2000	EJ251	TX 143 78D	
		EJ252	TX 143 78D	
OUTBACK;3.0L H 6	2009 - 2001	EZ30D	TX 143 78D	
OUTBACK;3.6L H6	2014 - 2010	EZ36D	TX 143 78D	



SVX

SVX;3.3L H6	1997 - 1996	VIN: 8	TX 143 78D	
SVX;3.3L H6	1995 - 1992	VIN: 3	TX 143 78D	

TRIBECA

TRIBECA;3.6L H6	2014 - 2008	EZ36D	TX 143 78D	
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WRX

WRX;2.5L H 4	2013	EJ255	TX 143 78D	
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WRX STI

WRX STI;2.5L H 4	2013	EJ257	TX 143 78D	
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SUZUKI

CARS

ESTEEM

ESTEEM;1.6L L4 97 CID	2000 - 1995	VIN: 3	TX 113 88D	
		G16S	TX 113 88D	

FORENZA

FORENZA	2008 - 2004		TI 9 87	
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GRAND VITARA

GRAND VITARA	2005 - 2000		TX 71 82D	
GRAND VITARA	2001		TX 71 82D	

RENO

RENO;2.0L L4 122 CID	2008 - 2005	VIN: Z	TI 9 87	
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SAMURAI

SAMURAI;1.3L L4 79 CID	1995 - 1990	VIN: 3	TX 7 88D	
SAMURAI;1.3L L4 81 CID	1989 - 1986	VIN: 5	TX 7 88D	

SIDEKICK

SIDEKICK;1.3L L4 81 CID	1989	VIN: 5	TX 7 88D	
SIDEKICK;1.6L L4 97 CID	1989	VIN: 0	TX 7 88D	

SWIFT

SWIFT	1994 - 1992		TX 113 88D	
SWIFT;1.3L L4 79 CID	2001 - 1989	VIN: 2	TX 113 88D	
		VIN: 3	TX 113 88D	
SWIFT	1993 - 1992		TX 113 88D	
WIFT;1.3L L4 79 CID	1990	VIN: 3	TX 113 88D	



VITARA

VITARA	2004		TX 71 82D	
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X-90

X-90;1.6L L4 97 CID	1998 - 1996	VIN: 1	TX 7 88D	
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XL-7

XL-7	2005 - 2002		TX 71 82D	
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TOYOTA

PREVIA

PREVIA;2.4L L4	1997 - 1991	2TZFE	TX 167 82D	
		2TZFZE	TX 167 82D	

VAN

VAN;2.0L L4 122 CID	1985 - 1984	3YEC	TX 159 82	
VAN;2.2L L4	1989 - 1986	4YEC	TX 159 82	

4RUNNER

4RUNNER;2.7L L4	2010	2TRFE	TX 73 82D	
4RUNNER;2.7L L4	2000 - 1996	3RZFE	TX 167 82D	
4RUNNER;3.4L V6	2002 - 2000	5VZFE	TX 70 82	
4RUNNER;4.0L V6 241 CID	2013 - 2003	1GRFE	TI 242 82	
4RUNNER;4.7L V8 285 CID	2009 - 2003	2UZFE	TX 148 82	

CAMRY

CAMRY;2.0L L4 122 CID	1991 - 1987	3SFE	TX 159 82	
CAMRY;2.0L L4	1986 - 1983	2SELC	TX 159 82	
CAMRY;2.2L L 4	2001 - 2000	5S-FE	TX 63 83 To be superseded by TX 159 82 TX 159 82	
CAMRY;2.2L L 4	2001 - 2000	5S-FE	TX 63 83 To be superseded by TX 159 82 TX 159 82	
		5SFNE	TX 63 83 To be superseded by TX 159 82 TX 159 82	
CAMRY;2.2L L 4	1999 - 1992	5S-FE	TX 159 82	
		5SFE	TX 159 82	

CELICA

CELICA;1.6L L4	1993 - 1990	4AFE	TX 159 82	
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CELICA

CELICA;1.8L L4	1997 - 1994	7AFE	TX 159 82	
CELICA;2.0L L4 122 CID	1989 - 1987	3SFE	TX 159 82	
CELICA;2.0L L4	1986	2SELC	TX 159 82	
CELICA;2.2L L4	1999 - 1992	5SFE	TX 159 82	

COROLLA

COROLLA;1.6L L4	1989 - 1988	4AF	TX 159 82	
COROLLA;1.6L L4	1997 - 1988	4AFE	TX 159 82	
COROLLA;1.6L L4	1991 - 1988	4AGE	TX 159 82	
COROLLA;1.6L L4	1988 - 1987	4AGELC	TX 159 82	
COROLLA;1.6L L4	1987 - 1985	4AGEC	TX 159 82	
COROLLA;1.6L L4	1987 - 1984	4AC	TX 159 82	
COROLLA;1.6L L4	1988 - 1984	4ALC	TX 159 82	
COROLLA;1.8L L4	1997 - 1993	7AFE	TX 159 82	

ECHO

ECHO;1.5L L4	2005 - 2000	1NZFE	TX 73 82D	
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FJ CRUISER

FJ CRUISER;4.0L V6 241 CID	2013 - 2007	1GRFE	TI 242 82	
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LAND CRUISER

LAND CRUISER;4.0L L6	1992	3FE	TX 148 82	
LAND CRUISER;4.5L L6	1997 - 1993	1FZFE	TX 148 82	
LAND CRUISER;4.7L V8 285 CID	2007 - 1998	2UZFE	TX 148 82	

MR2

MR2;1.6L L4	1989 - 1988	4AGZE	TX 159 82	
MR2;1.6L L4	1989 - 1985	4AGELC	TX 159 82	

PASEO

PASEO;1.5L L4	1998 - 1992	5EFE	TX 159 82	
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PRIUS

PRIUS;1.5L L4	2009 - 2001	1NZFXE	TX 73 82D	
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PRIUS C

PRIUS C;1.5L L4 91 CID	2014 - 2012	1NZFXE	TI 249 82	
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RAV4

RAV4;2.0L L4 122 CID	2000	3SFE	TX 63 83 To be superseded by TX 159 82	
RAV4;2.0L L4 122 CID	1999 - 1996	3SFE	TX 159 82	



SEQUOIA

SEQUOIA;4.7L V8 285 CID	2009 - 2001	2UZFE	TX 148 82	
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SOLARA

SOLARA	2001		TX 63 83 To be superseded by TX 159 82 TX 159 82	
SOLARA;2.2L L 4	2001 - 2000	5S-FE	TX 63 83 To be superseded by TX 159 82 TX 159 82	
SOLARA;2.2L L 4	1999	5S-FE	TX 159 82	

T100

T100;2.7L L4	1998 - 1994	3RZFE	TX 167 82D	
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TACOMA

TACOMA;2.4L L4	2004 - 1995	2RZFE	TX 167 82D	
TACOMA;2.7L L4	2013 - 2005	2TRFE	TX 73 82D	
TACOMA;2.7L L4	2004 - 1995	3RZFE	TX 167 82D	
TACOMA;3.4L V6	2004 - 2000	5VZFE	TX 70 82	
TACOMA;4.0L V6 241 CID	2013 - 2005	1GRFE	TI 242 82	

TERCEL

TERCEL;1.5L L4	1999 - 1995	5EFE	TX 159 82	
TERCEL;1.5L L 4	1994 - 1990	3E-E	TX 159 82	
TERCEL;1.5L L 4	1990 - 1987	3E	TX 159 82	
TERCEL;1.5L L4	1986	3A	TX 159 82	
TERCEL;1.5L L4	1988 - 1981	3AC	TX 159 82	
TERCEL;1.5L L4	1980	1AC	TX 159 82	

TUNDRA

TUNDRA;3.4L V6	2004 - 2000	5VZFE	TX 70 82	
TUNDRA;4.0L V6 241 CID	2013 - 2005	1GRFE	TI 242 82	
TUNDRA;4.7L V8 285 CID	2009 - 2000	2UZFE	TX 148 82	

YARIS

YARIS;1.5L L4	2013 - 2007	1NZFE	TX 73 82D	
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VOLVO

244

244;2.4L L6	1984 - 1982	D24	TX 25 87D	
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245

245;2.4L L6	1984 - 1982	D24	TX 25 87D	
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264

264;2.4L L6	1981	D24	TX 25 87D	
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740

740;2.4L L6	1986 - 1985	D24T	TX 25 87D	
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745

745;2.4L L6	1985	D24T	TX 25 87D	
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760

760;2.4L L6	1985	D24T	TX 25 87D	
760;2.4L L6	1984 - 1983	D24	TX 25 87D	
		D24T	TX 25 87D	

850

850;2.3L L5	1997	B 5234 T1	TX 13 92D	
850;2.3L L5	1996	B5234T	TX 13 92D	
850;2.3L L 5	1997 - 1995	B 5234 T5	TX 13 92D	
850;2.4L L5	1997	B5254T	TX 13 92D	
850;2.4L L5	1997 - 1995	B5254FS	TX 13 92D	

C70

C70;2.3L L5	2004 - 2003	B5234T9	TM 20 90D	
C70;2.3L L5	2002	B5234T3	TM 20 90D	
C70;2.3L L5	2001 - 1998	B5234T3	TX 13 92D	
C70;2.4L L5	2004 - 2003	B5244T7	TM 20 90D	
C70;2.4L L5	2002	B5244T	TM 20 90D	
C70;2.4L L5	2001 - 2000	B5244T	TX 13 92D	
C70;2.4L L5	1999 - 1998	B5254T	TX 13 92D	

S40

S40;1.9L L4	2003	B 4204 T4	TX 13 92D	
		B4204T3	TX 13 92D	
S40;1.9L L4	2004 - 2003	B 4204 T4	TX 13 92D	
S40;1.9L L4	2003 - 2001	B4204T3	TX 13 92D	
S40;2.0L L 4	2000	B 4204 T	TX 13 92D	
S40;1.9L L4	2000	B4204T2	TX 13 92D	

S60

S60;2.3L L5	2004 - 2002	B5234T3	TM 20 90D	
S60;2.3L L5	2001	B5234T3	TX 13 92D	
S60;2.4L L5	2009 - 2005	B5244T5	TM 20 90D	
S60;2.4L L5	2003	B5244S	TH 36 90D	
		B5244S6	TH 36 90D	
S60;2.4L L5 149 CID	2003 - 2002	B 5244 T3	TM 20 90D	



S60

S60;2.4L L5	2002 - 2001	B5244S	TX 13 92D	
S60;2.4L L5 149 CID	2001	B 5244 T3	TX 13 92D	
S60;2.5L L5	2007 - 2004	B5254T4	TM 20 90D	
S60;2.5L L5	2009 - 2003	B5254T2	TM 20 90D	
S60 2.4;2.4L L5	2005	B5244S	TH 36 90D	
		B5244S6	TH 36 90D	
S60 2.4;2.4L L5	2004	B5244S	TH 36 90D	

S70

S70;2.3L L5	2000 - 1998	B5234T3	TX 13 92D	
S70;2.4L L5	2000	B5244S	TX 13 92D	
S70;2.4L L5	2000	B5244T	TX 13 92D	
S70;2.4L L5	1999 - 1998	B5254S	TX 13 92D	
S70;2.4L L5	1999 - 1998	B5254T	TX 13 92D	

S80

S80;2.5L L5	2006 - 2004	B5254T2	TM 20 90D	
S80;2.8L L6	2001 - 1999	B6284T	TX 107 90D	
S80;2.9L L6	2005 - 2002	B6294T	TX 107 90D	
S80 2.9;2.9L L6	2004	B6294S2	TX 107 90D	
S80 2.9;2.9L L6	2003 - 2000	B6294S	TX 107 90D	

S90

S90;2.9L L6	1998	B6304S2	TX 13 92D	
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V40

V40;1.9L L4	2003	B4204T3	TX 13 92D	
V40;1.9L L4	2004 - 2003	B 4204 T4	TX 13 92D	
V40;1.9L L4	2003 - 2001	B4204T3	TX 13 92D	
V40;2.0L L 4	2000	B 4204 T	TX 13 92D	
V40;1.9L L4	2000	B4204T2	TX 13 92D	

V70

V70;2.3L L5	2004 - 2002	B5234T3	TM 20 90D	
V70;2.3L L5	1999	B5234T8	TX 13 92D	
V70;2.3L L5	2001 - 1998	B5234T3	TX 13 92D	
V70;2.3L L5	1998	B 5234 T6	TX 13 92D	
V70;2.4L L5	2005	B5244T5	TM 20 90D	
V70;2.4L L5	2003	B5244S	TH 36 90D	
		B5244S6	TH 36 90D	
V70;2.4L L5 149 CID	2003 - 2002	B 5244 T3	TM 20 90D	
V70;2.4L L5 149 CID	2001	B 5244 T3	TX 13 92D	
V70;2.4L L5	2002 - 2000	B5244S	TX 13 92D	
V70;2.4L L5	2000	B5244T	TX 13 92D	
V70;2.4L L5	1999 - 1998	B5254S	TX 13 92D	
V70;2.4L L5	1999 - 1998	B5254T	TX 13 92D	
V70;2.5L L5	2007 - 2005	B5254T2	TM 20 90D	
V70;2.5L L5	2007 - 2005	B5254T4	TM 20 90D	



