



东风乘用车

# 车桥和悬架



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# Axle and Suspension



- 1、熟悉E70车桥悬架系统的组成和结构特点
- 2、能对E70车桥悬架系统进行故障诊断与排除
- 3、掌握E70车桥及悬架各部件的拆装更换方法及注意事项
- 4、掌握E70四轮定位的方法及注意事项





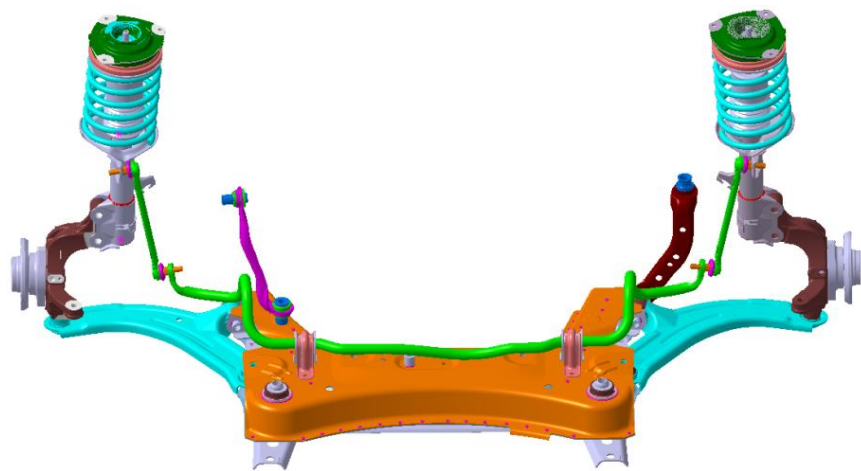
1. Familiar with the composition and structural characteristics of the E70 axle and suspension system
2. Troubleshoot the E70 axle and suspension system
3. Master the removal and refitting and replacement methods and precautions of the related components of the E70 axle and suspension system
4. Master the four-wheel alignment method and precautions of E70

