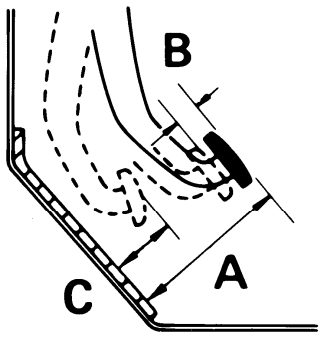
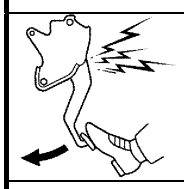
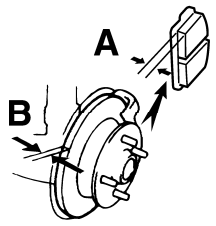
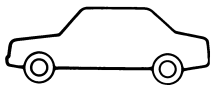
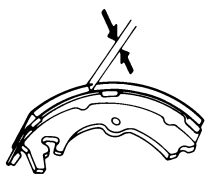
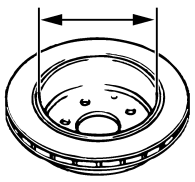
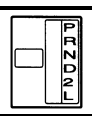
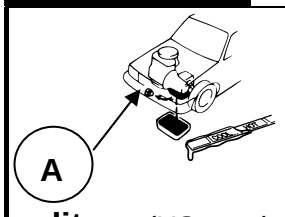
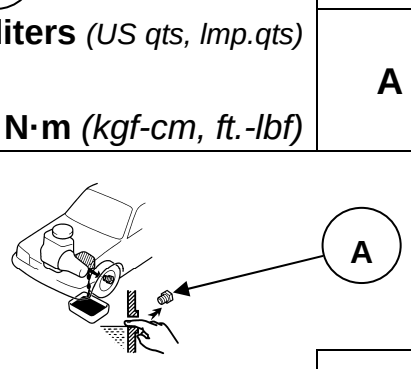
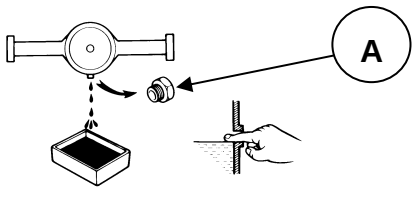
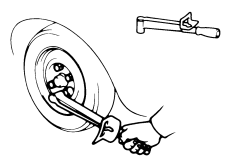
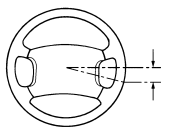
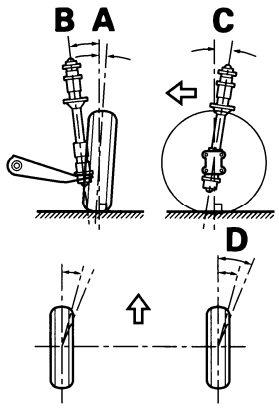
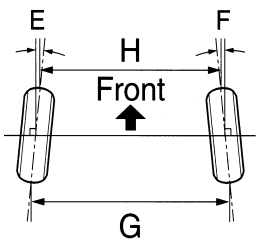
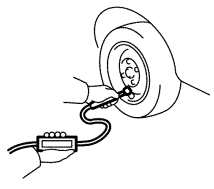
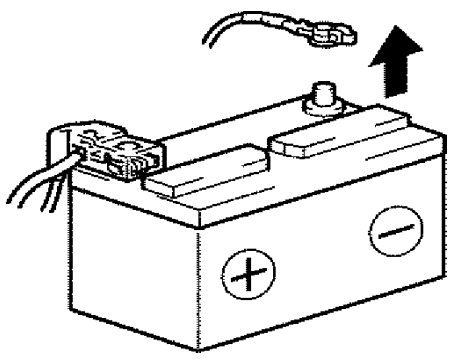
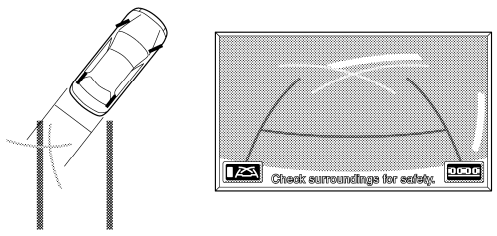
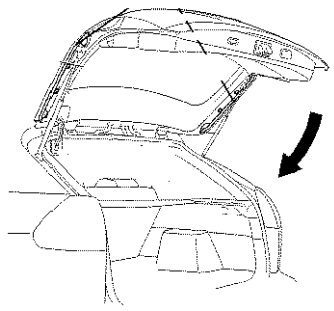
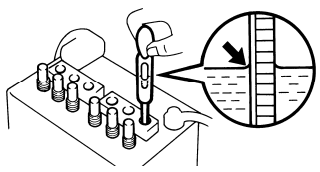
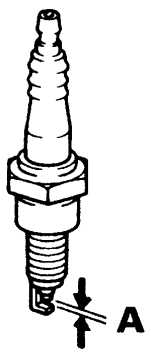
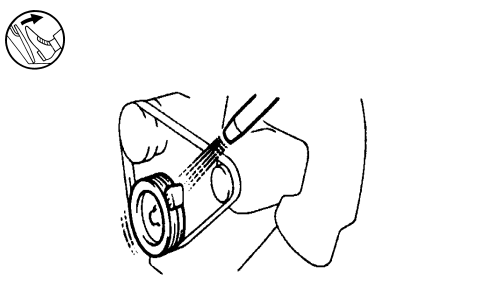
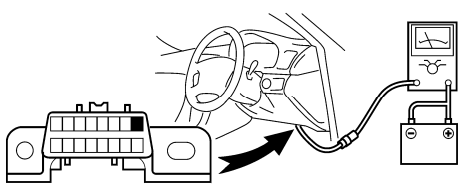
 **mm** *(in.)*	**A**	**148.8 to 158.8** *(5.858 to 6.252)*	**165.9 to 175.9** *(6.531 to 6.925)*
	B	**1.0 to 6.0** *(0.039 to 0.236)*	
	C	**84.4** *(3.32)*	**97.8** *(3.85)*
		**SAE J1703 or FMVSS No. 116 DOT 3**	
 **300 N** *(31 kgf, 67 lbf)*		**8 to 10**	
 **mm** *(in.)*			
	A	**1.0** *(0.039)*	
	B	**25.0** *(0.983)*	**8.5** *(0.334)*
 **mm***(in.)*		**1.0** *(0.039)*	
 **mm** *(in.)*		**191** *(7.52)*	
			
