



Service Manual

**Models: S, SN, BF, RB, C, CB, V
A, B, N & R**



How to use this manual

This manual is divided into general sections which are identified by a 2 letter designation. Find the section you want in the guide on this page, and then turn to the Table of Contents on page 1 of that section.

Each section begins with general information for servicing the assemblies listed in that section. The rest of the section outlines detailed servicing procedures and are accompanied by photographs & diagrams for easier use.

Service Guide

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SECTION GI

General Information

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Foreward

ODG has prepared this Argo Service Manual to assist qualified technicians of authorized ARGO dealers and distributors in providing fast and effective service and maintenance of the following ARGO vehicles produced from 1992.

First CONQUEST from CB10847	August 16, 1993
First RESPONSE from RB12075	June 23, 1995
First BIGFOOT from BF9212	July 2, 1997
First 6x6 CONQUEST from V6016200000C12747	October 17, 2001
First VANGUARD 2 from SN7841	March 7, 1995
First VANGUARD from S6999	February 6, 1992
First AVENGER from 2DGSS0BT54NV20905	January 29, 2004

Proper and regular maintenance is essential to prolonging the life of the ARGO and will result in satisfied ARGO customers. Please refer to this Service Manual before performing any servicing procedure on any of the above vehicles.

This ARGO Service Manual provides information on maintenance procedures, service operations, and on the removal, disassembly, reassembly, and installation of components, parts, and assemblies. Illustrated Parts Manuals on vehicles manufactured since 1977 are available on a separate CD (Part # 673-05CD), available from your distributor or local ARGO dealer.

All information contained in this service manual is based on the product specification records of Ontario Drive & Gear Ltd. If the ARGO that you are servicing differs from the specifications contained in this manual, contact Ontario Drive & Gear for information. ODG reserves the right to alter servicing procedures at any time without obligation or prior notification.

Liability for any personal injury, or damage to property or an ARGO vehicle which is occasioned by the use of this 673-04 Argo Service Manual, is in no way assumed by Ontario Drive & Gear Ltd.

ODG Dedicated to Quality & Performance

NOTE

Read your owner/operators manual *before* you operate your ARGO. It contains safe operating instructions and warns the user about potential hazards that can result in personal injury.

Warnings are identified in the text by the following symbol:



Warning text warns the user about potential hazards that can result in personal injury or death.

Cautions are identified in the text by the following symbol:



Caution text contains cautions that can prevent damage to the vehicle.

This manual is based on the latest product information available at the time of printing. Ontario Drive & Gear Limited reserves the right to make changes at any time and without obligation.

Reproduction of any part of this publication is prohibited without prior written permission.

Une version française du manuel d'opération est disponible sous le numéro suivant 671-04FR. Les plaquettes d'avertissement et d'instructions qui apparaissent sur l'Argo sont aussi disponibles en français sous le numéro suivant 126-73.

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673-25 Argo Service Video

Ontario Drive & Gear has produced a video which provides the Argo service technician with step-by-step instructions on how to perform service procedures to the vehicle. Everything from removal and replacement of brake pads to rebuilding the transmission. It's all there. Removal and replacement of engines is included, however, engine overhaul is not. A separate overhaul manual is available for each engine from your Argo dealer. Order the Service Video from your selling dealer or from Ontario Drive & Gear directly (have your VISA card information ready). Cost of the 4 hour video is \$33.00.

Available Service Manuals

Part number 670-00 ----- Service Manual for Models prior to 1977.

Part Number 673-00----- Service Manual for Models to 1986

Part Number 673-01----- Service Manual for 1987 Models

Part Number 673-02----- Service Manual Supplement for NKB Models (1988)

Part Number 673-04CD ----Service Manual for Models from 1992 - 2002

**Part Number 673-04-1-----Service Manual for Models from 1992 including 673-06
Avenger Service Manual Supplements**

Part Number 673-06 Avenger Service Manual Supplements

This edition of the ARGO Service Manual contains information and servicing procedures for models produced from 1992, when the 16H.P and then in 1995 the 18 H.P " V" Twin Briggs & Stratton Vanguard engines were introduced to our vehicle line up. Also covered, is the 8x8 Conquest model powered by the 20 H.P Kawasaki FD620D Liquid cooled engine which was introduced in 1993 & The Avenger Argo model, introduced in January of 2004. Although many parts and service procedures outlined in the 673-04 Service Manual also pertain to Avenger, additional supplement sections have been created in order to cover parts and procedures unique to Avenger (See supplement part number above). The service manuals **673-00**, **673-01** and **673-02** Supplement, can be used for Magnum models prior to 1995. Although the **673-02** supplement indicates coverage up until 1988 only for V888 & V688 models, the servicing procedures in both earlier manuals are still applicable to the Magnum models produced from 1988 to 1994. However, attention should be paid to the appropriate Magnum **parts manual** for these later years of vehicle production to identify any changes that may have been made to components until the Response was introduced in 1995. Refer to the Vehicle Parts Manual CD (Part # 673-05CD)

