Genie®
A TEREX BRAND

Service Manual Supplement

Telematics

Part No. 1274265GT
Rev A2
January 2018

Introduction

Important

The purpose of this document is to provide device connections for OEM Telematics providers.

Read, understand and obey the safety rules and operating instructions.

This manual provides detailed information for the machine owner and Telematics provider.

Compliance

Wireless Certifications

☑ Telematic device(s) should comply with specific wireless carrier certifications where applicable and comply with the following:

- N. America – PTCRB, FCC/IC
- Europe – CE, RED 2014/53/EU

☑ Owners must verify the RF safety compliance in accordance with the Telematics device certifications.

Technical Publications

Genie has endeavored to deliver the highest degree of accuracy possible. However, continuous improvement of our products is a Genie policy. Therefore, product specifications are subject to change without notice.

Readers are encouraged to notify Genie of errors and send in suggestions for improvement. All communications will be carefully considered for future printings of this and all other manuals.

Contact Us:

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1274265GT Rev A, May 2016

First Edition, First Printing

Revision History

Revision	Date	Section	Procedure / Page / Description
A	5/2016		Initial Release
A1	11/2016	Software Specifications	Pages 7, 8, 11, and 12.
A2	1/2018	Software Specifications	Remove Telematics Software Specifications Section

Safety Rules

General Safety

This machine is equipped with a connection for a telematics device. If a telematics device has been installed, additional information may need to be communicated to those that operate or service this machine and possibly the general public. Communications that need to be considered include:

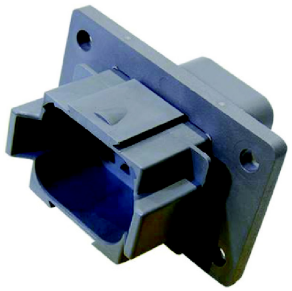
- A hazard decal warning of the specific hazards related to the radio frequency exposure and the required steps to take so as to avoid them. This could apply to the operator, service personnel or even the general public.
- Additional operator and service training regarding the potential hazard.

If a telematics device has been installed, before placing the machine into service, it is the owners' responsibility to clearly understand the installed telematics device as it relates to its performance and market compliance and to ensure that the necessary steps have been taken to inform and train operators, service personnel and the general public (when applicable) regarding the potential hazards related to radio frequency exposure and how to avoid them.

Telematics I/O Specifications

Telematics Ready Connector

The telematics connector installed on all Genie machines is an 8 pin Deutsch DT series panel mount receptacle. Depending on the equipment it may be an in-line receptacle.



Telematics Device Connector

OEM suppliers can connect their telematic devices by equipping with a 8 pin Deutsch plug.

Telematics Ready Connector Components

Genie Telematics Ready Connector parts and tools are available through Genie Parts Sales.

Website: http://www.genielift.com

Phone: (877) 367-5606

Email: AWP.PartsSalesPO@terex.com

Genie part number	Description
61794	Connector, Receptacle, Panel Mount, 8 pin, 14-18 GA
60433	Connector, Receptacle, In Line, 8 pin, 14-18 GA
60447	Terminal Pin, 16-18 GA (used with p/n 87755 and 119069)
73713	Lock, Receptacle, 8 pin (used with p/n 87755 and 119069)
73714	Connector, Plug, 8-pin, 14-18 GA
87755	Terminal Socket, 16-18 GA (used with p/n 119060)
119060	Lock, Plug, 8 pin, 14-18 GA
119069	Crimper, Deutsch, Light Duty

Telematics I/O Specifications

Telematics Ready Connector Function Pin Out

Refer to the TRC I/O map to capture machine function states including the remote disable feature.

Unavailable I/O

Some Genie models do not support all of the discrete outputs. If a particular circuit feature is not available it shall be left unconnected. There shall be no substitution or other optional wiring.

Refer to the appropriate *TRC Function Pin Out* for your model.