# 一、 E70车桥及悬架的结构特点

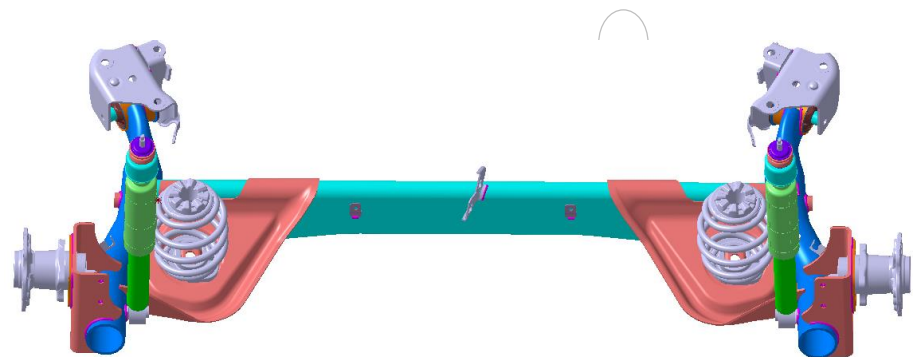


## 1、车桥形式

前车桥为断开式车桥，后车桥为整体式车桥



前桥



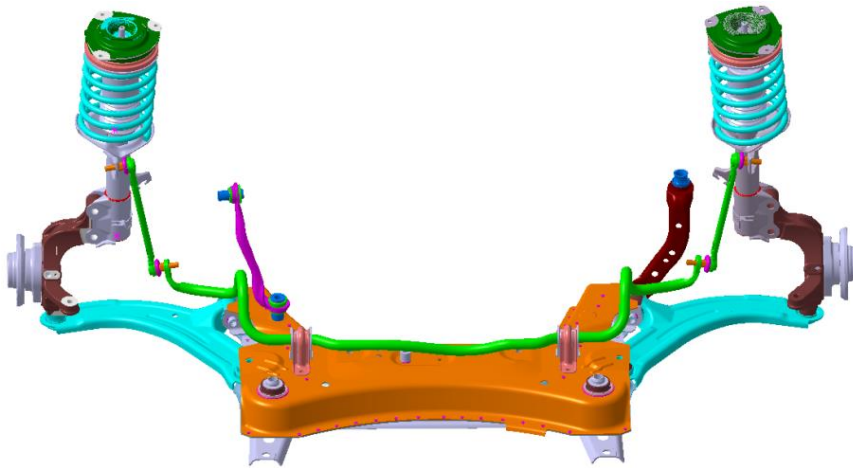
后桥

# I. Structural characteristics of E70 axle and suspension system

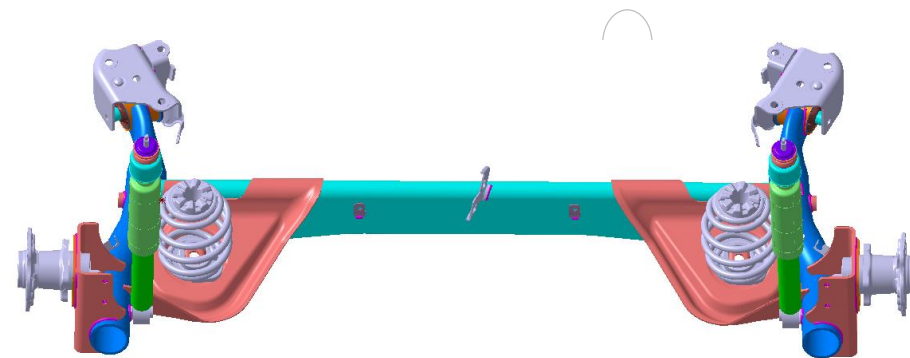


## 1. Axle type

The front axle is a disconnected axle and the rear axle is an integral axle.



Front axle



Rear axle

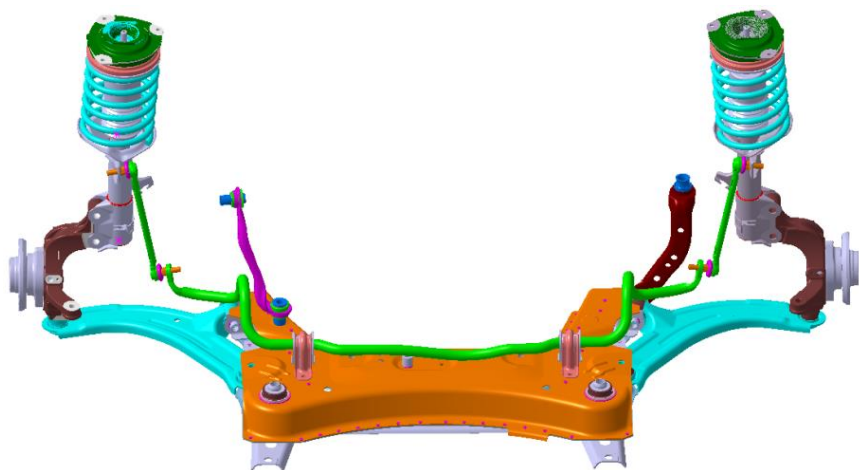
# 一、 E70车桥及悬架的结构特点



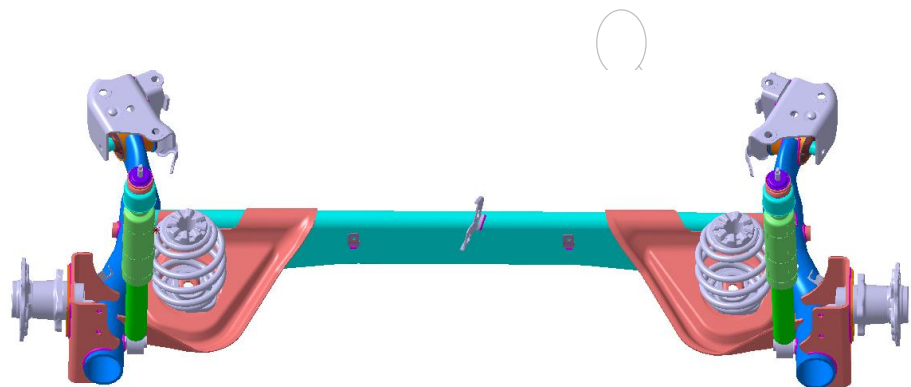
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## 2、悬架形式