A MESSAGE FROM THE PEOPLE WHO BUILD THE ARGO

Ontario Drive & Gear Limited has been building ARGO vehicles since 1967. By listening carefully to our customers and responding to their needs, we have been constantly improving the ARGO and will continue to do so.



Argo Vehicle Capacity

Vehicle capacity includes occupants, cargo, fuel, and all accessories. Capacity for occupants and cargo is reduced by the weight of accessories as shown in the chart below.

Available vehicle capacity must be reduced if your vehicle is equipped with any accessories. Reduce the available capacity by the total weight of accessories fitted to your vehicle

<u>Accessory On Vehicle</u>	<u>Reduce By</u>			
	<u>On Land</u>		<u>On Water</u>	
Regular Tracks 6x6	135 lbs.	(60 kg)	85 lbs.	(40 kg)
Regular Tracks 8x8	175	(80)	110	(50)
Supertracks 6x6	145	(65)	90	(40)
Supertracks 8x8	210	(95)	135	(60)
Rubber Track Kit	240	(110)	(150)	(68)
Winch Kit	50	(23)	50	(23)
Brush Guard	11	(5)	11	(5)
Windshield	33	(15)	33	(15)
Roll Bar 6x6	50	(23)	50	(23)
ROPS 6x6	130	(60)	SEE WARNING	
ROPS 8x8	140	(64)	140	(64)
ROPS Avenger	155	(70)	155	(70)
Half Top	16	(7)	16	(7)
Full Top 8x8	27	(12)	27	(12)
Full Top 6x6	22	(10)	22	(10)
Snow Plow	190	(85)	SEE WARNING	
Dump Box	100	(45)	500	(225)
Rear Bench Seat	34	(15)	34	(15)

⚠ WARNING

Do NOT use an Argo on water when equipped with a snow plow. Do NOT use an Argo 6x6 in water when equipped with a ROPS. The increased weight of the snow plow out front or the top-heavy weight of the ROPS on the 6x6 will make the Argo unstable and could cause the vehicle to capsize, causing injury or drowning to the driver and passengers.