 **liters** *(US qts, lmp.qts)* **N·m** *(kgf-cm, ft.-lbf)*	**2WD**	**8.8** *(9.3, 7.7)*	
	4WD	**9.0** *(9.5, 7.9)*	
	A	**49** *(500, 36)*	
 **liters** *(US qts, lmp.qts)* **N·m** *(kgf-cm, ft.-lbf)*		**0.9** *(0.95, 0.79)*	
	A	**Hypoid gear oil API GL-5 SAE 90**	
 **liters** *(US qts, lmp.qts)* **N·m** *(kgf-cm, ft.-lbf)*		**0.9** *(0.95, 0.79)*	
	A	**Hypoid gear oil API GL-5 SAE 90** (-18° C *(-0° F)*) **SAE 80W or 80W-90** (-18° C *(-0° F)*)	

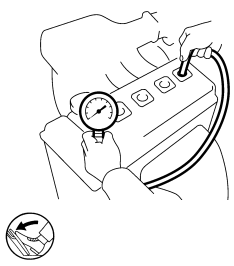
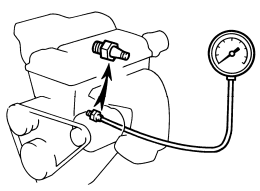
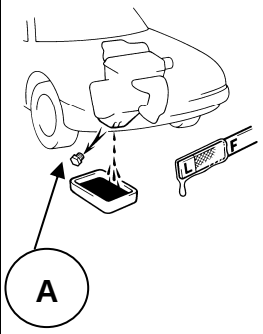
		GSU	
 **N·m** *(kgf-cm, ft.-lbf)*		**103** *(1050, 76)*	
		GSU	
 **mm** *(in.)*		**30** *(1.18)*	
			
	**A** **2WD**	**-0°38' +/- 45'** *(-0.63° +/- 0.75°)*	**-1°00' +/- 45'** *(-1.00° +/- 0.75°)*
	A **4WD**		**-0°36' +/- 45'** *(-0.60° +/- 0.75°)*
	B	**11°01' +/- 45'** *(11.02° +/- 0.75°)*	-
	C	**2°37' +/- 45'** *(2.62° +/- 0.75°)*	-
	D	**35°07' +/- 2°** *(35.12° +/- 2°)*	-
	**E+F** **2WD**	**0°02' +/- 12'** *(0.04° +/- 0.2°)*	**0°10' +/- 0°12'** *(0.17° +/- 0.2°)*
	E+F **4WD**		**0°08' +/- 0°12'** *(0.14° +/- 0.2°)*
	G-H **mm** *(in.)*	**0.9 +/- 2** *(0.04 +/- 0.08)*	**3.0 +/- 2.0** *(0.12 +/- 0.08)*
			