前悬架为麦克弗逊式独立悬架，冲压三角臂，带横向稳定杆，后悬架为扭力梁半独立悬架。



前悬架



后悬架

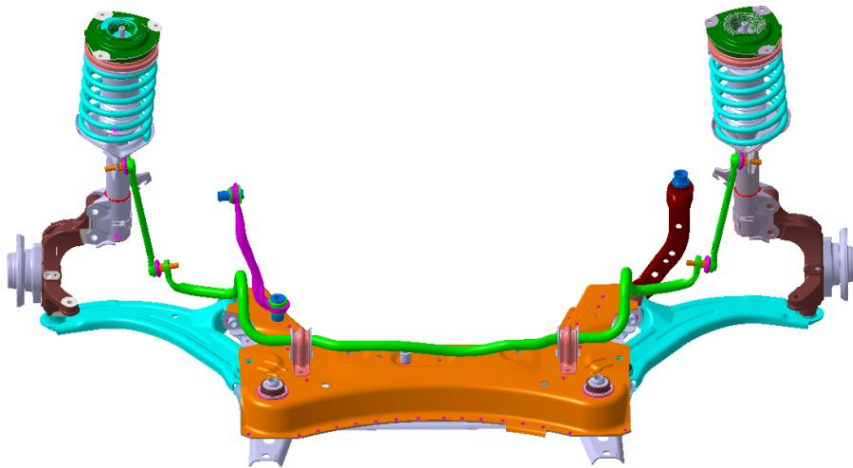
# I. Structural characteristics of E70 axle and suspension system



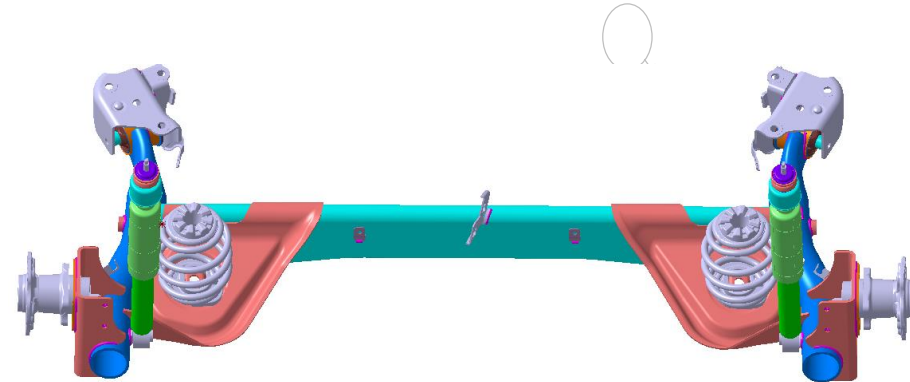
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## 2. Suspension type

Front McPherson independent suspension with stamped triangular arm and stabilizer bar, rear torsion beam semi-independent suspension.