V70

V70 2.4;2.4L L5	2007	B5244S	TH 36 90D	
V70 2.4;2.4L L5	2006 - 2005	B5244S	TH 36 90D	
		B5244S6	TH 36 90D	
V70 2.4;2.4L L5	2005	B5244S	TH 36 90D	
		B5244S6	TH 36 90D	
V70 2.4;2.4L L5	2005 - 2004	B5244S	TH 36 90D	

V90

V90;2.9L L6	1998	B6304S2	TX 13 92D	
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XC70

XC70;2.5L L5	2007 - 2003	B5254T2	TM 20 90D	
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XC90

XC90;2.5L L5	2006 - 2005	B5254T2	TM 20 90D	
XC90;2.9L L6	2005 - 2003	B6294T	TX 107 90D	

VW

VANS

EUROVAN

EUROVAN	1997		TX 25 87D	
EUROVAN;2.4L L 5 144 CID	1996	AAB	TX 25 87D	
EUROVAN;2.4L L 5 144 CID	1995	AAB	TX 25 87D	TSW 32
EUROVAN;2.4L L 5 144 CID	1994 - 1993	AAB	TX 25 87D	
EUROVAN;2.5L L 5 150 CID	1996	ACU	TX 25 87D	
EUROVAN;2.5L L 5 150 CID	1995	ACU	TX 25 87D	TSW 32
EUROVAN	1994		TX 25 87D	
EUROVAN	1993		TX 25 87D	TSW 32
EUROVAN	1992		TX 25 87D	
EUROVAN;2.8L V6	2003	AXK	TX 30 80D	
EUROVAN;2.8L V6	2002	AXK	TX 25 80D	
			TX 30 80D	
EUROVAN;2.8L V6	2001	AES	TX 25 80D	
		AXK	TX 25 80D	
EUROVAN;2.8L V6	2001	AES	TX 25 80D	
		AXK	TX 25 80D	
EUROVAN;2.8L V6	2001	AXK	TX 25 80D	
EUROVAN;2.8L V6	2000 - 1999	AES	TX 25 80D	TSW 32
EUROVAN;2.8L V 6	1997	AES	TX 25 80D	TSW 32

TRANSPORTER

TRANSPORTER	1985		TX 24 80D Alternate Temperature TX 24 87D OE Temperature	
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TRANSPORTER

TRANSPORTER	1991 - 1986		TX 24 80D Alternate Temperature	
TRANSPORTER;2.4L L 5 144 CID	1994 - 1993	AAB	TX 25 87D	
TRANSPORTER	1993 - 1992		TX 25 87D	

VANAGON

VANAGON;1.9L H 4	1985 - 1983	DH	TX 24 80D Alternate Temperature TX 24 87D OE Temperature	
VANAGON;2.1L H 4	1991 - 1986	MV	TX 24 80D Alternate Temperature TX 24 87D OE Temperature	

CARS

BEETLE

BEETLE;1.8L L 4	2005	BKF	TX 14 87D	
BEETLE;1.8L L 4	2004 - 2002	AWV	TX 14 87D	
BEETLE;1.8L L 4	2004 - 2002	AWP	TX 14 87D	
BEETLE;1.8L L 4	2001	APH	TX 14 87D	
		AWV	TX 14 87D	
BEETLE;1.8L L 4	2000 - 1999	APH	TX 14 87D	TSE 1D
BEETLE;1.9L L 4 116 CID	2006 - 2005	BEW	TX 15 87D	
BEETLE;1.9L L 4 116 CID	2004	ALH	TX 15 87D	
		BEW	TX 15 87D	
BEETLE;1.9L L 4 116 CID	2003 - 2001	ALH	TX 15 87D	
BEETLE;1.9L L 4 116 CID	2000 - 1998	ALH	TX 15 87D	TSE 1D
BEETLE;2.0L L 4 120 CID	2013	CJAA	TI 33 87	
BEETLE;2.0L L 4 121 CID	2005 - 2004	BEV	TX 14 87D	
		BGD	TX 14 87D	
BEETLE;2.0L L 4	2003	AZG	TX 14 87D	
BEETLE;2.0L L 4 121 CID	2003	AVH	TX 14 87D	
		BDC	TX 14 87D	
BEETLE;2.0L L 4 121 CID	2001	AEG	TX 14 87D	
		AVH	TX 14 87D	
		AZG	TX 14 87D	
BEETLE;2.0L L 4 121 CID	2002 - 2001	AVH	TX 14 87D	
		AZG	TX 14 87D	
BEETLE;2.0L L 4 121 CID	2001	AEG	TX 14 87D	
BEETLE;2.0L L 4 121 CID	2000 - 1998	AEG	TX 14 87D	TSE 1D
BEETLE;2.5L L 5 151 CID	2014 - 2012	CBTA	TH 5 75 Auto Trans Oil Thermostat TX 125 80	
		CBUA	TH 5 75 Auto Trans Oil Thermostat TX 125 80	
BEETLE;2.5L L 5 151 CID	2014 - 2012	CBTA	TX 125 80	
		CBUA	TX 125 80	
BEETLE;2.5L L 5 151 CID	2010 - 2008	BPR	TX 125 80	
		BPS	TX 125 80	



BEETLE

BEETLE 2.5;2.5L L5 151 CID	2008 - 2006	BPR	TX 125 80	
		BPS	TX 125 80	

CABRIO

CABRIO;2.0L L4 121 CID	2002 - 1995	ABA	TX 15 87D	
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CABRIOLET

CABRIOLET;1.8L L4	1993 - 1990	2H	TX 15 87D	
CABRIOLET;1.8L L 4	1989 - 1985	JH		

CC

CC;2.0L L4 121 CID	2013	CBFA	TH 5 75	
		CCTA	Auto Trans Oil Thermostat TH 5 75	
CC;2.0L L4 121 CID	2012 - 2010	CBFA	TH 5 75	
		CCTA	Auto Trans Oil Thermostat TX 117 95D	
CC;2.0L L4 121 CID	2009	CCTA	TH 5 75	
			Auto Trans Oil Thermostat TX 117 95D	

CORRADO

CORRADO;1.8L L4	1992 - 1990	PG	TX 15 87D	
CORRADO	1995 - 1993		TX 25 80D	
CORRADO;2.8L V6	1992	AAA	TX 25 80D	

DASHER

DASHER;1.5L L 4	1980 - 1979	CK	TX 13 80D	
DASHER;1.5L L4	1975	XR	TX 13 80D	
		XS	TX 13 80D	
DASHER;1.5L L4 90 CID	1974	XV	TX 13 80D	
		XW	TX 13 80D	
		XY	TX 13 80D	
		XZ	TX 13 80D	
DASHER;1.6L L4 97 CID	1981	CR	TX 13 80D	
DASHER;1.6L L4 97 CID	1980 - 1977	YG	TX 13 80D	
		YH	TX 13 80D	
DASHER;1.6L L4 97 CID	1976	YG	TX 13 80D	
		YH	TX 13 80D	
		YK	TX 13 80D	

EOS

EOS;2.0L L4 121 CID	2014 - 2010	CBFA	TX 117 95D	
		CCTA	TX 117 95D	



EOS

EOS;2.0L L 4 121 CID	2009	BPY	TH 5 80 Auto Trans Oil Thermostat TI 6 87	
		CBFA	TH 5 80 Auto Trans Oil Thermostat TX 117 95D	
		CCTA	TH 5 80 Auto Trans Oil Thermostat TX 117 95D	
EOS;2.0L L 4 121 CID	2008 - 2007	BPY	TH 5 80 Auto Trans Oil Thermostat TI 6 87	
EOS;3.2L V 6 195 CID	2008	BUB	TX 30 80D	
EOS;3.2L V6 195 CID	2008	CBRA	TX 30 80D	
EOS 3.2;3.2L V 6 195 CID	2007	BUB	TX 30 80D	

FOX

FOX;1.8L L4	1993 - 1991	ABG	TX 15 87D	
FOX;1.8L L4	1990 - 1988	JN	TX 15 87D	
FOX;1.8L L4	1987	JN	TX 15 87D	
		UM	TX 15 87D	

GOLF

GOLF	1990 - 1989		TX 15 87D	
GOLF;1.6L L4 97 CID	1988 - 1985	ME	TX 15 87D	
GOLF;1.8L L4	2006 - 2004	AWP	TX 14 87D	
GOLF;1.8L L4	2003 - 2002	AWP	TX 14 87D	TSE 1D
GOLF;1.8L L4	2001	AWD	TX 14 87D	TSE 1D
		AWW	TX 14 87D	TSE 1D
GOLF;1.8L L4	2000	AWD	TX 14 87D	TSE 1D
GOLF	1998		TX 15 87D	
GOLF	1996 - 1995		TX 15 87D	
GOLF	1993		TX 15 87D	
GOLF;1.8L L4	1992 - 1988	PF	TX 15 87D	
		RV	TX 15 87D	
GOLF;1.8L L4	1988	PF	TX 15 87D	
GOLF;1.8L L4	1989 - 1987	PL	TX 15 87D	
GOLF;1.8L L4	1987	RD	TX 15 87D	
GOLF;1.8L L 4	1987 - 1985	GX	TX 15 87D	
GOLF;1.8L L 4	1986 - 1985	HT	TX 15 87D	
		RD	TX 15 87D	
GOLF;1.9L L4 116 CID	2006 - 2005	BEW	TX 15 87D	
GOLF;1.9L L 4 116 CID	2004	ALH	TX 15 87D	
		BEW	TX 15 87D	
GOLF	2004		TX 15 87D	
GOLF;1.9L L 4 116 CID	2003	ALH	TX 15 87D	TSE 1D
GOLF;1.9L L 4 116 CID	2002 - 1999	ALH	TX 15 87D	
GOLF;1.9L L4 116 CID	1998	AHU	TX 15 87D	
GOLF	1998 - 1993		TX 15 87D	
GOLF;2.0L L4 121 CID	2013 - 2012	CRZA	TI 6 80	



GOLF

GOLF;2.0L L4 120 CID	2013 - 2010	CJAA	TI 33 87	
GOLF;2.0L L4 121 CID	2006 - 2004	BEV	TX 14 87D	
GOLF;2.0L L4 121 CID	2003	AVH	TX 14 87D	
GOLF;2.0L L4 121 CID	2002 - 2001	AVH	TX 14 87D	
		AZG	TX 14 87D	
GOLF;2.0L L4 121 CID	2001	AEG	TX 14 87D	
		AVH	TX 14 87D	
GOLF;2.0L L4 121 CID	2001 - 1999	AEG	TX 14 87D	
GOLF;2.0L L4 121 CID	1999	ABA	TX 15 87D	
		AEG	TX 14 87D	
GOLF;2.0L L4 121 CID	1999 - 1993	ABA	TX 15 87D	
GOLF;2.0L L4 121 CID	1992 - 1990	9A	TX 15 87D	
GOLF;2.5L L5 151 CID	2014 - 2010	CBTA	TH 5 75 Auto Trans Oil Thermostat TX 125 80	
		CBUA	TH 5 75 Auto Trans Oil Thermostat TX 125 80	
GOLF;2.8L V6	2005 - 2003	BDF	TX 25 80D	
GOLF;2.8L V6	2002	AFP	TX 25 80D	TSE 1D
		BDF	TX 25 80D	TSE 1D
GOLF;2.8L V6	2001 - 2000	AFP	TX 25 80D	TSE 1D
GOLF;2.8L V6	1999	AFP	TX 25 80D	
GOLF;2.8L V6	1998 - 1995	AAA	TX 25 80D	
GOLF;3.2L V6	2004	BJS	TX 30 80D	

GTI

GTI;2.0L L 4 121 CID	2008	BPY	TH 5 80 Auto Trans Oil Thermostat TI 6 87	
		CBFA	TH 5 80 Auto Trans Oil Thermostat TH 5 80	
		CCTA	Auto Trans Oil Thermostat TH 5 80	
GTI;2.0L L 4 121 CID	2007 - 2006	BPY	TH 5 80 Auto Trans Oil Thermostat TI 6 87	

JETTA

JETTA	1992 - 1991		TX 15 87D	
JETTA;1.6L L4 97 CID	1990	ME	TX 15 87D	
JETTA	1988		TX 15 87D	
JETTA;1.6L L 4 97 CID	1987	ME	TX 15 87D	
JETTA;1.6L L 4 97 CID	1986 - 1985	ME	TX 15 87D	
		MF	TX 15 87D	
JETTA;1.6L L 4 97 CID	1980	EJ	TX 13 80D	
JETTA;1.7L L 4	1984 - 1981	EN	TX 15 87D	
JETTA;1.8L L4	2005 - 2002	AWP	TX 14 87D	
JETTA;1.8L L4	2001	AWD	TX 14 87D	
		AWW	TX 14 87D	
JETTA;1.8L L4	2001	AWW	TX 14 87D	