 **kPa** *(kgf/cm²* *or bar, psi)*	**km/h** *(mph)*		
		**160** *(100)*	**220** *(2.2, 32)*
		160 *(100)*	**210** *(2.1, 30)*
		**160** *(100)*	**220** *(2.2, 32)* / **240** *(2.4, 35)*
		160 *(100)*	**210** *(2.1, 30)* / **230** *(2.3, 33)*

HIGHLANDER / KLUGER

GSU40
GSU45

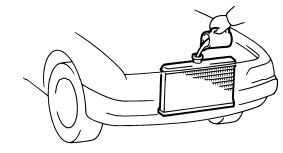
2007/05 - 2010/07

	GSU
*1  *2  *3 	
 20° C (68° F)	**1.25 to 1.29**
	2GR-FE
cm³ or cc *(cu. in.)*	**3456** *(210.9)*
 **A**	**DENSO** **FK20HR11**
A **mm** *(in.)*	**1.0 to 1.1** *(0.039 to 0.043)*
 **BTDC**	**8 to 12°** (DLC3 Terminals 13 (TC) - 4 (CG) Connected)
 **rpm**	**600 to 700**

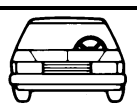
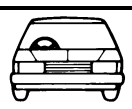
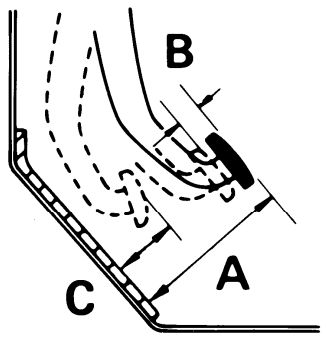
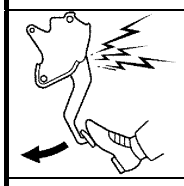
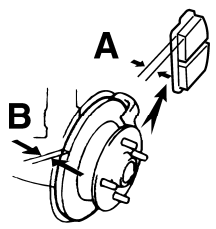
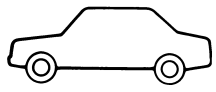
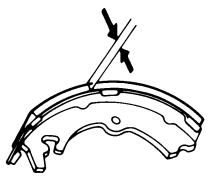
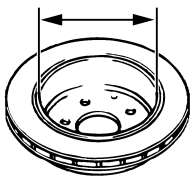
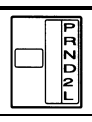
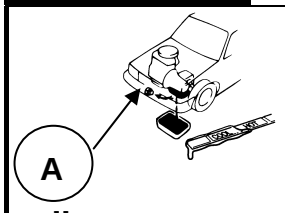
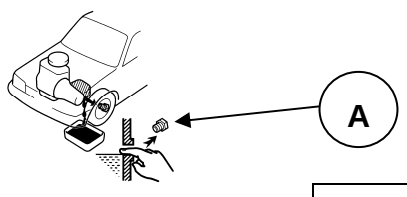
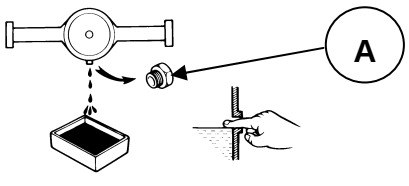
 **kPa** *(kgf/cm², psi)*		**1300** *(13, 189)*
		⬆ **980** *(10, 142)*
		⬇ **100** *(1.0, 15)*
 **kPa** *(kgf/cm², psi)*	**3000 rpm**	⬆ **80** *(0.8, 11.6)*
	3000 rpm	⬆ **380** *(3.9 to 55.1)*
		2GR-FE
 **liters** *(US qts, Imp.qts)*		**5.7** *(6.0, 5.0)*
		6.1 *(6.4, 5.4)*
N·m *(kgf-cm, ft.-lbf)*	**A**	**40** *(408, 30)*