Front suspension



Rear suspension

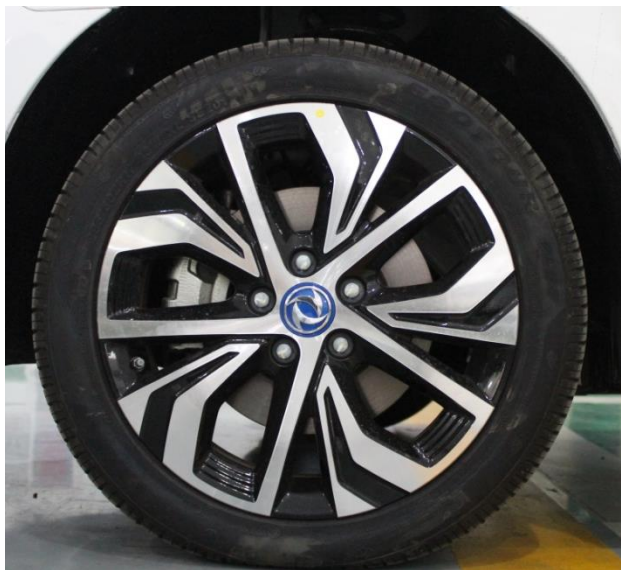


# 一、 E70车桥及悬架的结构特点

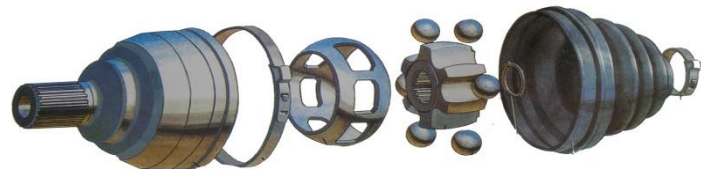


## 3、 车轮和半轴形式

子午线轮胎，铝合金轮辋，半轴为等速万向节传动轴，滑动式三销万向节联在差速器端，不可滑动的球笼式万向节联在车轮端。



车轮



半轴

# I. Structural characteristics of E70 axle and suspension system

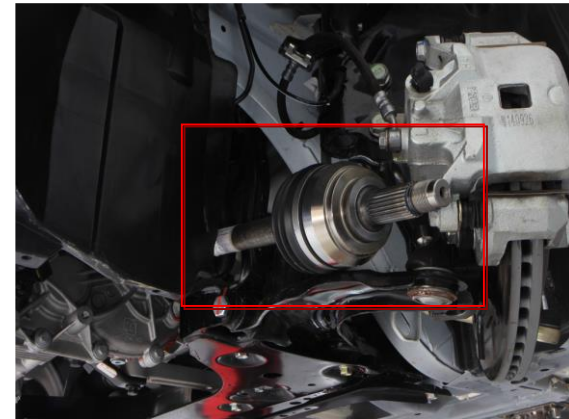


## 3. Wheel and axle shaft type

Radial tire, aluminum alloy rim, axle shaft is the CV joint propeller shaft, with motion type tripod universal joint connected to the differential, and fixed type CV joint to the wheel.



Wheel



Axle shaft

## 二、四轮定位



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### 1、E70车型四轮定位参数标准

项目		参数
前轮定位	车轮外倾	$-0^{\circ} 05' \pm 45'$
	主销内倾	$9^{\circ} 50' \pm 45'$
	主销后倾	$4^{\circ} 45' \pm 45'$
	前束	IN 1mm
后轮定位	车轮外倾	$-1^{\circ} 30' \pm 30'$
	前束	IN 3.5mm

# II. Four-wheel alignment



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## 1. Four-wheel alignment parameter standard of E70 model

Item		Parameters
Front wheel alignment	Wheel camber	$-0^{\circ} 05' \pm 45'$
	Kingpin inclination	$9^{\circ} 50' \pm 45'$
	Kingpin caster	$4^{\circ} 45' \pm 45'$
	Toe-in	IN 1mm
Rear wheel alignment	Wheel camber	$-1^{\circ} 30' \pm 30'$
	Toe-in	IN 3.5mm