JETTA

JETTA;1.8L L4	2000	AWD	TX 14 87D	
JETTA	1994 - 1992		TX 15 87D	
JETTA;1.8L L4	1992 - 1990	PF	TX 15 87D	
		RV	TX 15 87D	
JETTA;1.8L L4	1992 - 1990	RV	TX 15 87D	
JETTA;1.8L L4	1988	PF	TX 15 87D	
		RD	TX 15 87D	
JETTA;1.8L L4	1988	PF	TX 15 87D	
		RD	TX 15 87D	
		RV	TX 15 87D	
JETTA;1.8L L 4	1988	RV	TX 15 87D	
JETTA	1989 - 1988		TX 15 87D	
JETTA;1.8L L4	1987	PF	TX 15 87D	
		RD	TX 15 87D	
JETTA;1.8L L4	1989 - 1987	PL	TX 15 87D	
JETTA;1.8L L4	1986	RD	TX 15 87D	
JETTA;1.8L L 4	1987 - 1985	GX	TX 15 87D	
JETTA;1.8L L 4	1985	HT	TX 15 87D	
JETTA	1986 - 1984		TX 15 87D	
JETTA;1.9L L4 116 CID	2005	BEW	TX 15 87D	
JETTA;1.9L L4 116 CID	2006 - 2005	BRM	TX 109 87D	
JETTA;1.9L L 4 116 CID	2004	ALH	TX 15 87D	
		BEW	TX 15 87D	
JETTA	2004		TX 15 87D	
JETTA;1.9L L4 116 CID	1999	AHU	TX 15 87D	
		ALH	TX 15 87D	
JETTA;1.9L L 4 116 CID	2003 - 1999	ALH	TX 15 87D	
JETTA;1.9L L4 116 CID	1999 - 1998	AHU	TX 15 87D	
JETTA	1996 - 1994		TX 15 87D	
JETTA;2.0L L4 121 CID	2014	CBPA	TH 5 75	
			Auto Trans Oil Thermostat	
JETTA;2.0L L4 121 CID	2013 - 2012	CBFA	TX 117 95D	
		CCTA	TX 117 95D	
JETTA;2.0L L4 121 CID	2013 - 2011	CBPA	TH 5 75	
			Auto Trans Oil Thermostat	
			TX 14 87D	
JETTA;2.0L L4 120 CID	2013 - 2011	CJAA	TI 33 87	
JETTA;2.0L L4 120 CID	2010	CJAA	TI 33 87	
			Housing Type	
			TX 111 87D	
			Insert Type	
JETTA;2.0L L4 121 CID	2010 - 2009	CBFA	TH 5 75	
			Auto Trans Oil Thermostat	
		CCTA	TH 5 75	
			Auto Trans Oil Thermostat	
JETTA;2.0L L4 120 CID	2009	CBEA	TI 33 87	
			Housing Type	
			TX 111 87D	
			Insert Type	
JETTA;2.0L L 4 121 CID	2008 - 2006	BPY	TH 5 80	
			Auto Trans Oil Thermostat	
			TI 6 87	
		CBFA	TH 5 80	



JETTA

CCTA			Auto Trans Oil Thermostat TH 5 80	
			Auto Trans Oil Thermostat	
JETTA;2.0L L4 121 CID	2004	AVH	TX 14 87D	
		AZG	TX 14 87D	
		BBW	TX 14 87D	
		BEV	TX 14 87D	
JETTA;2.0L L4 121 CID	2005 - 2004	BBW	TX 14 87D	
		BEV	TX 14 87D	
JETTA;2.0L L4 121 CID	2003	AVH	TX 14 87D	
JETTA;2.0L L4 121 CID	2001	AEG	TX 14 87D	
		AVH	TX 14 87D	
		AZG	TX 14 87D	
JETTA;2.0L L4 121 CID	2004 - 2001	AVH	TX 14 87D	
		AZG	TX 14 87D	
JETTA;2.0L L4 121 CID	2001 - 2000	AEG	TX 14 87D	
JETTA;2.0L L4 121 CID	1999	ABA	TX 15 87D	
		AEG	TX 14 87D	
JETTA;2.0L L4 121 CID	1999 - 1993	ABA	TX 15 87D	
JETTA;2.0L L4 121 CID	1992 - 1990	9A	TX 15 87D	
JETTA;2.5L L5 151 CID	2014 - 2011	CBTA	TH 5 75 Auto Trans Oil Thermostat TX 125 80	
		CBUA	TH 5 75 Auto Trans Oil Thermostat TX 125 80	
JETTA;2.5L L5 151 CID	2010 - 2008	CBTA	TX 125 80	
		CBUA	TX 125 80	
JETTA;2.5L L5 151 CID	2007	BGQ	TX 125 80	
JETTA;2.5L L5 151 CID	2006	BGP	TX 125 80	
		BGQ	TX 125 80	
JETTA;2.8L V6	2002	AFP	TX 25 80D	TSE 1D
		BDF	TX 25 80D	TSE 1D
JETTA;2.8L V6	2004 - 2002	BDF	TX 25 80D	TSE 1D
JETTA;2.8L V6	1999	AAA	TX 25 80D	
		AFP	TX 25 80D	TSE 1D
JETTA;2.8L V6	2001 - 1999	AFP	TX 25 80D	TSE 1D
JETTA;2.8L V6	1998 - 1994	AAA	TX 25 80D	
JETTA 2.5;2.5L L5 151 CID	2008	CBTA	TX 125 80	
		CBUA	TX 125 80	
JETTA 2.5;2.5L L5 151 CID	2007 - 2005	BGP	TX 125 80	
		BGQ	TX 125 80	

PASSAT

PASSAT;1.8L L 4	2005 - 2002	AWM	TX 14 87D	
PASSAT;1.8L L4	2001	ATW	TX 14 87D	
		AWM	TX 14 87D	
PASSAT;1.8L L4	2001	ATW	TX 14 87D	
		AUG	TX 14 87D	
		AWM	TX 14 87D	
PASSAT;1.8L L4	2001	AUG	TX 14 87D	



PASSAT

PASSAT;1.8L L4	2000	ATW	TX 14 87D	TSE 1D
		AUG	TX 14 87D	TSE 1D
PASSAT;1.8L L4	1999 - 1998	AEB	TX 14 87D	TSE 1D
PASSAT	1993 - 1991		TX 15 87D	
PASSAT;1.9L L4 116 CID	1997	AHU	TX 15 87D	
PASSAT;1.9L L 4 116 CID	1997 - 1996	1Z		
PASSAT	1997 - 1995		TX 15 87D	
PASSAT;2.0L L4 121 CID	2010	CBFA	TX 117 95D	
		CCTA	TX 117 95D	
PASSAT;2.0L L4 121 CID	2010 - 2009	CCTA	TX 117 95D	
PASSAT;2.0L L 4 121 CID	2008 - 2006	BPY	TH 5 80 Auto Trans Oil Thermostat TI 6 87 TH 5 80 Auto Trans Oil Thermostat	
		CCTA		
PASSAT;2.0L L 4 120 CID	2005 - 2004	BHW	TX 15 87D	
PASSAT;2.0L L4 121 CID	1996 - 1995	ABA	TX 15 87D	
PASSAT	1994		TX 15 87D	
PASSAT;2.0L L4 121 CID	1993 - 1990	9A	TX 15 87D	
PASSAT;2.5L L5 151 CID	2014 - 2012	CBTA	TH 5 75 Auto Trans Oil Thermostat TX 125 80 TH 5 75 Auto Trans Oil Thermostat TX 125 80	
		CBUA		
PASSAT;2.8L V 6	2005 - 2002	ATQ	TX 30 71D Alternate Temperature TX 30 87D Alternate Temperature TX 30 92D OE Temperature	
PASSAT;2.8L V 6	2001	ATQ	TX 30 71D Alternate Temperature TX 30 87D OE Temperature TX 30 92D Alternate Temperature	
PASSAT;2.8L V6	2000	AHA	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	
PASSAT;2.8L V 6	2000	ATQ	TX 30 71D Alternate Temperature TX 30 87D OE Temperature TX 30 92D Alternate Temperature	TSE 1D
PASSAT;2.8L V6	1999 - 1998	AHA	TX 30 71D Alternate Temperature TX 30 87D OE Temperature	TSE 1D
PASSAT;2.8L V6	1997 - 1996	AAA	TX 25 80D	
PASSAT	1995		TX 25 80D	
PASSAT;2.8L V6	1994 - 1993	AAA	TX 25 80D	
PASSAT;4.0L W8 244 CID	2004 - 2002	BDP	TM 8 105	
PASSAT 2.0;2.0L L4 121 CID	2003 - 1997	ABA	TX 15 87D	
		BHW	TX 15 87D	



PHAETON

PHAETON;4.2L V8	2006 - 2004	BGH	TX 34 82D OE Temperature TX 34 87D Alternate Temperature	
PHAETON;6.0L W12 366 CID	2006	BRP	TM 9 105	
PHAETON;6.0L W12	2005	BAP	TM 9 105	
PHAETON	2004		TM 9 105	

QUANTUM

QUANTUM;1.7L L4	1983 - 1982	WT	TX 15 87D	
QUANTUM;1.8L L4	1985 - 1984	JN	TX 15 87D	
QUANTUM;2.2L L5	1987 - 1986	JT	TX 25 87D	
QUANTUM;2.2L L5	1988 - 1985	KX	TX 25 87D	
QUANTUM;2.2L L 5	1984	KM	TX 25 87D	
		WE	TX 25 87D	
QUANTUM;2.2L L 5	1984	KM	TX 25 87D	
QUANTUM;2.1L L 5	1983	WE	TX 25 87D	

R32

R32;3.2L V6 195 CID	2008	CBRA	TX 30 80D	
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RABBIT

RABBIT;1.5L L 4	1980	EH	TX 13 80D	
		FX	TX 13 80D	
RABBIT;1.5L L 4	1979 - 1978	EH	TX 13 80D	
		FX	TX 13 80D	
RABBIT;1.5L L 4	1978 - 1977	CK	TX 13 80D	
RABBIT;1.5L L4	1975	FC	TX 13 80D	
		FG	TX 13 80D	
RABBIT;1.6L L 4 97 CID	1980	EJ	TX 13 80D	
RABBIT;1.6L L 4 97 CID	1977	EE	TX 13 80D	
RABBIT;1.6L L 4 97 CID	1976	FN	TX 13 80D	
RABBIT;2.5L L5 151 CID	2009 - 2008	CBTA	TH 5 75 Auto Trans Oil Thermostat TX 125 80	
		CBUA	TH 5 75 Auto Trans Oil Thermostat TX 125 80	
RABBIT 2.5;2.5L L5 151 CID	2008	CBTA	TH 5 75 Auto Trans Oil Thermostat TX 125 80	
		CBUA	TH 5 75 Auto Trans Oil Thermostat TX 125 80	
RABBIT 2.5;2.5L L5 151 CID	2007 - 2006	BGP	TH 5 75 Auto Trans Oil Thermostat TX 125 80	
		BGQ	TH 5 75 Auto Trans Oil Thermostat TX 125 80	



RABBIT CONVERTIBLE

RABBIT CONVERTIBLE;1.6L L 4 97 CID	1980	EJ	TX 15 87D	
RABBIT CONVERTIBLE;1.7L L 4	1983 - 1981	EN	TX 15 87D	
RABBIT CONVERTIBLE;1.8L L 4	1984	JH		

RABBIT PICKUP

RABBIT PICKUP;1.5L L 4	1980	EH	TX 15 87D	
		FX	TX 15 87D	
RABBIT PICKUP;1.6L L4 97 CID	1983 - 1981	CR	TX 15 87D	
RABBIT PICKUP;1.6L L 4 97 CID	1980	EJ	TX 15 87D	
RABBIT PICKUP;1.7L L 4	1983 - 1981	EN	TX 15 87D	

SCIROCCO

CIROCCO;1.6L L 4 97 CID	1980	EJ	TX 13 80D	
CIROCCO;1.7L L 4	1981	EN	TX 15 87D	
SCIROCCO;1.5L L 4	1978	EH	TX 13 80D	
SCIROCCO;1.5L L4	1975	FC	TX 13 80D	
		FG	TX 13 80D	
SCIROCCO;1.6L L 4 97 CID	1980 - 1979	EJ	TX 13 80D	
SCIROCCO;1.6L L 4 97 CID	1977	EE	TX 13 80D	
SCIROCCO;1.6L L 4 97 CID	1976	FN	TX 13 80D	
SCIROCCO;1.7L L 4	1983 - 1981	EN	TX 15 87D	
SCIROCCO	1989 - 1988		TX 15 87D	
SCIROCCO;1.8L L4	1988 - 1986	PL	TX 15 87D	
SCIROCCO;1.8L L 4	1987 - 1984	JH		

TIGUAN

TIGUAN;2.0L L4 121 CID	2014 - 2009	CCTA	TX 117 95D	
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TOUAREG