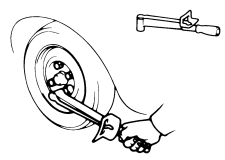
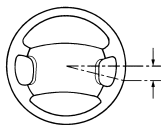
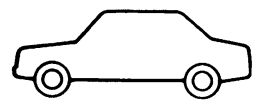
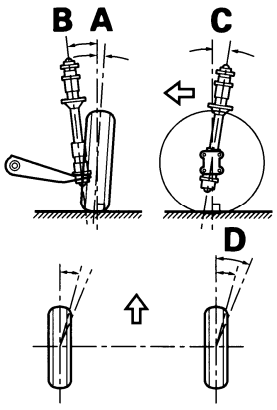
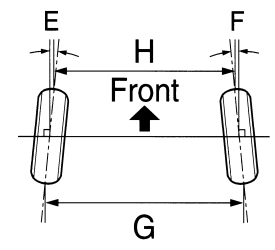
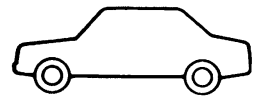
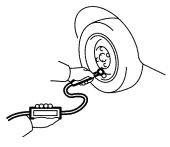
10W-30:
API grade SL "Energy-Conserving",
API grade SM "Energy-Conserving"
or ILSAC*4 multigrade engine oil

15W-40 and 20W-50:
API grade SL or API grade SM

 **liters** *(US qts, Imp.qts)*	w/ Engine oil cooler	w/o Engine oil cooler
w/ Rear Heater	**11.7** *(12.4, 10.3)*	**11.0** *(11.6, 9.7)*
w/o Rear Heater	**9.5** *(10.1, 8.4)*	**8.8** *(9.3, 7.7)*

*1: Initialization required. Refer to the repair manual for the initialization procedures. *2: Parking Assist Monitor System *3: Power Back Door System
*4: International Lubricant Standardization and Approval Committee

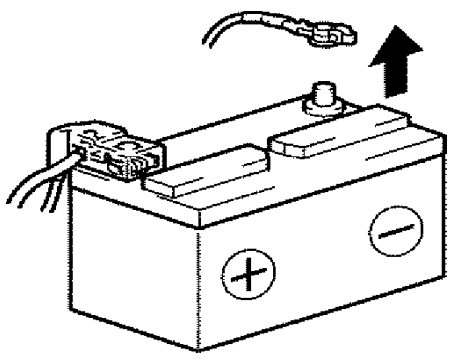
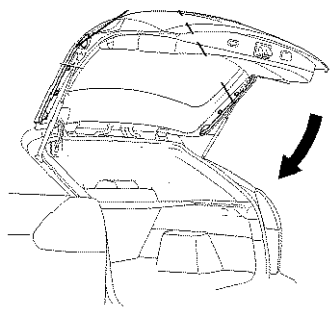
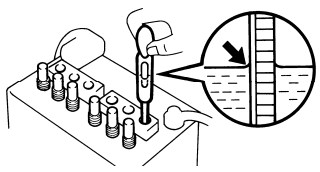
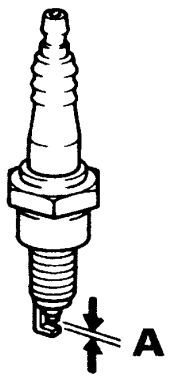
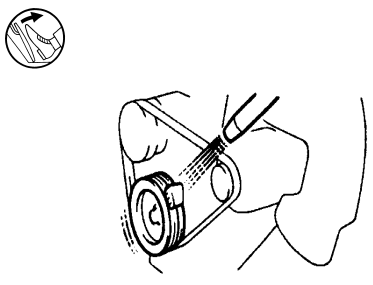
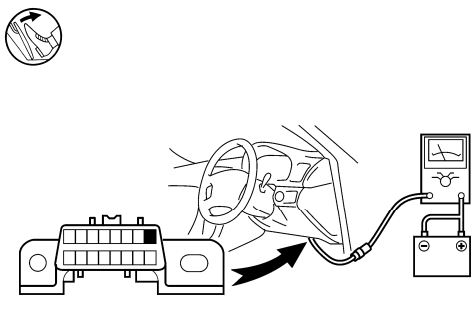
			