Basic TRC Connector I/O Map

Connector Pin-out	Circuit Type	Circuit Properties	Genie Machine Function(s)	Telematics Use Case
1	System Power	8-32 VDC 5 Amp Max. allowed draw	Battery Positive – constant power	Supply power to device
2	System Ground	0 VDC	Battery Negative	Device GND
3	Digital Output 1	12 or 24VDC	Engine Run, Hour meter, Motor Controller Enable 12/24V = active, 0V = inactive	Monitor Engine Hours
4	Digital Output 2	12 or 24 VDC	Key Switch Activation, Platform and Ground 12/24V = active, 0V = inactive	Monitor machine utilization
5	Digital Output 3	12 or 24 VDC	Platform Foot switch 12/24V = active, 0V = inactive	Monitor machine utilization
6	Digital Input 1	12 or 24 VDC	Remote Machine Disable Configurable Active High or Active Low control via wiring at the Disable Relay	Remote Disable Engine Start
7*	Databus H	CAN HIGH	Genie Databus	J1939 Engine Messages, Receive Proprietary Genie Telematics Message
8*	Databus L	CAN LOW	Genie Databus	J1939 Engine Messages, Receive Proprietary Genie Telematics Message

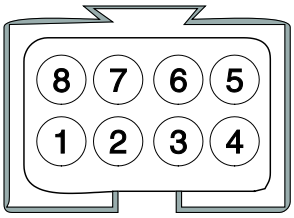
TRC Function Pin Out

GR, GRC, QS and Slab Scissor Models

This Legend Only Applies to the Following Genie Models

GS-1530	GS-1532	GS-2046	GR-12	QS-12	Z-33/18
GS-1930	GS-1932	GS-2646	GR-15	QS-15	Z-40/23
	GS-2032	GS-2646 AV	GR-20	QS-20	
	GS-2632	GS-3246	GRC-12		
	GS-3232	GS-4047			

Genie installed Telematics connector is wired with an Active High digital input.



Pin	Circuit Type	Circuit Properties	Genie Machine Function(s)	Telematics Use Case
1	System Power	24 VDC 5 Amp Max. allowed draw	Battery Positive – constant power	Supply power to device
2	System Ground	0 VDC	Battery Negative	Device Ground
3	Digital Output 1	24 VDC	Hour Meter Enable 24V = enabled, 0V = disabled	Monitor Machine Run Hours
4	No Connection		No Connection	
5	No Connection		No Connection	
6	No Connection		No Connection	
7*	Databus H	CAN HIGH	Genie Databus	Receive Proprietary Genie Telematics Message
8*	Databus L	CAN LOW	Genie Databus	Receive Proprietary Genie Telematics Message

* Genie proprietary databus support

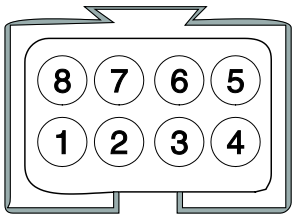
TRC Function Pin Out

GS-2669, GS-3369 and GS-4069 DC and Bi-Energy Models

This Legend Only Applies to the Following Genie Models

GS-2669 DC	GS-2669 BE
GS-3369 DC	GS-3369 BE
GS-4069 DC	GS-4069 BE

Genie installed Telematics connector is wired with an Active High digital input.



Pin	Circuit Type	Circuit Properties	Genie Machine Function(s)	Telematics Use Case
1	System Power	24 VDC 5 Amp Max. allowed draw	Battery Positive – constant power	Supply power to device
2	System Ground	0 VDC	Battery Negative	Device Ground
3	No Connection		No Connection	
4	No Connection		No Connection	
5	No Connection		No Connection	
6	No Connection		No Connection	
7*	Databus H	CAN HIGH	Genie Databus	Receive Proprietary Genie Telematics Message
8*	Databus L	CAN LOW	Genie Databus	Receive Proprietary Genie Telematics Message

* Genie proprietary databus support

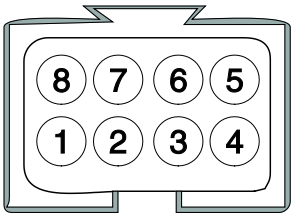
TRC Function Pin Out

GS-69 RT, GS-84 RT and GS-90 RT Models

This Legend Only Applies to the Following Genie Models

GS-2669 RT	GS-3384 RT	GS-3390 RT
GS-3369 RT		GS-4390 RT
GS-4069 RT		GS-5390 RT

Genie installed Telematics connector is wired with an Active High digital input.