Model Identification & Description

List of Earlier Models

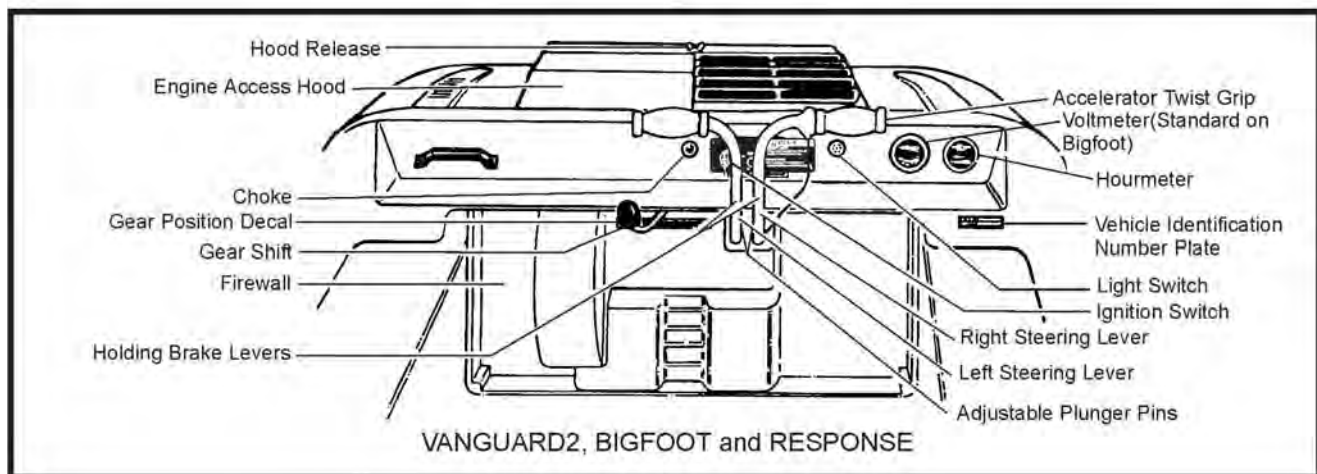
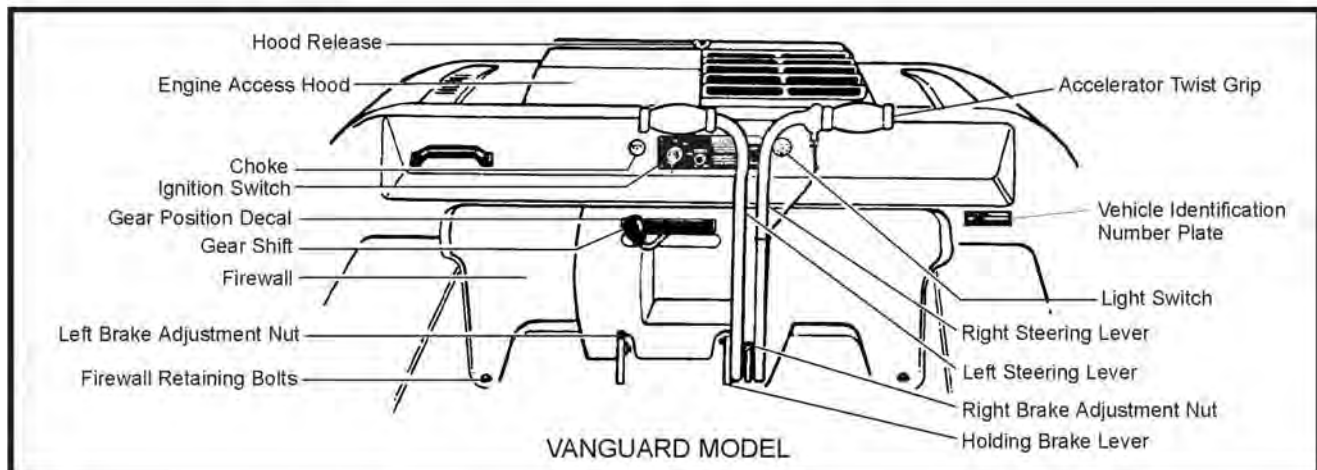
Tecumseh	V688-20	Conquest	V894-37
	V888-20	(Mid 1999)	V894-38
	V888-21		
Briggs& Stratton Twin	V888-22	Vanguard	V693-22
	V688-22		V693-36
	V891-22		V694-36
	V691-22		V697-51
	V892-22		V699-51
	V692-22		
Magnum	V888-23	Vanguard2	V696-55
	V688-23		V697-55
Magnum	V890-23		V699-55
	V690-23		
Magnum	V891-23	Bigfoot	V698-58
	V691-23		
Magnum	V891-27		
Magnum	V894-23		
	V894-27		
Response	V896-55		
Response	V896-65		
Conquest	- V899-37	- MU Transmission	
Conquest	- V899-38	- GU Transmission	
Conquest	- V899-37A	- Alternator, MU Transmission	
Conquest	- V899-45	- Alternator, Horn & Parking Brake, MU	
Conquest	- V899-46	- 22" Rawhide III Tires, MU	
Conquest	- V899-47	- 22" Rawhide III Tires, GU	
Response	- V899-64	- GU Transmission	

Model Identification & Description (continued)