 **mm** *(in.)*	**A**	**148.8 to 158.8** *(5.858 to 6.252)*	**165.9 to 175.9** *(6.531 to 6.925)*
	B	**1.0 to 6.0** *(0.039 to 0.236)*	
	C	**84.4** *(3.32)*	**97.8** *(3.85)*
		**SAE J1703 or FMVSS No. 116 DOT 3**	
 **300 N** *(31 kgf, 67 lbf)*		**8 to 10**	
 **mm** *(in.)*	**A**		
	B	⬆ **1.0** *(0.039)*	
 **mm***(in.)*		⬆ **25.0** *(0.983)*	⬆ **8.5** *(0.334)*
 **mm** *(in.)*		⬆ **1.0** *(0.039)*	
		⬇ **191** *(7.52)*	
			
 **liters** *(US qts, lmp.qts)* **N·m** *(kgf-cm, ft.-lbf)*	**2WD**	**8.8** *(9.3, 7.7)*	
	4WD	**9.0** *(9.5, 7.9)*	
	A	**49** *(500, 36)*	
 **liters** *(US qts, lmp.qts)* **N·m** *(kgf-cm, ft.-lbf)*		**0.9** *(0.95, 0.79)*	
	A	**Hypoid gear oil API GL-5 SAE 90**	
 **liters** *(US qts, lmp.qts)* **N·m** *(kgf-cm, ft.-lbf)*		**0.9** *(0.95, 0.79)*	
	A	**Hypoid gear oil API GL-5 SAE 90** (⬆ -18° C *(-0° F)*) **SAE 80W or 80W-90** (⬇ -18° C *(-0° F)*)	

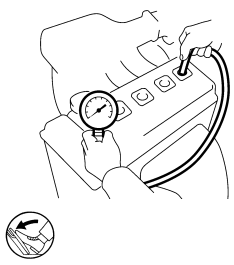
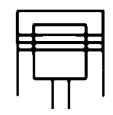
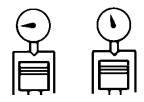
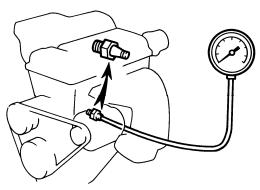
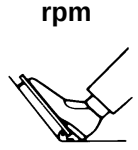
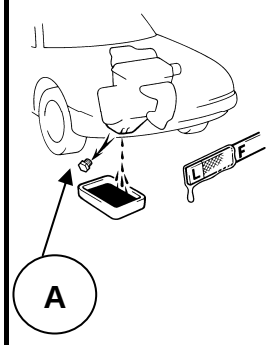
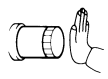
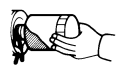
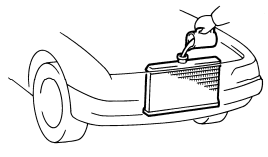
			GSU	
 **N·m** *(kgf-cm, ft.-lbf)*			**103** *(1050, 76)*	
			GSU	
 **mm** *(in.)*			⬇ **30** *(1.18)*	
				
	**A**	**2WD**	**-0°38' +/- 45'** *(-0.63° +/- 0.75°)*	**-1°00' +/- 45'** *(-1.00° +/- 0.75°)*
		4WD		**-0°36' +/- 45'** *(-0.60° +/- 0.75°)*
	B		**11°01' +/- 45'** *(11.02° +/- 0.75°)*	-
	C		**2°37' +/- 45'** *(2.62° +/- 0.75°)*	-
	D		**35°07' +/- 1°30'** *(35.12° +/- 1.5°)*	-
	**E+H**	**2WD**	**0°02' +/- 12'** *(0.04° +/- 0.2°)*	**0°10' +/- 0°12'** *(0.17° +/- 0.2°)*
		4WD		**0°08' +/- 0°12'** *(0.14° +/- 0.2°)*
	G-H **mm** *(in.)*		**0.9 +/- 2** *(0.04 +/- 0.08)*	**3.0 +/- 2.0** *(0.12 +/- 0.08)*
				
 **kPa** *(kgf/cm²* *or bar, psi)*		**km/h** *(mph)*		
	Australia		⬆**160** *(100)*	**220** *(2.2, 32)*
			⬇**160** *(100)*	**210** *(2.1, 30)*
			⬆**160** *(100)*	**220** *(2.2, 32)* **240** *(2.4, 35)*
			⬇**160** *(100)*	**210** *(2.1, 30)* **230** *(2.3, 33)*
	Russia			**210** *(2.1, 30)*
				**210** *(2.1, 30)* **230** *(2.3, 33)*