TOUAREG;3.0L V6 181 CID	2010 - 2009	CATA	TO 9 75 Auto Trans Oil Thermostat	
TOUAREG;3.2L V 6 195 CID	2006 - 2005	BMX	TO 9 75 Auto Trans Oil Thermostat TX 30 80D	
TOUAREG;3.2L V 6 195 CID	2005 - 2004	BAA	TO 9 75 Auto Trans Oil Thermostat TX 30 80D	
TOUAREG;3.6L V6 219 CID	2010 - 2007	BHK	TO 9 75 Auto Trans Oil Thermostat	
TOUAREG;4.2L V8	2009 - 2007	BAR	TO 9 75 Auto Trans Oil Thermostat	
TOUAREG;4.2L V8	2007 - 2004	AXQ	TO 9 75 Auto Trans Oil Thermostat TX 34 82D OE Temperature TX 34 87D Alternate Temperature	
TOUAREG;4.9L V10 300 CID	2004	BKW	TO 9 75 Auto Trans Oil Thermostat	
TOUAREG;5.0L V10 300 CID	2008 - 2006	BWF	TO 9 75 Auto Trans Oil Thermostat	



TOUAREG

TOUAREG;5.0L V10 300 CID	2005	BKW	TO 9 75 Auto Trans Oil Thermostat	

TH 5

AUDI, VW



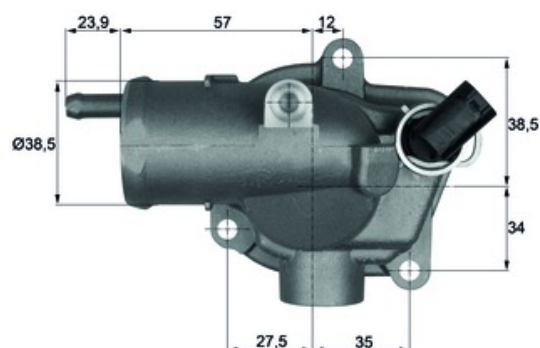
TH 7

FORD, MERCURY



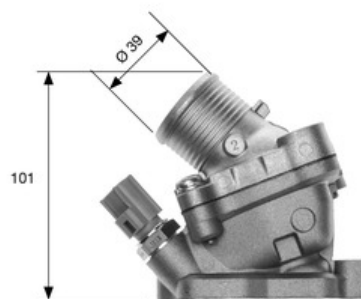
TH 11

DODGE



TH3690D

VOLVO



THD 1

BMW



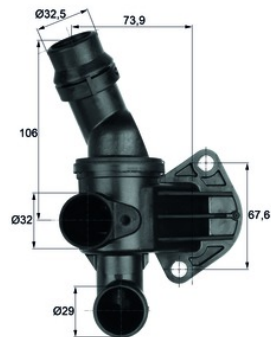
THD 2

PORSCHE



TI 6

AUDI, VW



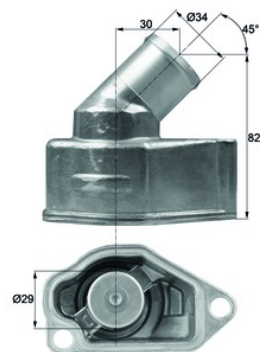
TI 7

AUDI



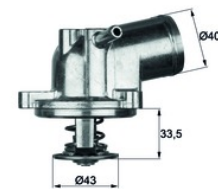
TI 9

DAEWOO, ISUZU, SUZUKI



TI 21

MERCEDES-BENZ



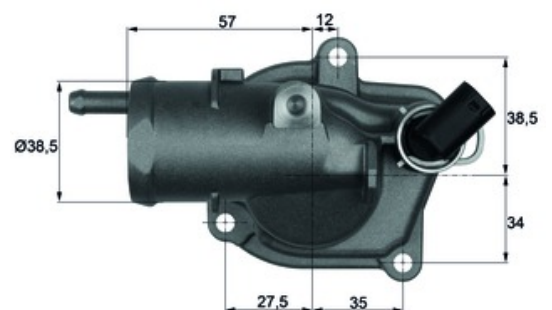
TI 24

BMW



TI 31

MERCEDES-BENZ



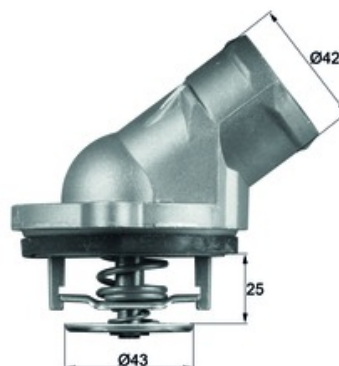
TI 33

AUDI, VW



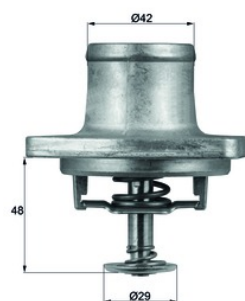
TI 45

CHRYSLER, MERCEDES-BENZ



TI 48

MERCEDES-BENZ



TI 200

FORD, MERCURY



TI 202

FORD, LINCOLN



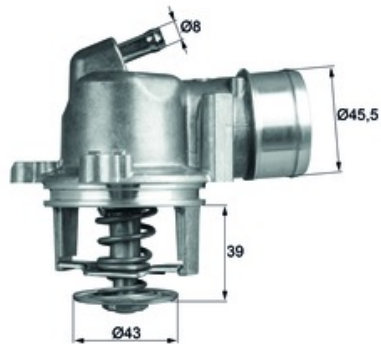
TI 205

AUDI



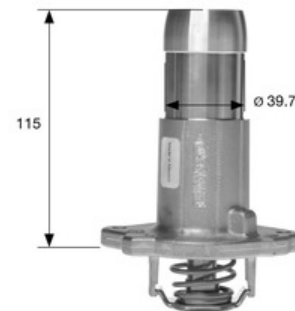
TI 208

MERCEDES-BENZ



TI22288

CHEVROLET, GMC



TI22688

BUICK, CHEVROLET, GMC, OLDSMOBILE



TI23082

FORD



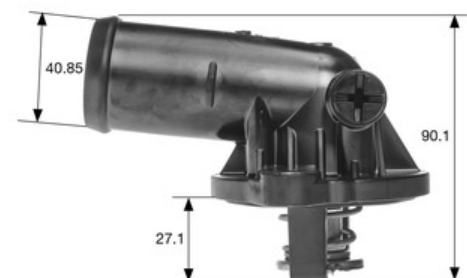
TI 234

BMW



TI23595

CHRYSLER, DODGE



TI23695

DODGE, JEEP



TI23795

CHRYSLER, DODGE



TI23878

HONDA



TI24178

ACURA, HONDA



TI24282

TOYOTA



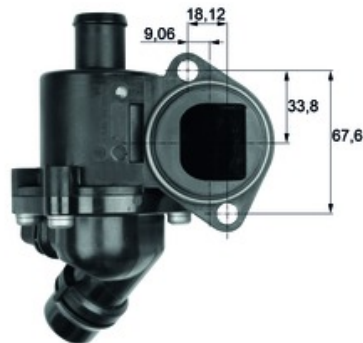
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TOYOTA



