

Groups/STANDARD MAPPING/ENGINE SPEED LIMITER

Maximum Rev Limit f(ECT)

This map is used to limit the engine speed as the engine coolant warms up and also if it gets too hot. The map "Maximum Rev Limit f(EOT)" is also read and the lowest rev limit taken.
 The current rev limit value can be viewed as "activeRevLimit" on the dashboard.

This is 250 rpm above the simulator programming at 6500 rpm.

Matrix: Maximum Rev Limit f(ECT) (rpm)

ECT (°C)	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	100	110	120	130
	6750	6750	6750	6750	6750	6750	6750	6750	6750	6750	6750	6750	6750	6750	6750	6750	6750

Maximum Rev Limit f(EOT)

This map is used to limit the engine speed as the engine oil warms up and also if it gets too hot. The map "Maximum Rev Limit f(ECT)" is also read and the lower rev limit taken.
 The current rev limit value can be viewed as "activeRevLimit" on the dashboard.

Matrix: Maximum Rev Limit f(EOT) (rpm)

EOT (°C)	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	100	110	120	130
	6750	6750	6750	6750	6750	6750	6750	6750	6750	6750	6750	6750	6750	6750	6750	6750	6750

Rev Limit Engine Speed Source

To determine if a soft cut is required, the engine speed is compared against the rev limit. One of three engine speeds can be chosen:

- F_ENGINE_SPEED - Filtered engine speed.
- ENGINE_SPEED - The standard engine speed shown as "RPM" on the dashboard.
- CYL_ENGINE_SPEED - Engine Speed calculated over a single cylinders angle updated every 30 deg.
- CYL_ENGINE_SPEED_TDC - Engine Speed calculated over a single cylinders angle updated every cylinder TDC.

Scalar: Rev Limit Engine Speed Source

Rev Limit Engine Speed Source	ENGINE_SPEED
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Rev Limit Torque Reduction Per Gear (%)

This map is used to set the severity of the limit used in each gear when the engine speed exceeds the rev limit by an amount.

The rpm is not interpolated between the rpm points they are used a rpm bands.

The rpm band size can be configured by changing the "Rev Limit rpm Cell Width"

If the gear position is not supplied by either a sensor or a CAN stream, the strategy defaults to using the value entered into the NEUTRAL gear position always

A value of 0 gives no limit.
A value of 100 gives a complete cut
Values between 1-100 give a limit varying in severity.

Matrix: Rev Limit Torque Reduction Per Gear (%)

RPM_Over_Rev_Limit (rpm)

gear_pos	0	20	40	60	80	100	120	140	160	180	200
REVERSE	35.0	40.5	46.0	51.5	57.0	62.5	68.0	73.5	79.0	84.5	90.0
NEUTRAL	35.0	40.5	46.0	51.5	57.0	62.5	68.0	73.5	79.0	84.5	90.0
FIRST	45.0	49.5	54.0	58.5	63.0	67.5	72.0	76.5	81.0	85.5	90.0
SECOND	41.0	46.0	51.0	55.5	60.5	65.5	70.5	75.5	80.0	85.0	90.0
THIRD	37.0	40.5	43.5	46.5	50.0	53.5	56.5	60.0	63.0	66.5	69.5
FOURTH	33.0	34.5	36.5	38.0	39.5	41.0	43.0	44.5	46.0	47.5	49.5
FIFTH	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0	29.0
SIXTH	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
SEVENTH	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
EIGHTH	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0

Rev Limit Rpm Cell Width

Scalar: Rev Limit Rpm Cell Width

Rev Limit Rpm Cell Width 20

Rev Cut Spike Window

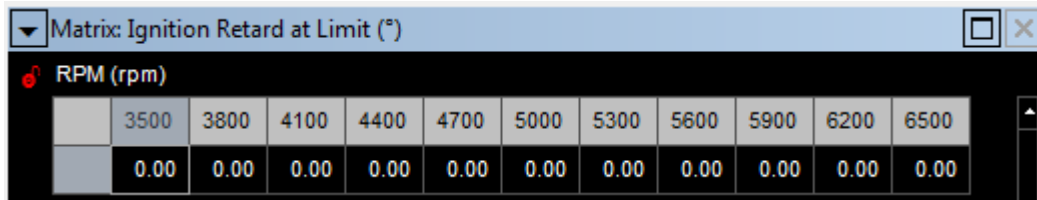
Provides a small window over the rev cut. This is to allow very brief engine speed spikes (up to the rpm given in this map) over the rev cut to be filtered out.