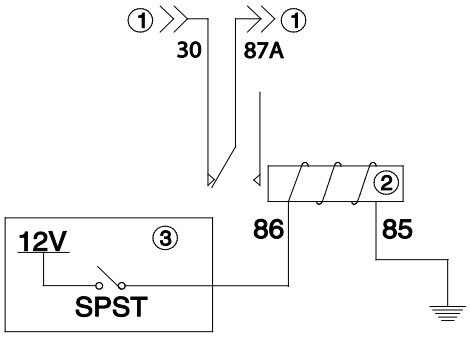
Pin	Circuit Type	Circuit Properties	Genie Machine Function(s)	Telematics Use Case
1	System Power	12 VDC 5 Amp Max. allowed draw	Battery Positive – constant power	Supply power to device
2	System Ground	0 VDC	Battery Negative	Device Ground
3	Digital Output 1	12 VDC	Engine Run Hour Meter 12V = engine run, 0V = engine off	Monitor Engine Hours
4	Digital Output 2	12 VDC	Key Switch 12V = Key SW On, 0V = Key SW Off	
5	No Connection		No Connection	Monitor machine utilization
6	Digital Input 1	12 VDC (standard) or ground (optional)	Remote Disable Engine Start	Remote Engine Shutdown
7*	Databus H	CAN HIGH	Genie Databus	J1939 engine message
8*	Databus L	CAN LOW	Genie Databus	J1939 engine message

* Tier IV engine models only

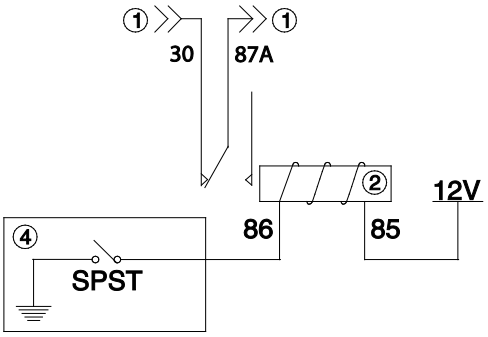
TRC Function Pin Out

Remote Disable Engine Start Relay Configuration

Telematics Active High - Schematic
(standard wiring)



Telematics Active Low - Schematic
(optional wiring)



1 Ignition Start Input
2 Relay
3 Telematics with Active High input
4 Telematics with Active Low input

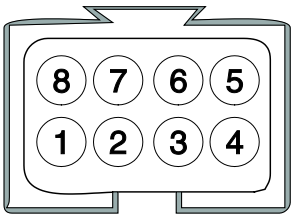
TRC Function Pin Out

Z-30N, Z-34 DC and Z-45 DC Models

This Legend Only Applies to the Following Genie Models

Z-30/20N	Z-45/25 DC
Z-30/20N RJ	Z-45/25J DC
Z-34/22 DC	

Genie installed Telematics connector is wired with an Active High digital input.

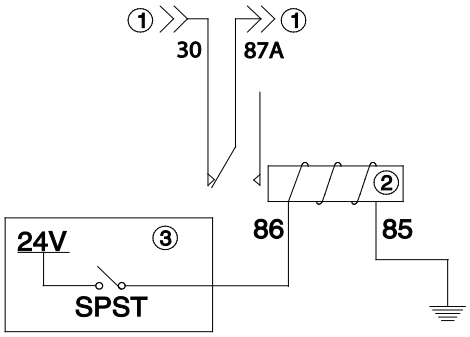


Pin	Circuit Type	Circuit Properties	Genie Machine Function(s)	Telematics Use Case
1	System Power	24 VDC 5 Amp Max. allowed draw	Battery Positive – constant power	Supply power to device
2	System Ground	0 VDC	Battery Negative	Device Ground
3	Digital Output 1	24 VDC	Hour Meter 24V = active, 0V = inactive	Monitor Machine Run Hours
4	Digital Output 2	24 VDC	Key Switch Activation 24V = Key SW On, 0V = Key SW Off	Monitor Machine Utilization
5	Digital Output 3	24 VDC	Foot Switch 24V = active, 0V = inactive	Monitor Machine Utilization
6	Digital Input 1	24 VDC (standard) or Ground (optional)	Remote Machine Disable	Remote Motor Controller Shutdown
7	No Connection		No Connection	
8	No Connection		No Connection	