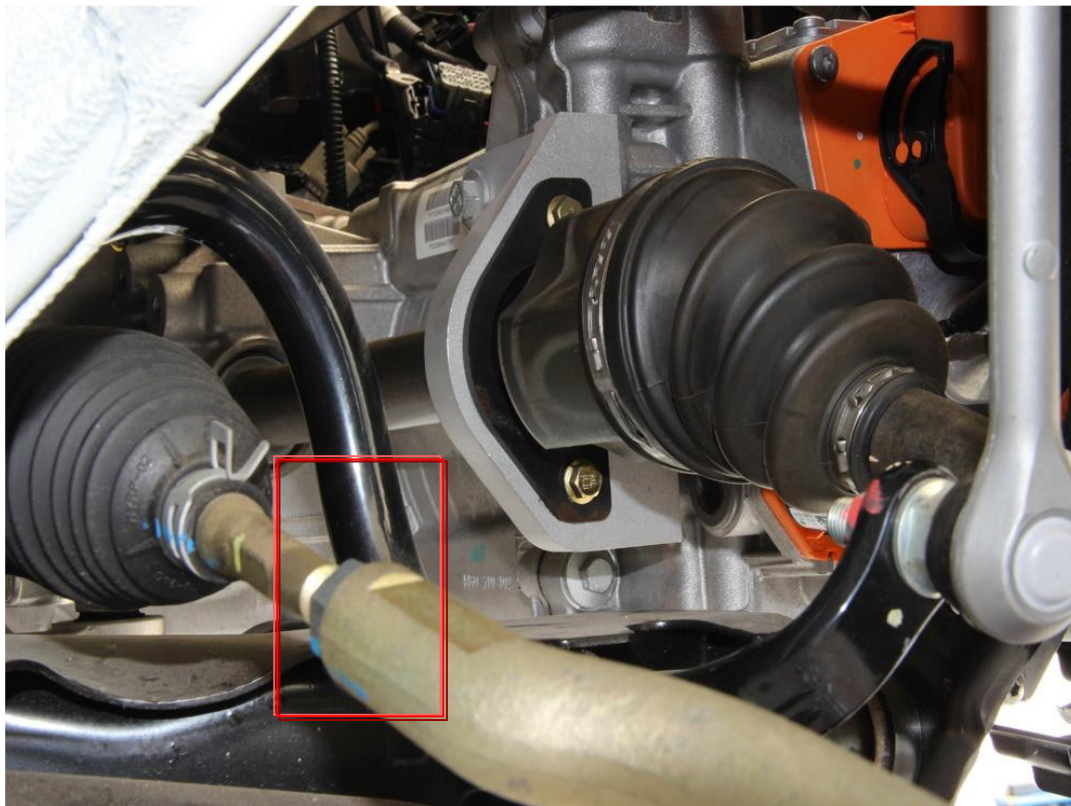
## 二、四轮定位



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### 2、E70四轮定位参数调整方法

前轮前束：两前轮可单独调整，调整位置如下图。





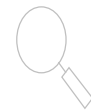
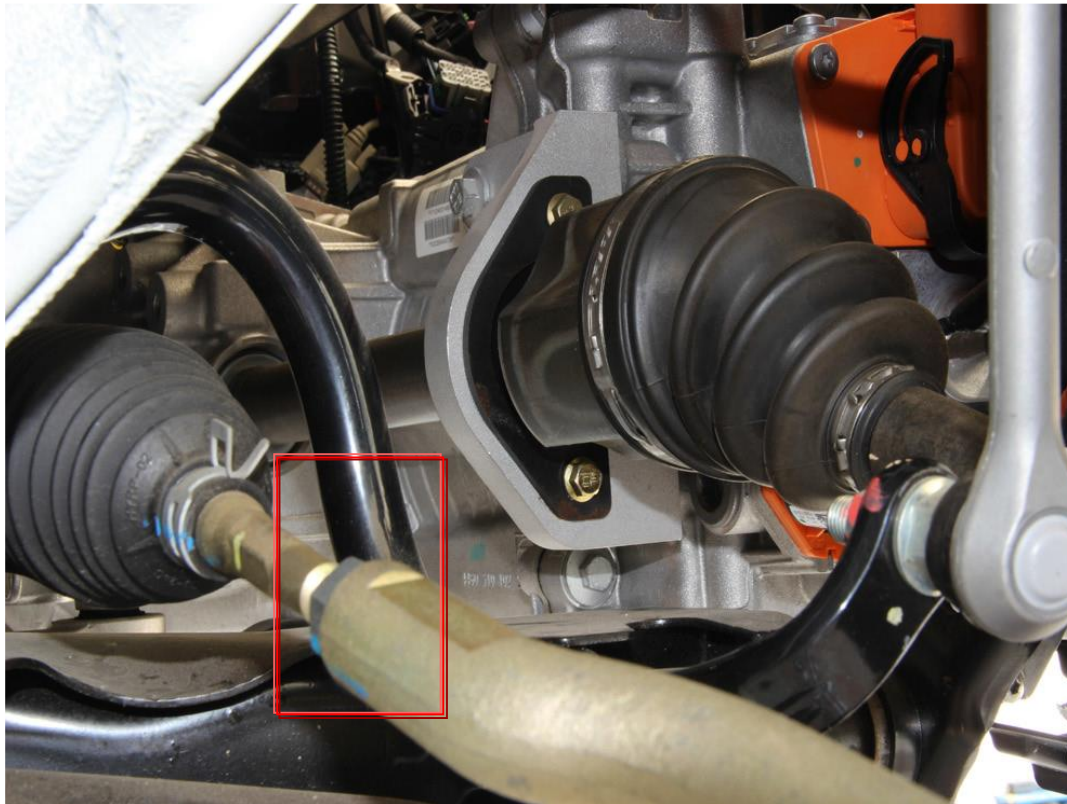
## II. Four-wheel alignment



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### 2. Adjustment method of E70 four-wheel alignment parameters

Front wheel toe-in: The two front wheels can be adjusted separately as shown below.