HIGHLANDER / KLUGER

GSU40
GSU45

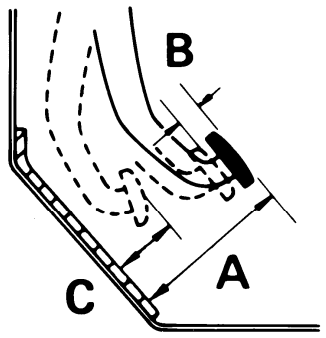
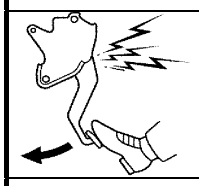
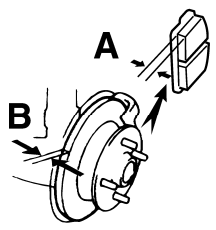
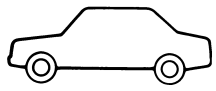
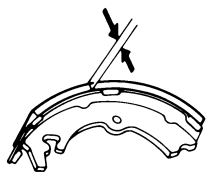
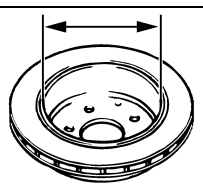
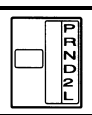
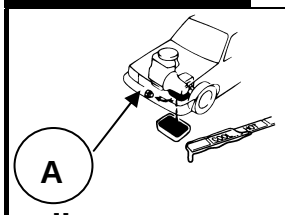
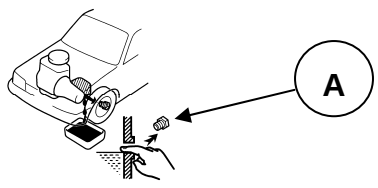
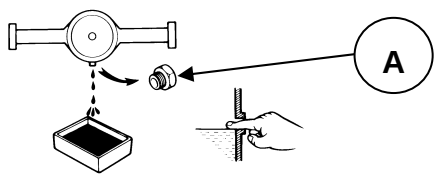
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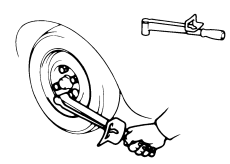
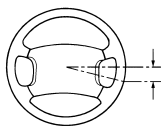
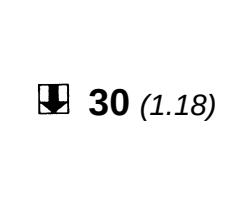
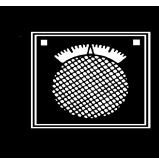
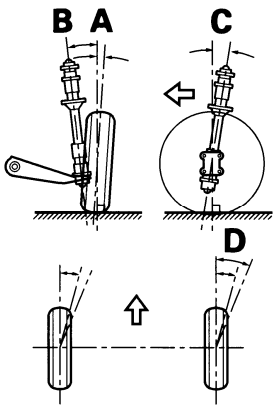
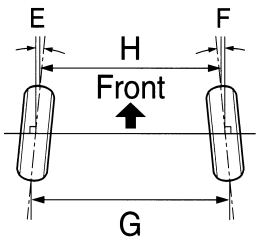
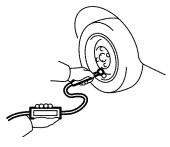
		GSU
*1 		*2 
 20° C *(68° F)*		**1.25 to 1.29**
		2GR-FE
	cm³ or cc *(cu. in.)*	**3456** *(210.9)*
	**DENSO**	**FK20HR11**
	A mm *(in.)*	**1.0 to 1.1** *(0.039 to 0.043)*
 **BTDC**		**8 to 12°** (DLC3 Terminals 13 (TC) - 4 (CG) Connected)
 **rpm**		**600 to 700**

 **kPa** *(kgf/cm², psi)*		**1300** *(13, 189)*
		**980** *(10, 142)*
		**100** *(1.0, 15)*
 **kPa** *(kgf/cm², psi)*		**80** *(0.8, 11.6)*
	3000 rpm 	**380** *(3.9 to 55.1)*
		2GR-FE
 **liters** *(US qts, Imp.qts)*		**5.7** *(6.0, 5.0)*
		**6.1** *(6.4, 5.4)*
		10W-30: **API grade SL "Energy-Conserving", API grade SM "Energy-Conserving" or ILSAC*3 multigrade engine oil** **15W-40:** **API grade SL** **20W-50:** **API grade SM**
N·m *(kgf-cm, ft.-lbf)*	**A**	**40** *(408, 30)*
 **liters** *(US qts, Imp.qts)*	w/ Rear Heater	**11.7** *(12.4, 10.3)*
	w/o Rear Heater	**9.5** *(10.1, 8.4)*