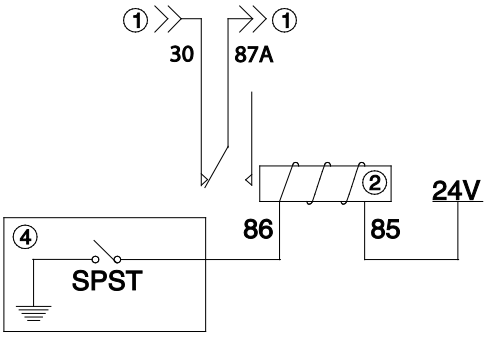
TRC Function Pin Out

Remote Disable relay Configuration

Telematics Active High - Schematic
(standard wiring)



Telematics Active Low - Schematic
(optional wiring)



1 Ignition Start Input
2 Relay
3 Telematics with Active High input
4 Telematics with Active Low input

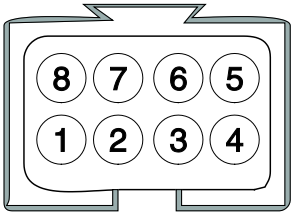
TRC Function Pin Out

S and Z Booms, IC and Bi-Energy Models

This Legend Only Applies to the Following Genie Models

S-40	S-60	S-80	Z-34/22 (BE)
S-40 TRAX	S-60 X	S-80 X	Z-34/22 (IC)
S-45	S-60 XC	S-85	Z-45/25 (BE)
S-45 TRAX	S-60 TRAX		Z-45/25 (IC)
	S-65		Z-45/25J (IC)
	S-65 TRAX		Z-51/30
			Z-62/40

Genie installed Telematics connector is wired with an Active High digital input.



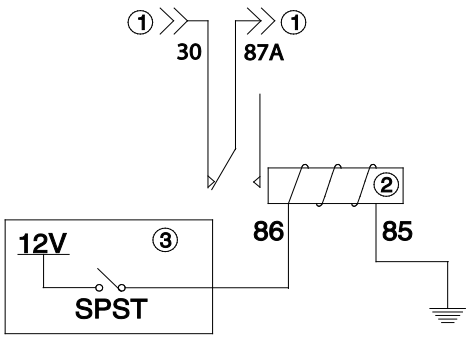
Pin	Circuit Type	Circuit Properties	Genie Machine Function(s)	Telematics Use Case
1	System Power	12 VDC 5 Amp Max. allowed draw	Battery Positive – constant power	Supply power to device
2	System Ground	0 VDC	Battery Negative	Device Ground
3	Digital Output 1	12 VDC	Engine Run Hour Meter 12V = engine run, 0V = engine off	Monitor Engine Hours
4	Digital Output 2	12 VDC	Key Switch Activation 12V = Key SW On, 0V = Key SW Off	Monitor Machine Utilization
5	Digital Output 3	12 VDC	Foot Switch 12V = active, 0V = inactive	Monitor Machine Utilization
6	Digital Input 1	12 VDC (standard) or ground (optional)	Remote Disable Engine Start	Remotely Prevent Engine Start
7 *	Databus H	CAN HIGH	Genie Databus	J1939 Engine Messages
8 *	Databus L	CAN LOW	Genie Databus	J1939 Engine Messages

* ALC-500 Tier IV engine models only

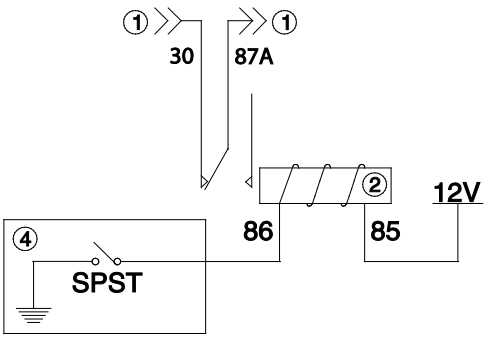
TRC Function Pin Out

Remote Disable Engine Start Relay Configuration

Telematics Active High - Schematic
(standard wiring)



Telematics Active Low - Schematic
(optional wiring)



1 Ignition Start Input
2 Relay
3 Telematics with Active High input
4 Telematics with Active Low input

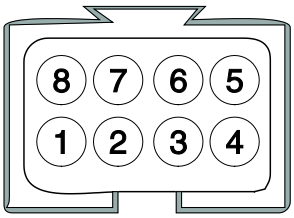
TRC Function Pin Out

S and Z Booms, ALC-1000 Models

This Legend Only Applies to the Following Genie Models

S-100	S-100 HD	Z-80/60
S-105	S-120 HD	ZX-135/70
S-120	SX-150	
S-125	SX-180	

Genie installed Telematics connector is wired with an Active High digital input.