Scalar: Rev Cut Spike Window...

Rev Cut Spike Window (rpm) 0

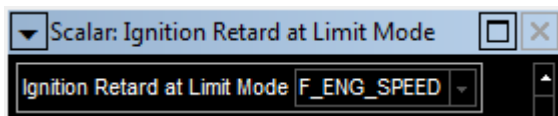
Groups/STANDARD MAPPING/ENGINE SPEED LIMITER/IGNITION RETARD AT LIMIT

Ignition Retard at Limit



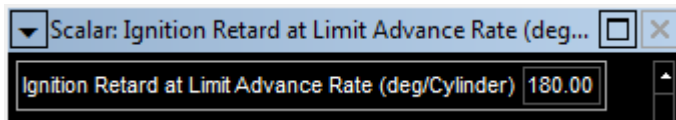
RPM (rpm)	3500	3800	4100	4400	4700	5000	5300	5600	5900	6200	6500
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Ignition Retard at Limit Mode

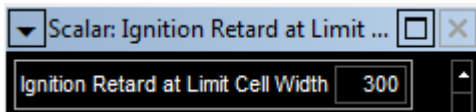


Ignition Retard at Advance Limit Rate

If ignition retard is used during a gear cut, the rate at which the ignition returns to normal is limited by the "Gear Upshift Ignition Advance Rate". This can be used "soften" the reintroduction of the engine power.



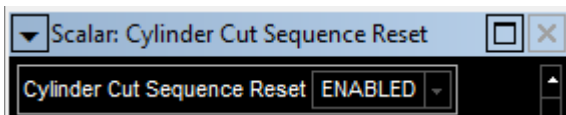
Ignition Retard at Limit Cell Width



Groups/STANDARD MAPPING/ENGINE SPEED LIMITER/CYLINDER CUT PATTERN

Cylinder Cut Sequence Reset

If ENABLED, the built-in cylinder cut table will be reset back to the beginning whenever the required torque reduction falls back to zero.
This ensures that a cut will happen on the next cylinder event if a torque reduction is required.



Groups/STANDARD MAPPING/ENGINE SPEED LIMITER/HARD REV CUT

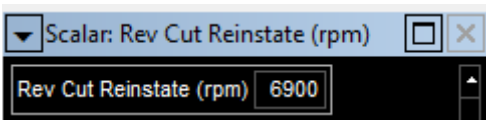
Rev Cut

When the engine speed exceeds this threshold a complete cylinder cut is applied. Once the rev cut has been initiated, normal operation will not resume until the engine speed has fallen below the "Rev Cut Reinststate"

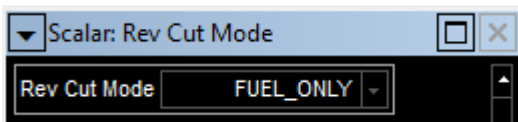


Rev Cut Reinststate

Once the rev cut has been initiated, normal operation will not resume until the engine speed has fallen below this threshold

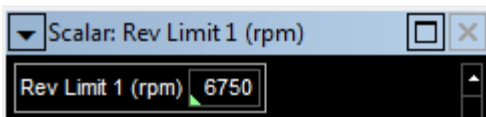


Rev Cut Mode



Groups/STANDARD MAPPING/ENGINE SPEED LIMITER/BASE CAL SOFT REV LIMITS

Rev Limits 1 to 4 all set at 6600



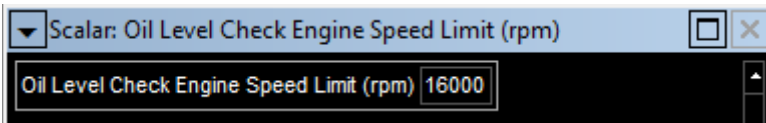
Groups/STANDARD MAPPING/ENGINE SPEED LIMITER/OIL LEVEL CHECK REV LIMIT

Oil Level Check Engine Speed Limit

This rev limit is used for dry sump engines that require a set engine speed to dip the oil it is activated by

1. car being in neutral gear
2. push to pass button being active
3. pit lane speed limit button being active

Note: in stage 3 if using the pit lane speed latch feature it will need to be off before stage 2 this should be used as a method for the mechanics to trigger this lower engine rpm limit



Oil Level Check Rev Limit Torque Reduction

The "Rev Limit Torque Reduction" is used to set the severity of the limit used when the engine speed exceeds the oil check rev limit.

A value of 0 gives no limit.
A value of 100 gives a complete cut
Values between 1-100 give a limit varying in severity.