*1: Initialization required. Refer to the repair manual for the initialization procedures. *2: Power Back Door System
*3: International Lubricant Standardization and Approval Committee

TOYOTA MOTOR CORPORATION Overseas Customer Service Technical Division

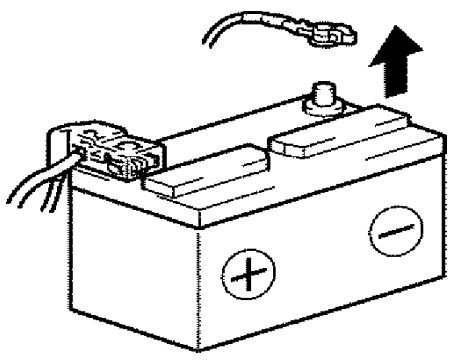
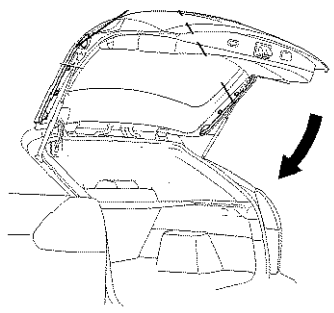
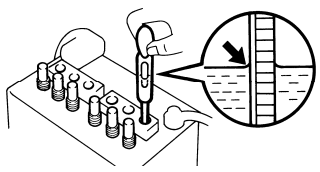
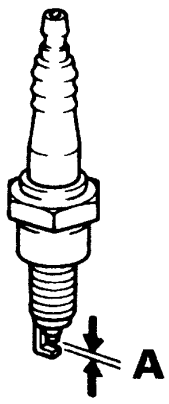
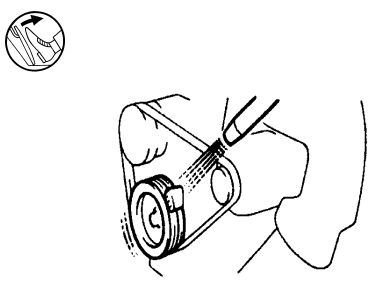
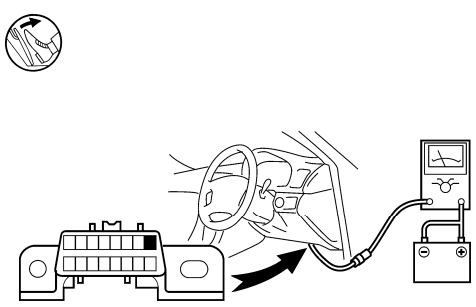
 mm *(in.)*	A	**148.8 to 158.8** *(5.858 to 6.252)*	**165.9 to 175.9** *(6.531 to 6.925)*
	B	**1.0 to 6.0** *(0.039 to 0.236)*	
	C	**84.4** *(3.32)*	**97.8** *(3.85)*
		**SAE J1703 or FMVSS No. 116 DOT 3**	
 **300 N** *(31 kgf, 67 lbf)*		**8 to 10**	
 mm *(in.)*	A		
	B	**25.0** *(0.983)*	**8.5** *(0.334)*
 mm *(in.)*		**1.0** *(0.039)*	
 mm *(in.)*		**191** *(7.52)*	
			
 liters *(US qts, lmp.qts)* N·m *(kgf-cm, ft.-lbf)*	2WD	**8.8** *(9.3, 7.7)*	
	4WD	**9.0** *(9.5, 7.9)*	
	A	**49** *(500, 36)*	
 liters *(US qts, lmp.qts)*		**0.9** *(0.95, 0.79)*	
N·m *(kgf-cm, ft.-lbf)*	A	**49** *(500, 36)*	
 liters *(US qts, lmp.qts)*		**0.9** *(0.95, 0.79)*	
N·m *(kgf-cm, ft.-lbf)*	A	**49** *(500, 36)*	