Pin	Circuit Type	Circuit Properties	Genie Machine Function(s)	Telematics Use Case
1	System Power	12 VDC 5 Amp Max. allowed draw	Battery Positive – constant power	Supply power to device
2	System Ground	0 VDC	Battery Negative	Device Ground
3	Digital Output 1	12 VDC	Engine Run Hour Meter 12V = engine run, 0V = engine off	Monitor Engine Hours
4	Digital Output 2	12 VDC	Key Switch Activation 12V = Key SW On, 0V = Key SW Off	Monitor Machine Utilization
5	Digital Output 3	12 VDC	Foot Switch 12V = active, 0V = inactive	Monitor Machine Utilization
6	Digital Input 1	12 VDC (standard) or ground (optional)	Remote Disable Engine Start	Remotely Prevent Engine Start
7 *	Databus H	CAN HIGH	Genie Databus	J1939 Engine Messages, Receive Proprietary Genie Telematics Message
8 *	Databus L	CAN LOW	Genie Databus	J1939 Engine Messages, Receive Proprietary Genie Telematics Message

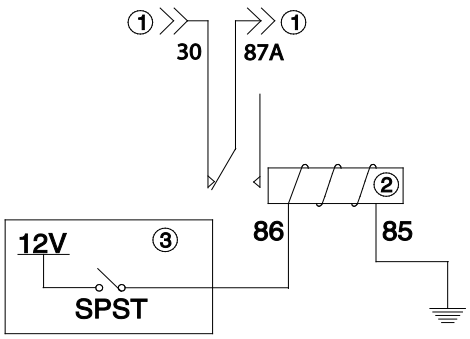
* Tier IV engine models only

* Genie proprietary databus support

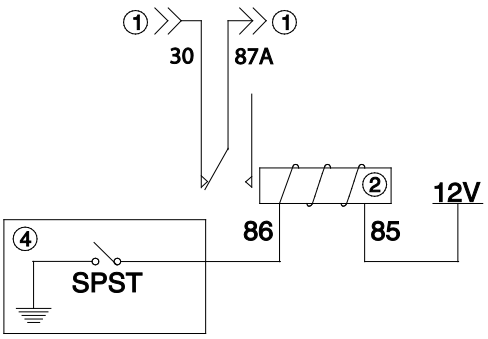
TRC Function Pin Out

Remote Disable Engine Start Relay Configuration

Telematics Active High - Schematic
(standard wiring)



Telematics Active Low - Schematic
(optional wiring)



1 Ignition Start Input
2 Relay
3 Telematics with Active High input
4 Telematics with Active Low input

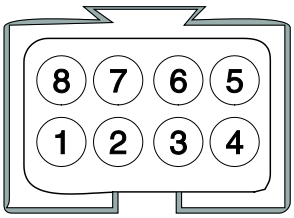
TRC Function Pin Out

GTH Models

This Legend Only Applies to the Following Genie Models

GTH-636	GTH-1256
GTH-844	GTH-1544
GTH-1056	GTH-5519

Genie installed Telematics connector is wired with an Active High digital input.



