AIRCRAFT BRAKE / LANDING GEAR VARIABLES

The tables below indicate the properties for the Simulation Variables that can be used to get and set properties related to the brakes and landing gear control systems. For information on the units listed for each variable, please see here: Simulation Variable Units

> ***NOTE**: When Microsoft Flight Simulator is running in multiplayer mode, only a small number of variables are communicated between aircraft. Those variables that are available will say so in the description as being either for "All Aircraft" or for "Shared Cockpit".*

You can find a complete index of all available SimVars here: SimVar Index

Brakes

Simulation Variable	Description	Units	Settable
`ANTISKID BRAKES ACTIVE`	True if antiskid brakes active. This can be set using the `AntiSkidActive` parameter.	Bool	
`AUTOBRAKES ACTIVE`	Whether or not the AutoBrakes are currently active.	Bool	
`AUTO BRAKE SWITCH CB`	Auto brake switch position	Number	
`BRAKE DEPENDENT HYDRAULIC PRESSURE`	Brake dependent hydraulic pressure reading	Pounds per square foot (*psf*)	
`BRAKE INDICATOR`	Brake on indication	Position (0 to 16K)	

		0 = off 16K = full	
BRAKE LEFT POSITION	Percent left brake. Note that this SimVar no longer sets the right brake percent and simply triggers a brake pressure increase regardless of the value passed.	Position (0 to 32K) 0 = off 32K = full	
BRAKE LEFT POSITION EX1	Triggers a brake pressure increase on the left brake regardless of the value passed.	Position (0 to 32K) 0 = off 32K = full	
BRAKE PARKING INDICATOR	Parking brake indicator	Bool	
BRAKE PARKING POSITION	Gets the parking brake position - either on (true) or off (false).	Bool	
BRAKE RIGHT POSITION	Percent right brake.	Position (0 to 32K) 0 = off 32K = full	
BRAKE RIGHT POSITION EX1	Triggers a brake pressure increase on the right brake regardless of the value passed.	Position (0 to 32K) 0 = off 32K = full	
REJECTED TAKEOFF BRAKES ACTIVE	Whether or not the rejected takeoff brakes are currently active.	Bool	
TOE BRAKES AVAILABLE	True if toe brakes are available	Bool	

Contact Points

Simulation Variable	Description	Units	Settable
`CONTACT POINT COMPRESSION:index`	The percentage value representing the amount the contact point is compressed. Index is from 0-19.	Position	
`CONTACT POINT IS ON GROUND:index`	Returns true if the indexed contact point is on the ground, or will return false otherwise. Index is from 0 - 19.	Bool	
`CONTACT POINT IS SKIDDING:index`	Returns true if the indexed contact point is skidding, or will return false otherwise. Index is from 0 - 19.	Bool	
`CONTACT POINT POSITION:index`	The currently extended position of the (retractable) contact point, expressed as a percentage. Index is from 0 - 19.	Position	
`CONTACT POINT SKIDDING FACTOR:index`	The skidding factor associated with the indexed contact point, from 0 to 1. Index is from 0 - 19.	*Percent Over 100*	
`CONTACT POINT WATER DEPTH:index`	This returns the depth of the water for the indexed contact point. Index is from 0 - 19.	Feet (*ft*)	

Landing Gear

These SimVars are related to the landing gear of the aircraft. Note that some of them require an *index* to identify the landing gear. This index value should be one of the following:

- 0 = Center Gear
- 1 = Left Gear
- 2 = Right Gear
- 3 = Auxiliary Gear
- 4 = Left Water Rudder
- 5 = Right Water Rudder
- 6 = Left Float Retracted
- 7 = Right Float Retracted
- 8 = Left Ski Retracted
- 9 = Right Ski Retracted
- 10 = Center Front Skid
- 11 = Center Rear Skid
- 12 = Left Front Skid
- 13 = Left Rear Skid
- 14 = Right Front Skid
- 15 = Right Rear Skid

Simulation Variable	Description	Units	Settable
`AUX WHEEL ROTATION ANGLE`	Aux wheel rotation angle (rotation around the axis for the wheel).	Radians	
`AUX WHEEL RPM`	Rpm of fourth set of gear wheels.	*RPM*	
`CENTER WHEEL ROTATION ANGLE`	Center wheel rotation angle (rotation around the axis for the wheel).	Radians	

	***NOTE**: This is available in multiplayer to all **near** aircraft. See here for more information: Note On SimVars In Multiplayer.*		
`CENTER WHEEL RPM`	Center landing gear rpm.	*RPM*	
`GEAR ANIMATION POSITION:index`	Percent indexed gear animation extended. ***NOTE**: This is available in multiplayer to all **near** aircraft. See here for more information: Note On SimVars In Multiplayer.*	Percent	
`GEAR AUX POSITION`	Percent auxiliary gear extended.	*Percent Over 100*	
`GEAR AUX STEER ANGLE`	Aux wheel angle, negative to the left, positive to the right. The aux wheel is the fourth set of landing gear, sometimes used on helicopters.	Radians	
`GEAR AUX STEER ANGLE PCT`	Aux steer angle as a percentage.	*Percent Over 100*	
`GEAR CENTER POSITION`	Percent center gear extended.	*Percent Over 100*	
`GEAR CENTER STEER ANGLE`	Center wheel angle, negative to the left, positive to the right.	Radians	