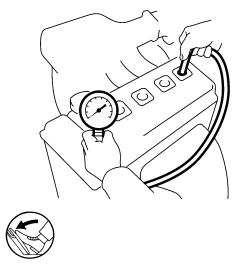
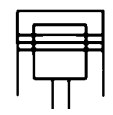
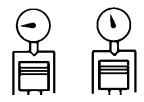
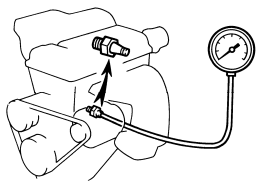
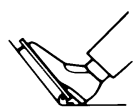
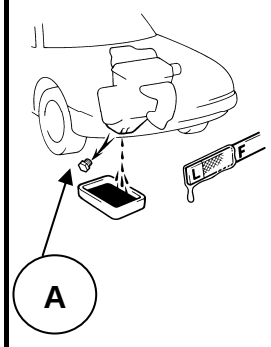
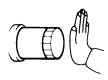
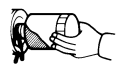
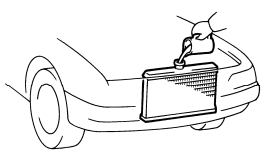
		GSU	
 N·m *(kgf-cm, ft.-lbf)*		**103** *(1050, 76)*	
		GSU	
 mm *(in.)*			
			
	A	2WD **-0°38' +/- 45'** *(-0.63° +/- 0.75°)*	2WD **-1°00' +/- 45'** *(-1.00° +/- 0.75°)*
		4WD **-0°38' +/- 45'** *(-0.63° +/- 0.75°)*	4WD **-0°36' +/- 45'** *(-0.60° +/- 0.75°)*
	B	**11°01' +/- 45'** *(11.02° +/- 0.75°)*	-
	C	**2°37' +/- 45'** *(2.62° +/- 0.75°)*	-
	D	**35°07' +/- 1°30'** *(35.12° +/- 1.5°)*	-
	E+F	2WD **0°02' +/- 12'** *(0.04° +/- 0.2°)*	2WD **0°10' +/- 0°12'** *(0.17° +/- 0.2°)*
		4WD **0°02' +/- 12'** *(0.04° +/- 0.2°)*	4WD **0°08' +/- 0°12'** *(0.14° +/- 0.2°)*
	G-H mm *(in.)*	**0.9 +/- 2** *(0.04 +/- 0.08)*	**3.0 +/- 2.0** *(0.12 +/- 0.08)*
		km/h *(mph)*	
 kPa *(kgf/cm²* or bar, psi)	Australia	 160 *(100)*	**220** *(2.2, 32)*
		160 *(100)*	**210** *(2.1, 30)*
		 160 *(100)*	**220** *(2.2, 32)* / **240** *(2.4, 35)*
		160 *(100)*	**210** *(2.1, 30)* / **230** *(2.3, 33)*
	Russia		**210** *(2.1, 30)*
			**210** *(2.1, 30)* / **230** *(2.3, 33)*

HIGHLANDER / KLUGER

GSU40
GSU45

2012/07 -

	GSU	
*1 	*2 	
 20° C *(68° F)*	**1.25 to 1.29**	
	2GR-FE	
cm³ or cc *(cu. in.)*	**3456** *(210.9)*	
 **A**	**DENSO**	**FK20HR11**
	A **mm** *(in.)*	**1.0 to 1.1** *(0.039 to 0.043)*
 **BTDC**	**8 to 12°** (DLC3 Terminals 13 (TC) - 4 (CG) Connected)	
 **rpm**	**600 to 700**	

 **kPa** *(kgf/cm², psi)*		**1300** *(13, 189)*
		**980** *(10, 142)*
		**100** *(1.0, 15)*
 **kPa** *(kgf/cm², psi)*		**80** *(0.8, 11.6)*
	3000 rpm 	**380** *(3.9 to 55.1)*
	2GR-FE	
 **liters** *(US qts, Imp.qts)*		**5.7** *(6.0, 5.0)*
		**6.1** *(6.4, 5.4)*
		5W-30 and 10W-30: **API grade SL "Energy-Conserving", SM"Energy-Conserving", SN "Resource-Conserving" or ILSAC*3 multigrade engine oil** **15W-40 and 20W-50:** **API grade SL, SM or SN multigrade engine oil**
N·m *(kgf-cm, ft.-lbf)*	**A**	**40** *(408, 30)*
 **liters** *(US qts, Imp.qts)*	w/ Rear Heater	**11.7** *(12.4, 10.3)*
	w/o Rear Heater	**9.5** *(10.1, 8.4)*

*1: Initialization required. Refer to the repair manual for the initialization procedures. *2: Power Back Door System
*3: International Lubricant Standardization and Approval Committee

TOYOTA MOTOR CORPORATION Overseas Customer Service Technical Division