## 二、四轮定位



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### 主销后倾，主销内倾，车轮外倾及后轮前束

主销后倾，主销内倾，车轮外倾及后轮前束值出厂已经设置好，一般不需要调整，如果检查时发现参数不正确，可能是车桥，悬架，转向机拉杆，转向节，车轮轮毂等部件变形或者技术状况不良。



更换转向机，车桥和悬架等相关部件后，需对四轮定位进行检查和调整，以维修手册为准。车辆行驶一段时间，也需对四轮定位定期检查。



### **Kingpin caster, kingpin inclination, wheel camber and rear wheel toe-in**

Kingpin caster, kingpin inclination, wheel camber and rear wheel toe-in have been set before delivery, and generally do not need to be adjusted. If the parameters are found to be incorrect during the inspection, it may be caused by deformation of the axle, suspension, steering gear tie rod, steering knuckle, wheel hubs or poor technical conditions.



After replacing the steering gear, axle and suspension and other related components, it is necessary to check and adjust the four-wheel alignment as specified in the service manual. When the vehicle has been running for a period of time, it is also necessary to regularly check the four-wheel alignment.



### 1、车桥和悬架

- 安装三角臂橡胶衬套时，最终拧紧必须在轮胎着地及空载条件下进行。机油会缩短橡胶衬套的使用寿命，务必将溅出的机油擦拭干净。
- 维修完悬架零件后，务必检查车轮定位。
- 不可重复使用自锁螺母。安装时一定要使用新的螺母。由于新的自锁螺母已预先上油，可直接拧紧。



### 1. Axle and suspension

- When installing the rubber bush of triangular arm, the bush cannot be tightened finally unless the tires are grounded and vehicle is unloaded. The oil sprayed onto the rubber bush should be wiped up; otherwise, its service life will be shortened.
- After servicing the suspension parts, check for wheel alignment.
- Never reuse the self-locking nut. Instead, always use a new one for refitting. It is allowed to tighten the new self-locking nuts directly as they are oiled in advance.





## 2、车轮

- 安装车轮时，分两到三步对角拧紧车轮螺栓，以防车轮扭曲变形。
- 轮胎修补或更换后，必须进行平衡检测。
- 轮胎出现偏磨，产生不规则磨损时，应检查车轮的定位。
- 经常检查轮胎有无损坏，并立即除去嵌入轮胎花纹中的杂物，以免高速行车时车轮发抖。
- 无内胎轮胎侧壁较薄，靠边停车时避免擦碰沟埂。



## 2. Wheels

- While refitting the wheels, tighten the wheel bolts diagonally in two to three steps for the avoidance of wheel distortion.
- After tire repair or replacement, balance testing must be performed.
- In case of eccentric or irregular wear on tires, check the wheel alignment.
- Check tires for damage regularly and remove the foreign matters in tread patterns immediately to prevent the wheels from shaking at high-speed driving.
- Avoid rubbing the pits when pulling over as the side wall of tubeless tire is very thin.





### 3、半轴

- 接头分总成不可分解。
- 请在尽可能无尘的地点操作。
- 必须使用无纺布。不能使用纤维织布否则布屑会附着在零件上。





### 3. Axle shaft

- It is unable to disassemble the joint subassembly.
- Please conduct operation at a dust-free place as far as possible.
- You must use the non-woven cloth. Never use the woven fabric, otherwise the rag dust will attach on the parts.





1、对E70的车桥及悬架结构进行认知，必要时进行拆装

2、调整E70的四轮定位参数





1. Cognize the E70 axle and suspension structures, and remove and refit them if necessary.
2. Adjust the E70 four-wheel alignment parameters.