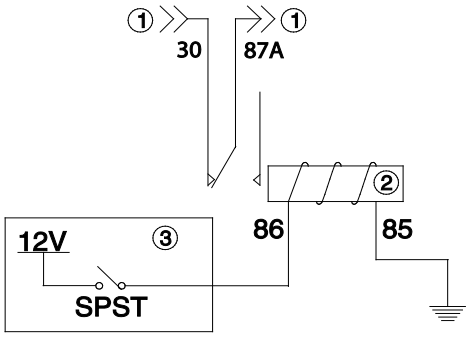
Pin	Circuit Type	Circuit Properties	Genie Machine Function(s)	Telematics Use Case
1	System Power	12 VDC 5 Amp Max. allowed draw	Battery Positive – constant power	Supply power to device
2	System Ground	0 VDC	Battery Negative	Device Ground
3	Digital Output 1	12 VDC	Engine Run Hour Meter 12V = engine run, 0V = engine off	Monitor Engine Hours
4*	Digital Output 2	12 VDC	Boom Angle Status 12V = boom >55°, 0V <55°	Monitor Machine Utilization
5	Digital Output 3	12 VDC	Parking Brake 12V = active, 0V = inactive	Monitor Machine Utilization
6	Digital Input 1	12 VDC (standard) or Ground (optional)	Remote Disable Engine Start	Remotely Prevent Engine Start
7	CAN HIGH	J1939	Databus HIGH J1939	Receive J1939 Engine Data
8	CAN LOW	J1939	Databus LOW J1939	Receive J1939 Engine Data

* Not available on GTH-636

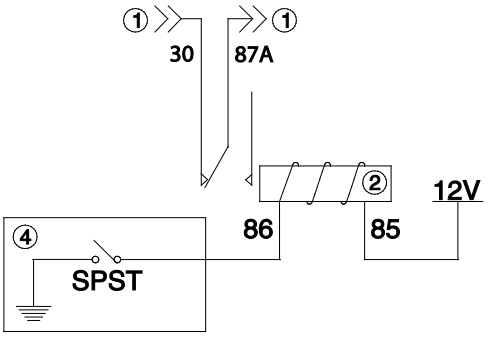
TRC Function Pin Out

Remote Disable Engine Start Relay Configuration

Telematics Active High - Schematic
(standard wiring)



Telematics Active Low - Schematic
(optional wiring)



1 Ignition Start Input
2 Relay
3 Telematics with Active High input
4 Telematics with Active Low input

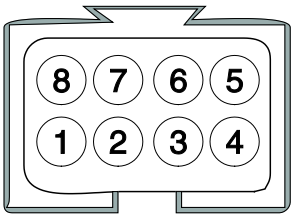
TRC Function Pin Out

Light Tower Models

This Legend Only Applies to the Following Genie Models

AL4	AL5	AL5HT	RL4

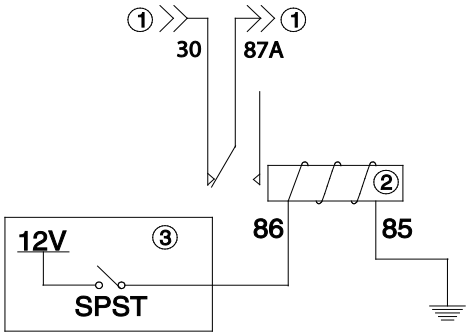
Genie installed Telematics connector is wired with an Active High digital input.



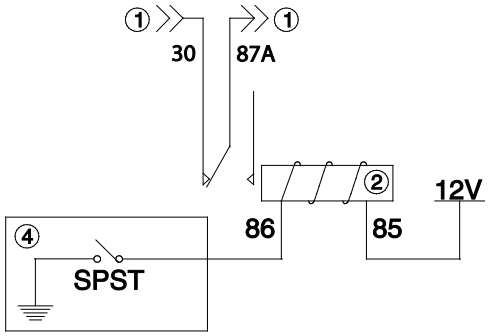
Pin	Circuit Type	Circuit Properties	Genie Machine Function(s)	Telematics Use Case
1	System Power	12 VDC 5 Amp Max. allowed draw	Battery Positive – constant power	Supply power to device
2	System Ground	0 VDC	Battery Negative	Device Ground
3	Digital Output 1	12 VDC	Hour Meter Enable 12V = enabled, 0V = disabled	Monitor Machine Run Hours
4	No Connection		No Connection	
5	No Connection		No Connection	
6	Digital Input 1	12 VDC	Remote Light Enable	Remotely turn on lights
7	No Connection		No Connection	
8	No Connection		No Connection	

Remote Disable Engine Start Relay Configuration

Telematics Active High - Schematic
(standard wiring)



Telematics Active Low - Schematic
(optional wiring)



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