	***NOTE**: This is available in multiplayer to all **near** aircraft. See here for more information: Note On SimVars In Multiplayer.*		
GEAR CENTER STEER ANGLE PCT	Center steer angle as a percentage.	*Percent Over 100*	
GEAR DAMAGE BY SPEED	True if gear has been damaged by excessive speed.	Bool	
GEAR EMERGENCY HANDLE POSITION	True if gear emergency handle applied.	Bool	
GEAR HANDLE POSITION	The gear handle position, where 0 means the handle is retracted and 1 is the handle fully applied.	*Percent Over 100*	
GEAR HYDRAULIC PRESSURE	Gear hydraulic pressure.	Pound force per square foot (*psf*)	
GEAR IS ON GROUND:index	True if the gear is on the ground.	Bool	
GEAR IS SKIDDING:index	True if the gear is skidding.	Bool	
GEAR LEFT POSITION	Percent left gear extended.	*Percent Over 100*	
GEAR LEFT STEER ANGLE	Left wheel angle, negative to the left, positive to the right. ***NOTE**: This is available in multiplayer to all **near** aircraft. See here for more*	Radians	

	information: Note On SimVars In Multiplayer.		
GEAR LEFT STEER ANGLE PCT	Left steer angle as a percentage.	*Percent Over 100*	
GEAR POSITION:index	Position of landing gear. ***NOTE**: This is available in multiplayer to all **near** aircraft. See here for more information: Note On SimVars In Multiplayer.*	Enum: 0 = unknown 1 = up 2 = down	
GEAR RIGHT POSITION	Percent right gear extended.	*Percent Over 100*	
GEAR RIGHT STEER ANGLE	Right wheel angle, negative to the left, positive to the right. ***NOTE**: This is available in multiplayer to all **near** aircraft. See here for more information: Note On SimVars In Multiplayer.*	Radians	
GEAR RIGHT STEER ANGLE PCT	Right steer angle as a percentage.	*Percent Over 100*	
GEAR SKIDDING FACTOR	The gear skidding factor, expressed as a value between 0 and 1.	*Percent Over 100*	
GEAR SPEED EXCEEDED	True if safe speed limit for gear exceeded.	Bool	

`GEAR STEER ANGLE:index`	Alternative method of getting the steer angle. ***NOTE**: This is available in multiplayer to all **near** aircraft. See here for more information: Note On SimVars In Multiplayer.*	Radians	
`GEAR STEER ANGLE PCT:index`	Alternative method of getting steer angle as a percentage.	*Percent Over 100*	
`GEAR TAIL POSITION` ***Deprecated***	Percent tail gear extended. ***NOTE**: This is a **deprecated** legacy SimVar and should not be used, as it will always return 0.*	*Percent Over 100*	
`GEAR TOTAL PCT EXTENDED`	Percent total gear extended.	Percent	
`GEAR WARNING:index`	Gear warnings.	Enum: 0 = None 1 = Gear Up 2 = Amphibious Gear Up 3 = Amphibious Gear Down 4 = On Ground Handle Up	
`GEAR WATER DEPTH`	The depth of the gear in the water.	Centimeters	

IS GEAR FLOATS	True if landing gear are floats	Bool	
IS GEAR RETRACTABLE	True if gear can be retracted	Bool	
IS GEAR SKIDS	True if landing gear is skids	Bool	
IS GEAR SKIS	True if landing gear is skis	Bool	
IS GEAR WHEELS	True if landing gear is wheels	Bool	
LEFT WHEEL ROTATION ANGLE	Left wheel rotation angle (rotation around the axis for the wheel).	Radians	
LEFT WHEEL RPM	Left landing gear rpm	*RPM*	
NOSEWHEEL LOCK ON	True if the nosewheel lock is engaged. This can be set using the NosewheelLock parameter.	Bool	
NOSEWHEEL MAX STEERING ANGLE	Can be used to get or set the maximum permitted steering angle for the nose wheel of the aircraft.	Radians	
RETRACT FLOAT SWITCH	True if retract float switch on	Enum: -1: Retracted 0: Neutral 1: Extended	
RETRACT LEFT FLOAT EXTENDED	If aircraft has retractable floats.	Percent (0 is fully retracted, 100 is fully extended)	

`RETRACT RIGHT FLOAT EXTENDED`	If aircraft has retractable floats.	Percent (0 is fully retracted, 100 is fully extended)	
`RIGHT WHEEL ROTATION ANGLE`	Right wheel rotation angle (rotation around the axis for the wheel).	Radians	
`RIGHT WHEEL RPM`	Right landing gear rpm.	*RPM*	
`STEER INPUT CONTROL`	Position of steering tiller.	*Percent Over 100*	
`TAILWHEEL LOCK ON`	True if tailwheel lock applied. This can be set using the `TailwheelLock` parameter.	Bool	
`WATER LEFT RUDDER EXTENDED`	Percent extended.	Percent	
`WATER LEFT RUDDER STEER ANGLE`	Water left rudder angle, negative to the left, positive to the right.	*Percent Over 100*	
`WATER LEFT RUDDER STEER ANGLE PCT`	Water left rudder angle as a percentage.	*Percent Over 100*	
`WATER RIGHT RUDDER EXTENDED`	Percent extended.	Percent	
`WATER RIGHT RUDDER STEER ANGLE`	Water right rudder angle, negative to the left, positive to the right.	*Percent Over 100*	
`WATER RIGHT RUDDER STEER ANGLE PCT`	Water right rudder as a percentage.	*Percent Over 100*	