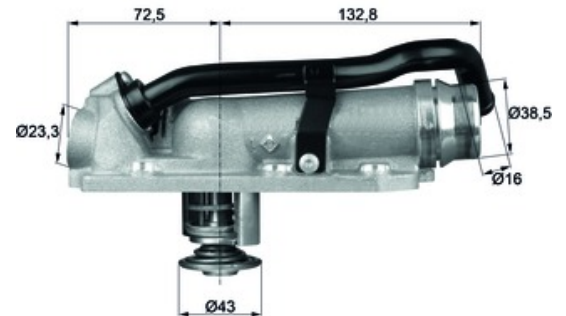
TM 3

AUDI



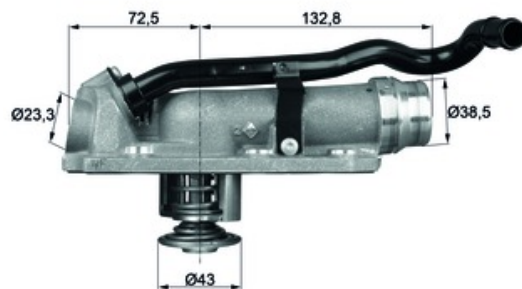
TM 8

VW



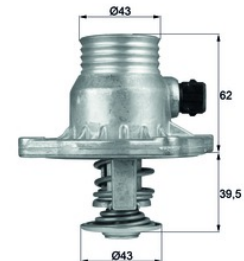
TM 9

VW



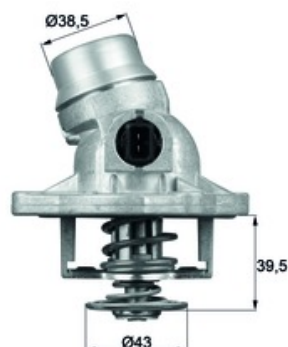
TM 11

BMW



TM 12

BMW



TM 13

BMW



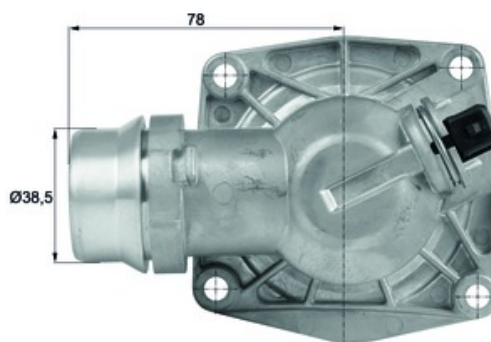
TM 14

BMW



TM 16

BMW



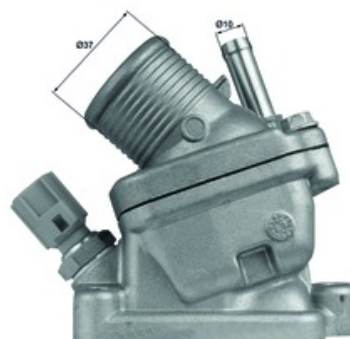
TM 17

FORD



TM 20

VOLVO



TM 21

BMW



TM 25

BMW



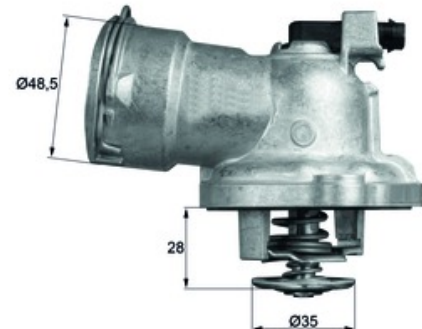
TM 27

BMW



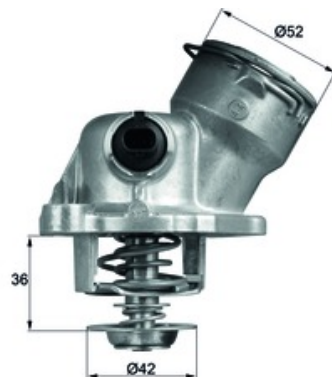
TM 28

DODGE, MERCEDES-BENZ



TM 29

DODGE, MERCEDES-BENZ



TM 30

BMW



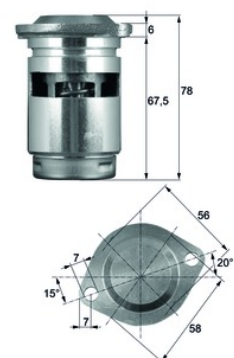
TM42103

BMW



TO 1

PORSCHE



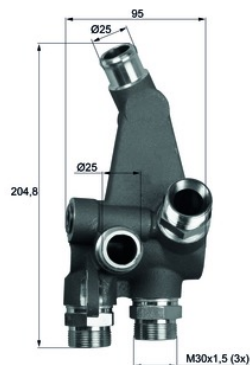
TO 2

PORSCHE



TO 3

PORSCHE



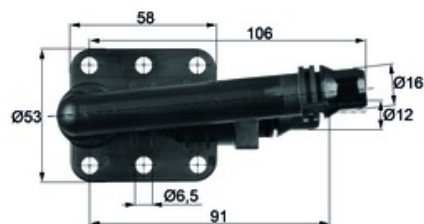
TO 4

BMW



TO 5

BMW



TO 6

BMW



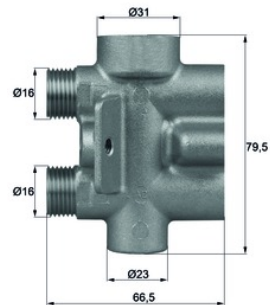
TO 7

BMW



TO 9

AUDI, VW



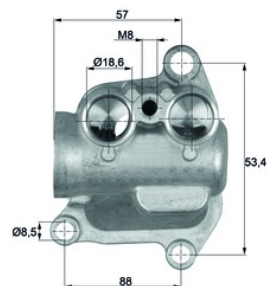
TO 11

BMW



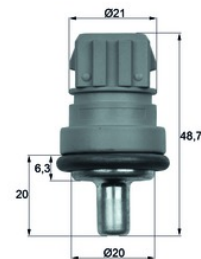
TO 12

BMW



TSE 1

AUDI, VW



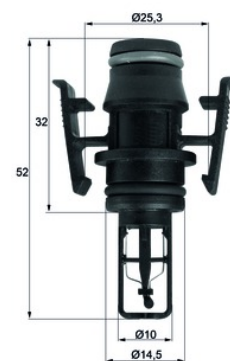
TSE 2

MERCEDES-BENZ



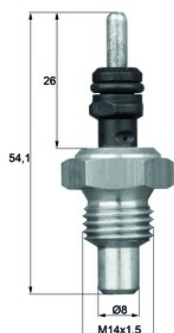
TSE 3

MERCEDES-BENZ



TSE 5

MERCEDES-BENZ



TSW 32

VW



TSW 34

MERCEDES-BENZ



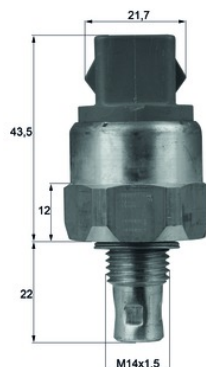
TSW 44

MERCEDES-BENZ



TSW 46

AUDI



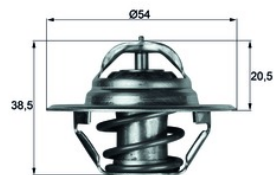
TSW 47

MERCEDES-BENZ



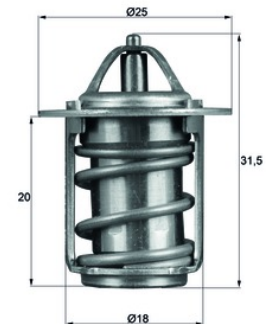
TX 3

MERCEDES-BENZ



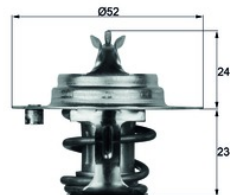
TX 6

PORSCHE



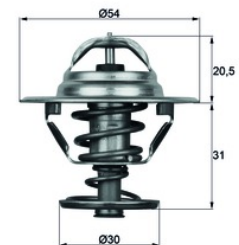
TX 7

CHEVROLET, FORD, MAZDA, SUZUKI



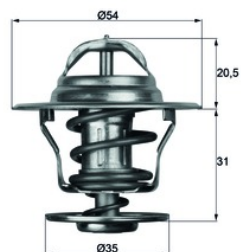
TX 10

SAAB



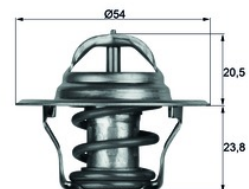
TX 13

AUDI, PORSCHE, VOLVO, VW



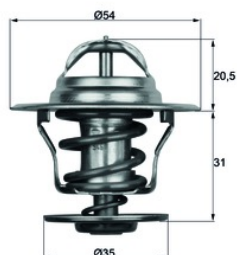
TX 14

AUDI, NISSAN, VOLVO, VW



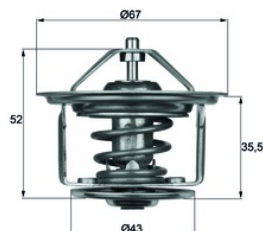
TX 15

AUDI, VW



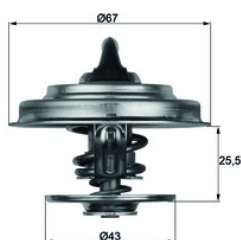
TX 17

BMW



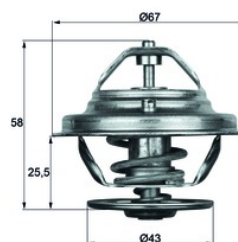
TX 18

CHRYSLER, DODGE, JEEP, MERCEDES-BENZ, PLYMOUTH



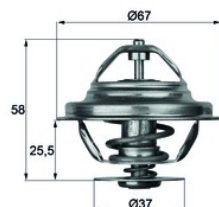
TX 19

MERCEDES-BENZ



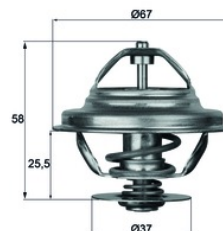
TX 20

MERCEDES-BENZ



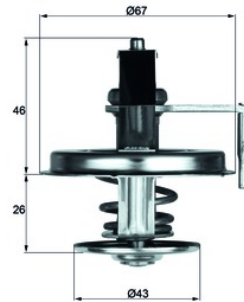
TX 21

BMW



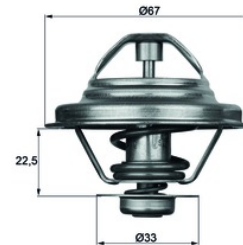
TX 22

MERCEDES-BENZ



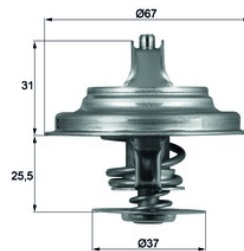
TX 24

VW



TX 25

AUDI, VOLVO, VW



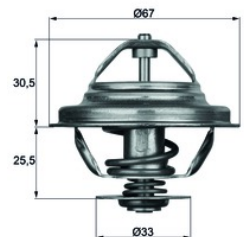
TX 26

MERCEDES-BENZ



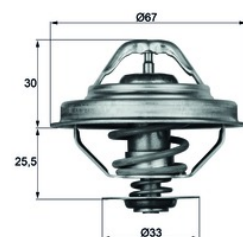
TX 27

BMW



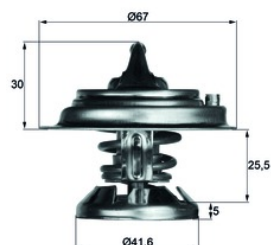
TX 28

BMW



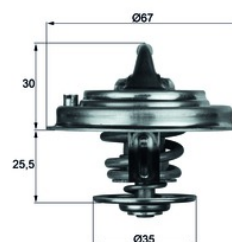
TX 29

MERCEDES-BENZ



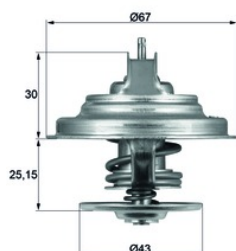
TX 30

AUDI, BMW, PORSCHE, VW



TX 31

FORD, MERCURY



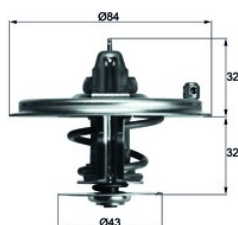
TX 34

AUDI, VW



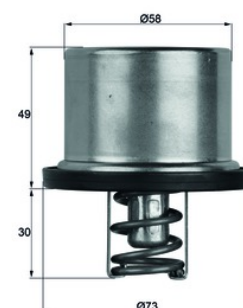
TX 36

BMW



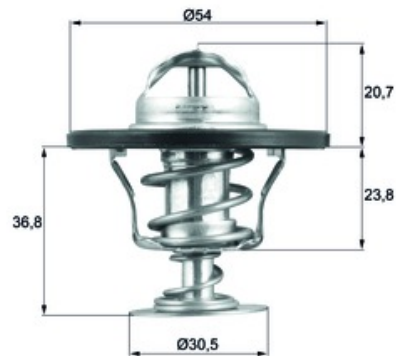
TX 37

BMW



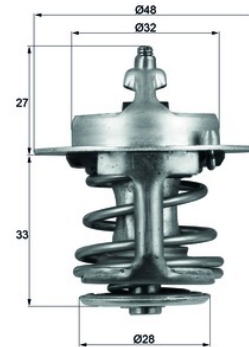
TX 52

CADILLAC, CHEVROLET, GMC, OLDSMOBILE



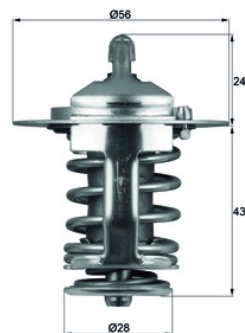
TX 63

TOYOTA



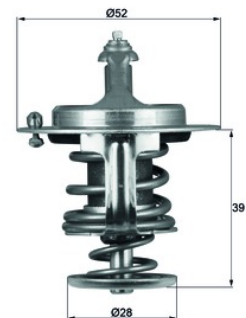
TX 70

MITSUBISHI, TOYOTA



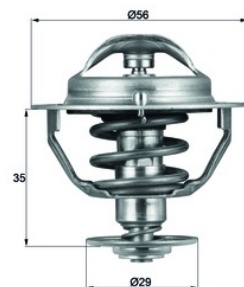
TX 71

SUZUKI



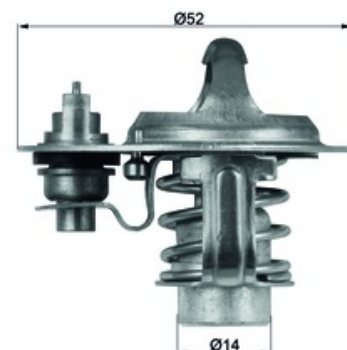
TX 73

LEXUS, SCION, TOYOTA



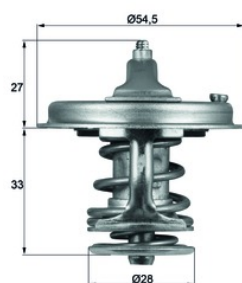
TX 76

KIA MOTORS, MAZDA



TX 78

HYUNDAI, KIA MOTORS



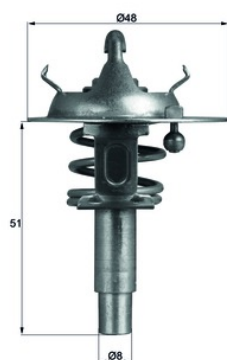
TX 103

MERCEDES-BENZ



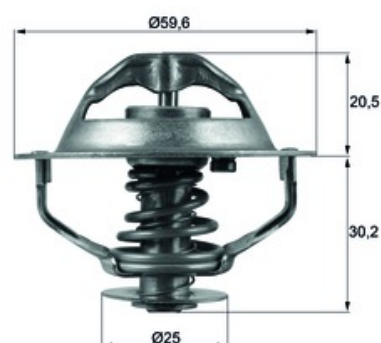
TX 106

MERCEDES-BENZ



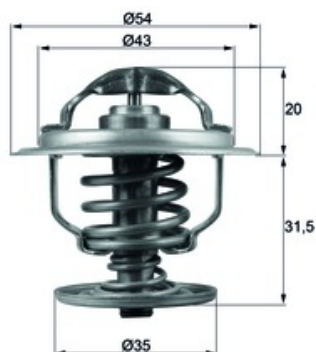
TX 107

VOLVO



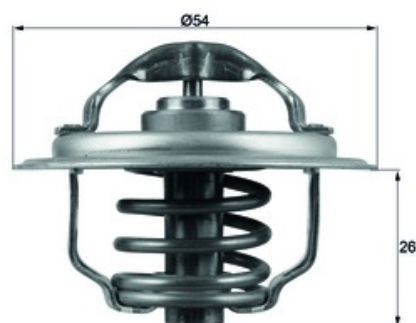
TX 109

VW



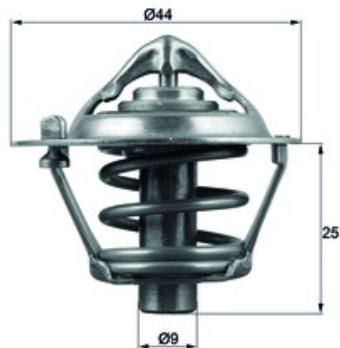
TX 111

VW



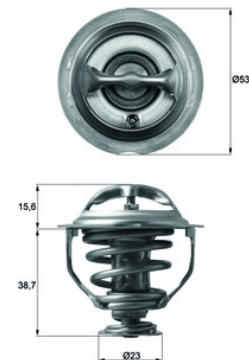
TX 113

ISUZU, SUBARU, SUZUKI



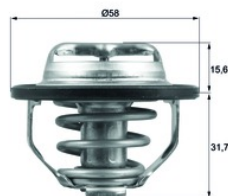
TX 117

AUDI, VW



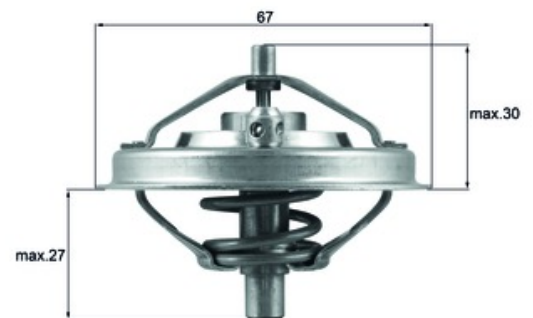
TX 122

BUICK, CHEVROLET, GMC, OLDSMOBILE, PONTIAC, SATURN



TX 125

VW



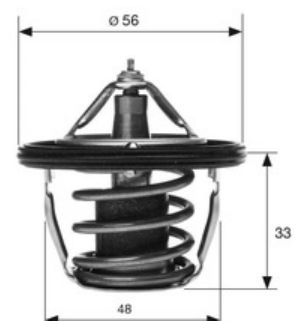
TX14282D

HYUNDAI, KIA MOTORS



TX14378D

SUBARU



TX14478D

ACURA, HONDA



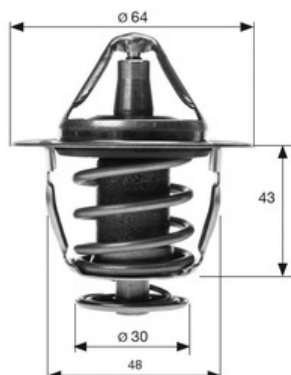
TX14582D

INFINITI, NISSAN



TX14678D

ACURA, HONDA



TX14782D

INFINITI, MITSUBISHI, NISSAN



TX14882

LEXUS, TOYOTA



TX15982

CHEVROLET, NISSAN, TOYOTA



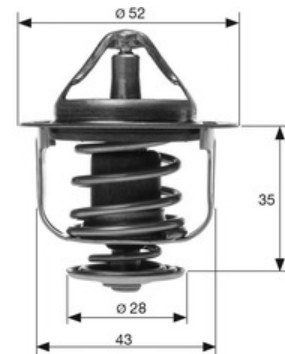
TX16082

MAZDA



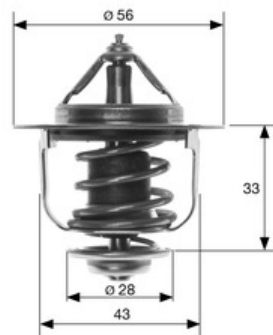
TX16182D

ACURA, HONDA



TX16782D

TOYOTA



TX16895

INFINITI, NISSAN



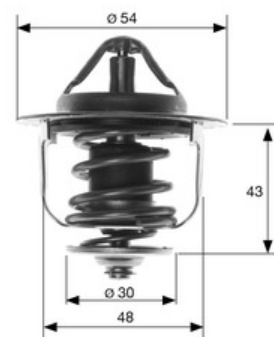
TX16982

MAZDA



TX17077

NISSAN



TX17182

MITSUBISHI



ACURA	
19300-PE0-024	TX 144 78D
19301-P13-305	TX 146 78D
19301-P8C-A11	TX 146 78D
19301-RMX-307	TX 144 78D

siehe/see/voir/véase
HONDA

ALFA-ROMEO	
51770698	TX 122 82

siehe/see/voir/véase
FIAT

AUDI	
------	--

siehe/see/voir/véase
VW GROUP

BMW	
11 53 7 502 779	TM 27 105
11 53 7 733 803	TX 28 92D
11 53 7 835 558	TX 37 79
11231265085	TX 27 80D
1142 7 542 267	TO 12 100
11517805811	TI 234 88
1153 0 139 877	TM 13 97
1153 1 251 041	TX 17 80D
1153 1 254 065	TX 17 80D
1153 1 256 667	TX 17 80D
1153 1 264 668	TX 21 80D
1153 1 265 085	TX 21 80D
1153 1 307 737	TX 21 80D
1153 1 312 288	THD 1 79
1153 1 315 063	TX 37 79
1153 1 407 772	TX 37 79
1153 1 432 884	TI 24 95
1153 1 436 386	TM 12 105
1153 1 436 823	TM 13 97
1153 1 436 852	TM 16 105
1153 1 437 040	TM 13 97
1153 1 437 526	TM 11 105
1153 1 466 173	TX 21 80D
1153 1 704 324	TM 11 105
1153 1 710 056	TX 36 85D
1153 1 710 953	TX 27 80D
1153 1 710 954	TX 27 80D
1153 1 712 043	TX 28 88D
1153 1 712 043	TX 28 92D
1153 1 713 040	TX 27 80D
1153 1 720 306	TX 36 85D
1153 1 721 002	TX 28 88D
1153 1 721 003	TX 28 88D
1153 1 729 720	TX 36 85D
1153 1 729 841	TX 36 85D
1153 1 733 144	TX 36 85D

BMW	
1153 1 733 803	TX 28 92D
1153 1 743 017	TI 24 95
1153 1 743 528	TX 28 92D
1153 1 743 542	TX 28 92D
1153 7 509 227	TM 13 97
1153 7 511 083	TX 28 92D
1153 7 511 580	TX 28 88D
1153 7 580 627	TM 21 97
1153 7 588 257	TM 25 108
1153 7 601 159	TM 21 103
1153 7 605 431	TM 42 103
1153 7 836 155	THD 1 79
1153 7536 655	TM 14 97
1153 7544 788	TM 14 97
1153 7549 476	TM 14 97
1153 8 635 689	TM 25 108
1153 8 636 594	TM 25 108
1153 8 648 791	TM 25 108
1153 9 055 588	TX 17 80D
11531466174	TX 27 71D
11537550172	TM 30 97
11537586885	TM 27 105
11537633477	TM 25 108
11537791072	TX 73 82D
1710 1 439 115	TO 4 82
1710 7 558 267	TO 6 93
1710 7 559 966	TO 4 82
1711 1 437 362	TO 7 80
1711 3 438 717	TO 7 75
1712 7 507 982	TO 5 82
1721 1 437 772	TO 11 86
1721 7 559 962	TO 5 82

CHEVROLET	
6062030275	TX 29 85D
92062728	TI 9 87
92067408	TI 9 87

CHRYSLER	
04778 975	TX 18 79D
05080146AA	TH 11 87
05080146AB	TH 11 87
4778975	TX 18 79D
5080146AA	TH 11 87
5080146AB	TH 11 87
5098 918AA	TI 45 87D
5184 570AH	TI 237 95
5184 977AE	TI 235 95
6801 4141AA	TM 28 87
68013949AA	TM 29 100D

DAEWOO	
6062030275	TX 29 85D
92062728	TI 9 87
92067408	TI 9 87

DODGE	
5080146 AB	TH 11 87

siehe/see/voir/véase
CHRYSLER

FIAT	
4618835	THD 1 79
4618836	THD 1 79
73502809	TX 122 82

FORD	
1 002 788	TX 15 87D
1 018 799	TX 30 80D
1 025 491	TX 31 92D
1 031 881	TX 15 87D
1 032 249	TX 30 80D
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1119280	TM 17 98
1122497	TM 17 98
1135768	TM 17 98
1217827	TM 17 98
1302167	TI 202 90
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1374191	TI 200 82
1450962	TI 202 90
1462483	TI 200 82
1475495	TI 200 82
1476110	TI 202 90
1476205	TI 200 90
1505640	TI 200 90
1566316	TI 202 90
1S7G-8575-AF	TM 17 98
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3599763	TX 71 82D
3893570	TX 71 82D
3902514	TX 71 82D
3M4G8575AC	TI 200 82
3M4G8575AD	TI 200 82
3M4G8575AE	TI 200 82
3M4G8575BA	TI 200 82
3M4G8575BB	TI 200 82

FORD	
3M4G8575BC	TI 200 82
3M4G8575BD	TI 200 82
3M4Z-8575-B	TI 200 82
4 356 545	TX 31 92D
4176181	TX 71 82D
4188498	TX 71 82D
4L5G-8575-BC	TI 200 90
4L5Z-8575-B	TI 200 90
4M5G8575EF	TI 202 90
4M5G8575FC	TI 202 90
4M5G8575GA	TI 202 90
4M5Z-8575-F	TI 202 90
5157411	TI 202 82
6 994 257	TX 7 88D
6058784	TX 27 80D
6113611	TX 13 80D
6163559	TX 7 88D
7 072 643	TX 18 79D
77TF8575A1A	TX 13 92D
81TF8575CA	TX 13 80D
95VW 8575 AB	TX 15 87D
95WM8575AA	TX 7 88D
97JM 8A586AE	TX 31 92D
CJ5E8575AA	TI 202 82
E6TZ8575A	TX 7 88D
F2TZ8575A	TX 7 88D
F42Z8575BA	TX 71 82D
KL0115171A	TX 71 82D
XM348575AA	TX 71 82D
XM348575AB	TX 71 82D
YU 3E 8575AA	TX 31 92D
YU 3Z 8575AA	TX 31 92D
YU3Z-8A-586-A	TH 7 92
YU3Z8575BA	TX 7 88D

GMC	
12 597 583	TX 52 92
12579956	TI 222 88
12602913	TI 226 88
12620112	TI 226 88
12620113	TI 222 88
12622316	TI 222 88
12622410	TX 122 82
24 417 225	TX 122 82
90537453	TX 122 82
9067918	TX 13 92D
91153670	TX 18 79D
92062728	TI 9 87
96610574	TX 113 88D
97 153 670	TX 18 79D

HONDA	
19301-PLC-315	TX 144 78D
19300-PM3-003	TX 144 78D
19301-P8A-A00	TX 146 78D
19301-P8E-A10	TX 146 78D
19301-PAA-306	TX 144 78D
19301-REA-305	TX 144 78D
19301RP3305	TX 144 78D

HYUNDAI	
25500-02500	TX 63 83
2550023001	TX 78 83
2550023010	TX 78 83
2550025001	TX 78 83
2550025002	TX 78 83
2551042100	TX 70 82

INFINITI	
21200-AD201	TX 147 82D

JEEP	
05080146AA	TH 11 87
siehe/see/voir/véase CHRYSLER	

KIA MOTORS	
0K710-15-171	TX 76 88D
0K9FC-15-171	TX 76 88D
2550023001	TX 78 83
2550023010	TX 78 83
2550025001	TX 78 83
2550025002	TX 78 83
KE5DE3-15-171	TX 76 88D

LEXUS	
90916-03144	TX 70 82
90916-03145	TX 70 82
siehe/see/voir/véase TOYOTA	

MAZDA	
1767-07-7E10	TX 71 82D
1767-07-7E11	TX 71 82D
1A51-15-171	TX 71 82D
21200HA301	TX 71 82D
817 399 152 A	TX 7 88D
8AB1-15-171	TX 76 88D
8AB5-15-171	TX 76 88D
8AB8-15-171	TX 76 88D
8ABE-15-171	TX 76 88D
8AG115171	TX 76 88D

MAZDA	
8AG5-15-171	TX 76 88D
8AG7-15-171	TX 76 88D
8AGX-15-171	TX 71 82D
8AK1-15-171	TX 76 88D
8AK2-15-171	TX 71 82D
8AN1-15-171	TX 76 88D
8AU-15-171	TX 76 88D
8AU1-15-171	TX 76 88D
AB6-15-171	TX 76 88D
B6H-15-171	TX 76 88D
B6H-15-171 A	TX 76 88D
BP6F-15-171	TX 76 88D
BP6F15171A	TX 76 88D
BPD3-15-171	TX 76 88D
E5D3-15-171	TX 76 88D
F201-15-171	TX 76 88D
F201-15-171A	TX 76 88D
FS05-15-171	TX 71 82D
KL01-15-171	TX 71 82D
KL01-15-171A	TX 71 82D
L32715170	TI 200 82
L32715170A	TI 200 82
L32715171	TI 200 82
L32815170A	TI 200 82
L32815170B	TI 200 82
L336-15-170	TI 200 82
L35715170B	TI 200 90
LF01-15-170	TM 17 98
LF5015170	TI 202 82
LF5015170A	TI 202 82
LF5015170B	TI 202 82
LF5015170C	TI 202 82
LF5315170	TI 202 82
LF5315170A	TI 202 82
LF5315170B	TI 202 82
LF7015170	TI 202 82
LFE215170	TI 200 82
PE0115171	TX 71 82D
ZZ40-15-171	TX 76 88D

MERCEDES-BENZ	
000 203 64 75	TX 3 79D
001 203 90 75	TX 18 79D
001 203 91 75	TX 18 87D
001 203 95 75	TX 103 30
002 203 02 75	TX 18 79D
002 203 22 75	THD 1 79
002 203 35 75	TX 18 79D
002 203 37 75	TX 18 79D
002 203 38 75	TX 18 79D
002 203 46 75	TX 18 79D

MERCEDES-BENZ	
002 203 75 75	TX 20 80D
002 203 76 75	TX 18 87D
002 203 76 76	TX 18 87D
002 203 77 75	TX 19 75D
002 203 78 75	TX 18 79D
002 203 80 75	TX 20 80D
002 203 81 75	TX 18 87D
002 203 82 75	TX 19 75D
002238075	TX 28 88D
003 203 22 75	TX 3 79D
003 203 23 75	THD 1 79
003 203 35 75	TX 18 79D
003 203 68 75	TX 18 79D
003 203 69 75	TX 18 87D
003 203 82 75	TX 22 84D
003 203 91 75	TX 18 79D
003 203 92 75	TX 18 79D
003 203 98 75	TX 29 80D
003 545 51 24	TSW 44D
004 203 08 75	TX 22 84D
004 203 09 75	TX 29 85D
004 203 10 75	TX 29 85D
004 203 39 75	TX 26 80D
004 203 40 75	TX 26 80D
004 203 85 75	TX 18 79D
005 203 27 75	TX 18 79D
005 203 29 75	TX 30 80D
006 542 34 17	TSE 5
006 545 14 24	TSW 44D
006 545 39 24	TSW 44D
006 545 42 24	TSW 34D
006 545 91 24	TSW 47
008 542 45 17	TSE 2
010 542 57 17	TSE 3
100 200 05 15	TX 18 87D
100 200 07 15	TX 18 79D
100 200 08 15	TX 18 79D
100 200 87 15	TX 18 79D
102 001 81 5	TX 18 87D
102 200 02 15	TX 18 87D
102 200 03 15	TX 18 87D
102 200 08 15	TX 18 87D
102 200 09 15	TX 18 87D
102 200 14 15	TX 18 87D
102 200 15 15	TX 18 87D
102 200 19 15	TX 18 87D
110 200 0111	TX 18 87D
110 200 05 15	TX 18 87D
110 200 06 15	TX 18 87D
111 200 04 15	TI 21 87
111 200 09 15	TI 21 87
111 203 0275	TI 21 87

MERCEDES-BENZ	
111 203 06 75	TI 21 87
111 203 08 75	TI 21 87
111 203 09 75	TI 21 87
11120000815	TI 21 87
11120000915	TI 21 87
112 200 00 15	TI 45 87D
112 203 00 15	TI 45 87D
112 203 02 75	TI 45 87D
116 200 00 15	TX 19 75D
116 200 01 15	TX 19 75D
116 200 02 15	TX 22 84D
116 200 03 15	TX 26 80D
119 200 00 15	TI 48 80D
119 203 01 75	TI 48 80D
120 200 00 15	TI 208 87D
120 203 02 75	TI 208 87D
121 200 03 15	TX 3 79D
121 200 05 15	TX 3 79D
271 200 00 15	TX 106 90D
271 203 03 75	TX 106 90D
271 203 05 75	TX 106 90D
273 200 02 15	TM 29 100D
601 200 00 15	TX 29 85D
601 200 00 15	TX 29 85D
601 200 01 15	TX 29 80D
601 200 05 15	TX 29 85D
602 200 00 15	TX 29 80D
602 200 01 15	TX 29 80D
602 203 35 75	TX 18 79D
603 200 00 15	TX 29 80D
606 200 04 75	TX 29 80D
606 203 01 75	TX 29 80D
606 203 02 75	TX 29 85D
606 203 05 75	TX 29 85D
611 200 02 15	TH 11 87
611 200 07 15	TH 11 87
611 203 04 75	TH 11 87
611 203 05 75	TH 11 87
611 203 15 75	TH 11 87
611 203 19 75	TH 11 87
615 200 13 15	TX 20 80D
615 200 14 15	TX 20 80D
616 200 02 15	TX 18 79D
616 200 04 15	TX 20 80D
616 200 08 15	TX 20 80D
616 200 18 15	TX 20 80D
617 200 03 15	TX 20 80D
617 200 08 15	TX 20 80D
617 200 11 15	TX 20 80D
617 200 18 15	TX 20 80D
642 200 04 15	TM 28 87
646 200 00 15	TI 31 92

MERCEDES-BENZ	
646 200 00 15	TI 31 92
646 200 07 15	TI 31 92
646 200 09 15	TI 31 92
646 200 11 15	TI 31 92
646 200 12 15	TH 11 87
646 203 02 75	TI 31 92
88 5236 4201 10	THD 1 79

MITSUBISHI	
1305A191	TX 147 82D
MD 015299	TX 78 83
MD 094120	TX 78 83
MD 158570	TX 70 82
MD 165630	TX 70 82
MD 174233	TX 147 82D
MD 175746	TX 70 82
MD 310106	TX 70 82
MD 335170	TX 70 82
MD 338234	TX 70 82
MD 360320	TX 70 82
MD 997224	TX 78 83
MD 997606	TX 78 83
MD194988	TX 147 82D
MD315301	TX 70 82
ME 999295	TX 78 83
MN980137	TX 14 87D

NISSAN	
21200-4M500	TX 63 83
21200-57J00	TX 70 82
21200-77A05	TX 63 83
21200-77A65	TX 63 83
21200-77A66	TX 63 83
21200-86J00	TX 63 83
21200-86J01	TX 63 83
21200-90J00	TX 63 83
21200-90J10	TX 63 83
21200-96002	TX 78 83
21200-99B02	TX 14 80D
21200-9F600	TX 63 83
212002W20A	TX 70 82
212004A00G	TX 113 88D
25500-02500	TX 63 83

PEUGEOT	
1338G3	TX 73 82D
1608167380	TX 70 82

PORSCHE	
056 121 113A	TX 13 80D
930 107 155 00	TO 2 83

PORSCHÉ	
930 107 755 00	TO 2 83
930 107 765 00	TO 1 83
944 106 129 07	TX 13 80D
94410601900	TX 13 80D
94410612905	TX 13 80D
948 106 125 01	THD 2 89
951 106 311 00	TX 6 83
955.106.113.00	TX 30 80D
959 106 519 00	THD 1 79
964 207 047 08	TO 3 83
996 106 125 80	THD 1 79
ROVER GROUP	
812 499 152	TX 7 88D
GTS 287	TX 18 79D
GTS301	TX 7 88D
PEL 10009 EVA	TX 18 79D
SAAB	
12 61 5097	TX 122 82
30577561	TX 10 88D
88 17 289	TX 10 88D
88 22 025	TX 10 88D
8817298	TX 10 88D
90 537 811	TX 122 82
91 94 242	TX 10 88D
9166687	TX 10 88D
9194101	TX 10 88D
SEAT	
siehe/see/voir/véase VW GROUP	
SUBARU	
21200-AA071	TX 143 78D
21200-AA072	TX 143 78D
21200-AA170	TX 143 78D
21200-KA070	TX 113 88D
21210-AA030	TX 143 78D
21210-AA080	TX 143 78D
SUZUKI	
17600-77820	TX 113 88D
17600-83831	TX 7 88D
17600-83841	TX 7 88D
17600-83851	TX 7 88D
17600-85821	TX 113 88D
17600-85841	TX 7 88D
17670-50G10	TX 113 88D
17670-50G20	TX 113 88D
17670-50G20	TX 113 88D

SUZUKI	
17670-76G10	TX 113 88D
17670-77E10	TX 71 82D
17670-77G10	TX 113 88D
17670-79101	TX 7 88D
17670-83020	TX 7 88D
17670-85020	TX 113 88D
1767077E11	TX 71 82D
TOYOTA	
90080-23002	TX 63 83
90916-03041	TX 7 88D
90916-03060	TX 63 83
90916-03070	TX 76 88D
90916-03075	TX 70 82
90916-03084	TX 70 82
90916-03090	TX 63 83
90916-03092	TX 73 82D
90916-03093	TX 73 82D
90916-03094	TX 148 82
90916-03095	TX 63 83
90916-03096	TX 63 83
90916-03100	TX 148 82
90916-03101	TX 73 82D
90916-03109	TX 63 83
90916-03115	TX 63 83
90916-03117	TX 148 82
90916-03123	TX 73 82D
90916-03125	TX 70 82
90916-03129	TX 70 82
90916-03133	TX 70 82
90916-03136	TX 70 82
90916-03140	TX 70 82
90916-03143	TX 73 82D
90916-03144	TX 70 82
90916-03145	TX 70 82
90916-03201	TX 73 82D
9091603138	TX 148 82
VOLVO	
1 661 993 4	THD 1 79
271 417	TX 13 92D
271 664	TX 13 92D
271664-5	TX 13 92D
272 246	TX 25 87D
272335	TX 107 90D
273 728	TX 25 87D
273728-6	TX 28 88D
274217	TH 36 90D
30637216	TM 20 90D
30637217	TH 36 90D
30637217-8	TH 36 90D

VOLVO	
30650022	TH 36 90D
30650469	TM 20 90D
30711785	TI 202 90
30731313	TI 202 90
30757408	TI 202 90
30777475	TH 36 90D
30777476	TM 20 90D
30874021	TX 70 82
30875350	TX 70 82
31219205	TM 20 90D
31251245	TI 202 90
31251246	TI 200 90
31293611	TI 202 90
31293698	TM 20 90D
31319608	TX 13 92D
3273728	TX 25 87D
9125406	TX 107 90D
918 0811	TX 13 92D
VW	
siehe/see/voir/véase VW GROUP	
VW GROUP	
00A 121 113	TI 21 87
022 121 113	TX 30 80D
025 121 113 D	TX 24 87D
025 121 113 E	TX 24 87D
025 121 113 F	TX 24 87D
025121113	TX 24 80D
025121113	TX 24 87D
034 919 369 C	TSW 46
035 121 113	TX 25 80D
035 121 113 A	TX 25 87D
035 121 113 B	TX 25 87D
037 121 113	TX 15 87D
03G121111 A	TX 109 87D
03G121113	TX 111 87D
03G121113A	TX 109 87D
03L 121 111 AC	TI 33 87
03L 121 111 M	TI 33 87
044 121 113	TX 15 87D
050 121 113 B	TX 14 80D
050 121 113 C	TX 14 87D
056 121 113	TX 15 87D
056 121 113 A	TX 13 80D
056 121 113 D	TX 15 87D
059 919 501	TSE 1D
067121113	TX 25 87D
068 121 113	TX 15 87D
068 121 113 D	TX 15 87D

VW GROUP	
069 121 113	TX 25 87D
069 121 113 A	TX 25 87D
069 121 113 S1	TX 25 87D
06B 121 111 D	TM 3 100
06B 121 111 G	TM 3 100
06B 121 111 H	TM 3 100
06B 121 111 K	TM 3 100
06B 121 113 A	TX 14 87D
06C 121 111 C	TI 205 92D
06C 121 111 D	TI 205 92D
06C 121 111 E	TI 205 92D
06D 121 111 G	TI 7 87
06F 121 111 F	TI 6 87
06F 121 111 J	TI 6 87
06F121111H	TI 6 80
06J 121 113 C	TX 117 95D
075 121 113 D	TX 25 80D
077 121 113	TX 30 87D
077 121 113 B	TX 34 87D
077 121 113 C	TX 34 82D
077 121 113 D	TX 34 82D
078 121 113	TX 30 87D
078 121 113 B	TX 30 87D
078 121 113 C	TX 30 87D
078 121 113 F	TX 30 87D
078 121 113 G	TX 30 92D
078 121 113 H	TX 30 92D
078 121 113 J	TX 30 87D
078 919 501 B	TSE 1D
07D 121 111 AB	TM 8 105
07D 121 111 AK	TM 9 105
07D 121 111 AP	TM 9 105
07D 121 111 AR	TM 9 105
07D 121 111 Q	TM 8 105
07D 121 111 R	TM 9 105
07D 121 111 RP	TM 9 105
07K121113B	TX 125 80
1K0 121 113 A	TH 5 75
251959481G	TSW 32
251959481H	TSW 32
251959481K	TSW 32
4E0 121 113	TH 5 80
7L0 317 027 A	TO 9 75

FEBI	
01598	TX 21 80D
07016	TSE 2
07017	TSW 34D
09671	TX 18 87D
09675	TX 19 75D
10262	TX 22 84D
10263	TX 26 80D
10264	TX 29 80D
10265	TX 29 85D
10266	TX 20 80D
10520	TSW 44D
11444	TX 28 88D
118280	TX 25 80D
12189	TX 27 80D
12191	TX 28 92D
14771	TX 25 87D
15804	TX 63 83
17888	TX 15 87D
18270	TX 30 87D
18284	TX 14 87D
18292	TX 30 80D
26311	TX 36 85D
30265	TM 14 97
31539	TSE 1D
33493	TX 73 82D
33714	TSW 47
36101	TO 7 80
36455	TI 24 95
36462	TI 21 87
38450	TH 36 90D

GATES	
TH00182G1	TX 14 80D
TH00188G1	TX 14 87D
TH00682	TX 13 80D
TH00682G1	TX 13 80D
TH00691	TX 13 92D
TH00691G1	TX 13 92D
TH00782	TX 78 83
TH01682	TX 17 80D
TH01682G1	TX 17 80D
TH01880G1	TX 20 80D
TH01975G1	TX 19 75D
TH05586	TX 18 87D
TH05586G1	TX 18 87D
TH11287G1	TX 109 87D
TH11680	TX 30 80D
TH11680G1	TX 27 80D
TH11687G1	TX 28 88D
TH12680	TX 29 80D
TH12680G1	TX 29 80D

GATES	
TH12685G1	TX 29 85D
TH12782	TX 14 80D
TH12988G1	TX 10 88D
TH13287G1	TX 24 87D
TH13480	TX 18 79D
TH14380G1	TX 30 80D
TH14387	TX 34 87D
TH14387G1	TX 30 87D
TH14392G1	TX 30 92D
TH15087	TI 9 87
TH15087G1	TI 9 87
TH24782	TX 71 82D
TH24782G1	TX 71 82D
TH26590G1	TX 13 92D
TH27680G1	TX 26 80D
TH28695G1	TI 24 95
TH30688	TX 76 88D
TH30688G1	TX 76 88D
TH31282G1	TX 70 82
TH31482	TX 73 82D
TH31482G1	TX 73 82D
TH31887	TI 45 87D
TH31887G1	TI 45 87D
TH31987	TI 21 87
TH31987G1	TI 21 87
TH32080	TI 48 80D
TH32080G1	TI 48 80D
TH32197G1	TM 13 97
TH34590G1	TX 107 90D
TH35087	TH 11 87
TH35087G1	TH 11 87
TH35798G1	TM 17 98
TH36392G1	TI 31 92
TH36792G1	TI 205 92D
TH38490G1	TX 106 90D
TH39082G1	TX 63 83
TH39190	TM 20 90D
TH39190G1	TM 20 90D
TH39290G1	TH 36 90D
TH39797	TM 14 97
TH40787G1	TI 7 87
TH42895G1	TX 117 95D
TH433105G1	TM 11 105
TH444100G1	TM 3 100

MOTORAD	
200-88J	TX 14 87D
201-192JV	TX 7 88D
201-88J	TX 7 88D
234-80	TX 13 80D
234-92	TX 13 92D

MOTORAD	
247-79	TX 20 80D
247-79	TX 25 80D
247-88	TX 25 87D
248-79J	TX 18 79D
248-88J	TX 18 87D
248-92J	TX 31 92D
250-79	TX 17 80D
251-79	TX 29 80D
251-85	TX 29 85D
269-79	TX 26 80D
273-88	TX 24 87D
274-79	TX 27 80D
274-88	TX 28 88D
274-92	TX 28 92D
274-920	TX 28 92D
281-82	TX 70 82
288-85	TX 36 85D
298-82	TX 73 82D
304-88	TX 30 87D
335-180	TX 78 83
347-88	TI 9 87
351-88	TI 21 87
390-195	TX 107 90D
414-88	TX 76 88D
424-89	TX 10 88D
444-82	TX 71 82D
4461-180	TX 122 82
458-88	TI 45 87D
458-88	TI 45 87D
459	THD 1 79
459-79	THD 1 79
467-97	TM 13 97
468-105	TM 12 105
469-95	TI 24 95
470-105	TM 11 105
475-82	TX 14 80D
501-87	TH 11 87
501-92	TI 31 92
527-87	TX 15 87D
530-82	TX 63 83
568-97	TM 14 97
576-87	TI 7 87
580-87	TI 6 87
601-100	TM 3 100
65-192	TX 52 92
669-212	TM 29 100D
708-95	TX 117 95D

QH (QUINTON HAZELL)	
QTH125	TX 17 80D
QTH132K	TX 20 80D

QH (QUINTON HAZELL)	
QTH169K	TX 3 79D
QTH203K	TX 13 92D
QTH206K	TX 25 87D
QTH295K	TX 29 80D
QTH329K	TX 13 80D
QTH348K	TX 28 88D
QTH369	TX 70 82
QTH393K	TX 30 80D
QTH423K	TX 29 85D
QTH424	TX 36 85D
QTH428K	TI 21 87
QTH461	TX 76 88D
QTH488K	TX 30 87D
QTH492K	TX 28 92D
QTH507K	TM 12 105
QTH510K	TM 11 105
QTH512K	TI 24 95
QTH513K	TM 13 97
QTH523K	TI 45 87D
QTH563	TX 71 82D
QTH566K	TI 9 87
QTH580	TX 63 83
QTH597K	TH 11 87
QTH610K	TM 17 98
QTH616K	TM 20 90D
QTH626K	TX 34 82D
QTH640K	TM 14 97
XEFS243	TSW 34D
XEFS279	TSW 32
XEMS90	TSE 1D
XTS30	TSW 44D
XTT101	TSE 5
XTT142	TSE 2
XTTS38	TSW 47

STANT INC.	
13378	TX 13 80D
13379	TX 13 92D
13496	TX 19 75D
13588	TX 25 87D
13648	TX 24 80D
13649	TX 24 87D
13959	TX 7 88D
14119	TX 52 92
14188	TX 36 85D
14419	TX 14 87D
14569	TI 45 87D
14578	TX 26 80D
14578	TX 26 71D1
14589	TI 21 87
14598	TI 48 80D
14602	TM 13 97

STANT INC.	
14612	TM 12 105
14622	TX 28 92D
14632	TI 24 95
48019	TX 18 87D
48038	TX 27 80D
48049	TX 30 87D
48058	TX 20 80D
48118	TX 70 82
48278	TX 63 83
48308	TX 73 82D
48349	TX 10 88D
48457	TX 143 78D
48499	TX 109 87D
48529	TX 113 88D
48628	TX 122 82
48648	TX 28 88D
48658	TX 29 80D
48658	TX 29 85D
48668	TX 25 80D
48718	TI 222 88
48732	TM 3 100
48829	TX 106 90D
48839	TX 107 90D
49099	TI 7 87
49258	TH 11 87
49269	TM 14 97
49279	TI 9 87
49299	TM 27 105

TRISCAN	
86206388	TX 28 88D
86207088	TX 30 80D
86207188	TX 14 87D

VALEO	
819849	TX 3 79D
819864	TX 78 83
819867	TX 13 80D
819868	TX 15 87D
819869	TX 13 92D
819873	TX 18 87D
819875	TX 7 88D
819910	TX 15 87D
819911	TX 63 83
819926	TX 13 92D
819945	TX 63 83
819948	TX 30 80D
819967	TX 14 87D
819970	TX 29 85D
820027	TX 25 87D
820027	TX 30 87D
820058	TX 14 87D

VALEO	
820059	TX 18 79D
820068	TX 7 88D
820136	TX 73 82D
820136	TX 70 82
820168	TX 15 87D
820171	TX 14 87D
820173	TX 73 82D
820182	TX 14 87D
820184	TI 21 87
820191	TX 76 88D
820193	TX 78 83
820221	TSW 34D
820229	TSW 32
820419	TI 24 95
820423	TX 36 85D
820425	TM 11 105
820437	TI 9 87
820495	TI 45 87D
820510	TX 63 83
820788	TX 24 87D
820793	TX 71 82D
820941	TX 106 90D
820958	TX 30 80D
820979	TI 48 80D
820989	TM 17 98

VERNET	
1378.80/J	TX 3 79D
1439.80/J	TX 13 80D
1439.92	TX 13 92D
1439.92/J	TX 13 92D
1441.75/J	TX 19 75D
1476.79J	TX 18 79D
1476.87J	TX 18 87D
1535.80/J	TX 20 80D
1535.87/J	TX 25 87D
2553	TSE 5
2624	TSW 34D
2634	TSW 32
2897	TSW 44D
3296.80/J	TX 20 80D
3349.87/J	TX 15 87D
4561.92/J	TX 13 92D
5079.83	TX 63 83
5111.71/J	TX 27 71D
5111.80/J	TX 27 80D
5111.88/J	TX 28 88D
5434.82	TX 70 82
5699.80/J	TX 29 80D
5699.85/J	TX 29 85D
5902.87/J	TX 30 87D
5955.88	TX 7 88D

VERNET	
5955.88/J	TX 7 88D
5968.87/J	TX 25 87D
5977.88/J	TX 7 88D
5981.89/J	TX 10 88D
6222.87/J	TI 9 87
6243.92/J	TX 28 92D
6273.87	TX 15 87D
6273.87/J	TX 15 87D
6276.87	TX 14 87D
6276.87/J	TX 14 87D
6285.87	TI 21 87
6292.88/J	TX 76 88D
6294.82	TX 78 83
6310.88	TX 7 88D
6310.88/J	TX 7 88D
6311.82/J	TX 73 82D
6493 105/J	TM 12 105
6496 105/J	TM 11 105
6498 95	TI 24 95
6499.97/J	TM 13 97
6513.87/J	TI 45 87D
6529.87	TX 34 87D
6702.82	TX 71 82D
6842100	TM 3 100
6847.87/J	TH 11 87
6849.80/J	TI 48 80D
6866.90/J	TM 20 90D
D 17550	THD 1 79
D16050	THD 1 79
TH1378.80J	TX 3 79D
TH1439.80J	TX 13 80D
TH1439.92J	TX 13 92D
TH1441.75J	TX 19 75D
TH1476.79J	TX 18 79D
TH1476.87J	TX 18 87D
TH1535.80J	TX 20 80D
TH1535.87J	TX 25 87D
TH3349.87J	TX 15 87D
TH5111.71J	TX 27 71D
TH5111.80J	TX 20 80D
TH5111.80J	TX 27 80D
TH5111.88J	TX 28 88D
TH5434.82J	TX 70 82
TH5699.80J	TX 29 80D
TH5699.85J	TX 29 85D
TH5902.87J	TX 30 87D
TH5955.88J	TX 7 88D
TH5981.89J	TX 10 88D
TH6222.87J	TI 9 87
TH6243.92J	TX 28 92D
TH6285.87J	TI 21 87
TH6292.88J	TX 76 88D

VERNET	
TH6294.82J	TX 78 83
TH6311.82J	TX 73 82D
TH6484.82J	TX 63 83
TH6493.105J	TM 12 105
TH6496.105J	TM 11 105
TH6497.85J	TX 36 85D
TH6498.95J	TI 24 95
TH6499.97J	TM 13 97
TH6513.87J	TI 45 87D
TH6523.87	TX 24 87D
TH6529.82J	TX 34 82D
TH6529.87J	TX 34 87D
TH6533.92J	TX 30 92D
TH6702.82J	TX 71 82D
TH6842.100J	TM 3 100
TH6847.87J	TH 11 87
TH6849.80J	TI 48 80D
TH6865.90J	TH 36 90D
TH6866.90J	TM 20 90D
TH6867.90J	TX 107 90D
TH6883.82J	TX 122 82
TH6939.98J	TM 17 98
TH6955.92J	TI 205 92D
TH6962.90J	TX 106 90D
TH6988.87J	TI 7 87
TH7002.87J	TI 6 87
TH7135.80J	TH 5 80
TH7155.100J	TM 29 100D
TH7156.87J	TM 28 87
TH7162.87J	TI 208 87D
TH7163.84J	TX 22 84D
TH7189.87J	TI 33 87
THCT16965.79	TX 37 79
THCT19094.80	THD 1 79
TM 14 97	TM 14 97
TS2624	TSW 34D
TS2634	TSW 32
TS2897	TSW 44D
WS2553	TSE 5

WAHLER	
3000.80	TX 3 79D
3100.88	TX 7 88D
3141.87D	TX 14 87D
3457.90D	TX 106 90D
3472.87D	TX 111 87D
3478.82D	TX 63 83
3498.88D	TX 76 88D
4049.80D	TX 25 80D
4049.80D1	TX 20 80D
4049.87D	TX 25 87D

WAHLER	
4078.79D	TX 18 79D
4078.87D	TX 18 87D
4088.80D	TX 24 80D
4088.87D	TX 24 87D
410086.97D0	TM 14 97
410087.97D0	TM 30 97
410183.88D	TX 113 88D
410231.82D	TX 73 82D
4103.82	TX 63 83
4105.79D	TX 18 79D
411193.82D	TX 122 82
4116.87D1	TX 25 87D
4117.80D	TX 20 80D
4123.80D	TX 25 80D
4137.71D	TX 26 71D1
4154.88D	TX 10 88D
4155.87D	TX 24 87D
4158.80D	TX 18 79D
4165.79D	TX 18 79D
4176.80D	TX 29 80D
4176.85D	TX 29 85D
4189.87D	TI 9 87
4206.90D	TX 107 90D
4232.80D	TX 18 79D
4233.84D	TX 22 84D
4235.71D	TX 30 71D
4235.80D	TX 30 80D
4236.88D	TX 30 87D
4236.92D	TX 30 92D
4253.87D	TX 15 87D
4255.82D	TX 13 80D
4255.92D	TX 13 92D
4256.80D	TX 13 80D
4256.80D60	TX 13 80D
4256.83D	TX 13 80D
4256.92D50	TX 13 92D
4272.90D	TX 13 92D
4274.82D	TX 34 82D
4274.87D	TX 25 87D
4274.92D	TX 30 92D
4275.87D	TI 21 87
4278.80D	TI 48 80D
4281.87D	TI 45 87D
4326.97D	TM 13 97
4453.87D	TH 11 87
4455.80D	TX 30 80D
4480.82D	TX 70 82
4488.80D0	TX 125 80
4508.105D	TM 27 105
4516.85D	TX 36 85D
4517.87D	TI 208 87D
4605.79	THD 1 79

WAHLER	
4638.82D	TX 78 83
4639.82D	TX 71 82D
4814.92D	TI 205 92D
4816.90D	TH 36 90D
4817.90D	TM 20 90D
4820.87D	TX 109 87D
4833.100D	TM 29 100D
4835.87D	TM 28 87
6017.85D	TSW 32

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[illegible]

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