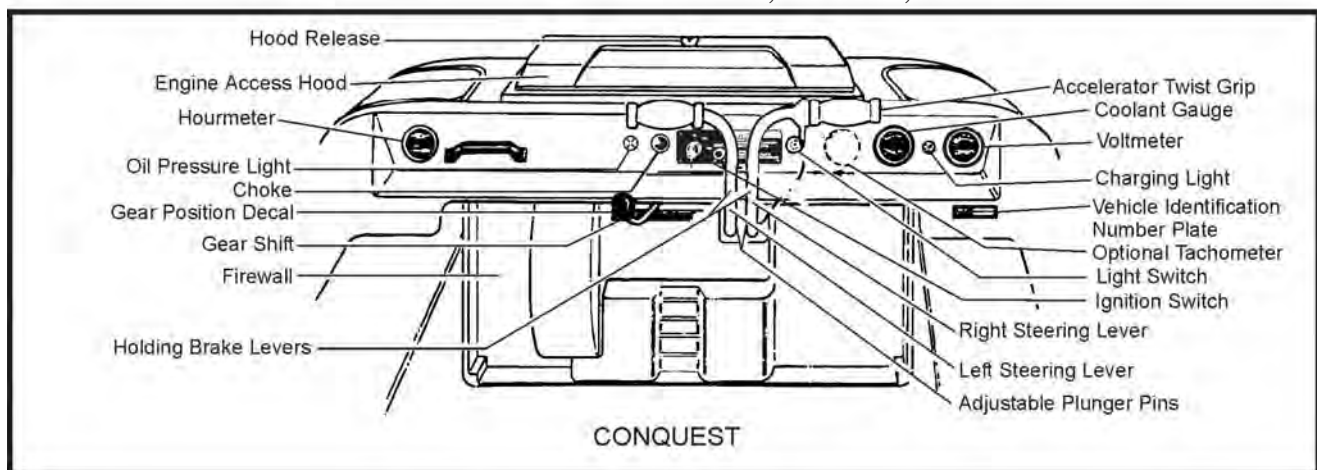
List of Earlier Models

Response	-	V899-65	- MU Transmission
Response	-	V899-65E	- Bearing Extensions, MU
Response	-	V899-66	- Skidplate, MU
Response	-	V899-67	- Horn & Parking Brake, MU
Response	-	V899-68	- 22" Rawhide III Tires, MU
Response	-	V899-69	- Skidplate & GU Transmission
Vanguard	-	V699-51	- HU Transmission
Vanguard 2	-	V699-55	- HU Transmission
Vanguard 2	-	V699-55E	- Bearing Extensions, HU
Vanguard 2	-	V699-56	- MU Transmission
Vanguard 2	-	V699-57	- Horn & Parking Brake, HU
Bigfoot	-	V698-58	- HU Transmission
Bigfoot	-	V698-59	- MU Transmission
Bigfoot	-	V698-60	- Horn & Parking Brake, HU
Bigfoot	-	V698-61	- Runamuck Tires, HU
Conquest 6x6	-	V601-62	- Rollbar, HU
Conquest 6x6	-	V601-63	- without Rollbar, HU
Conquest 6x6	-	V601-64	- Rollbar & MU Transmission

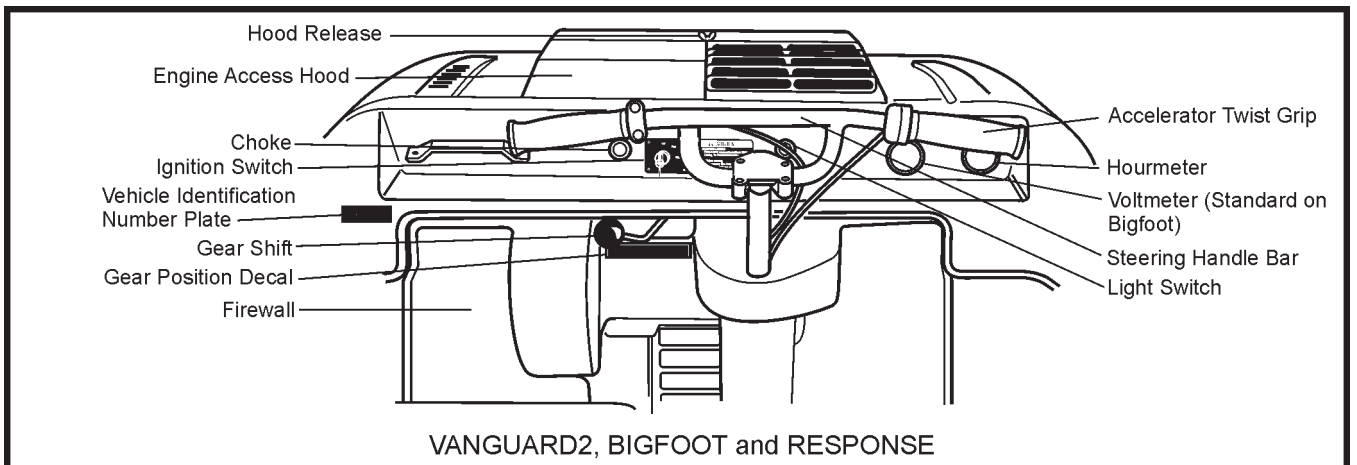
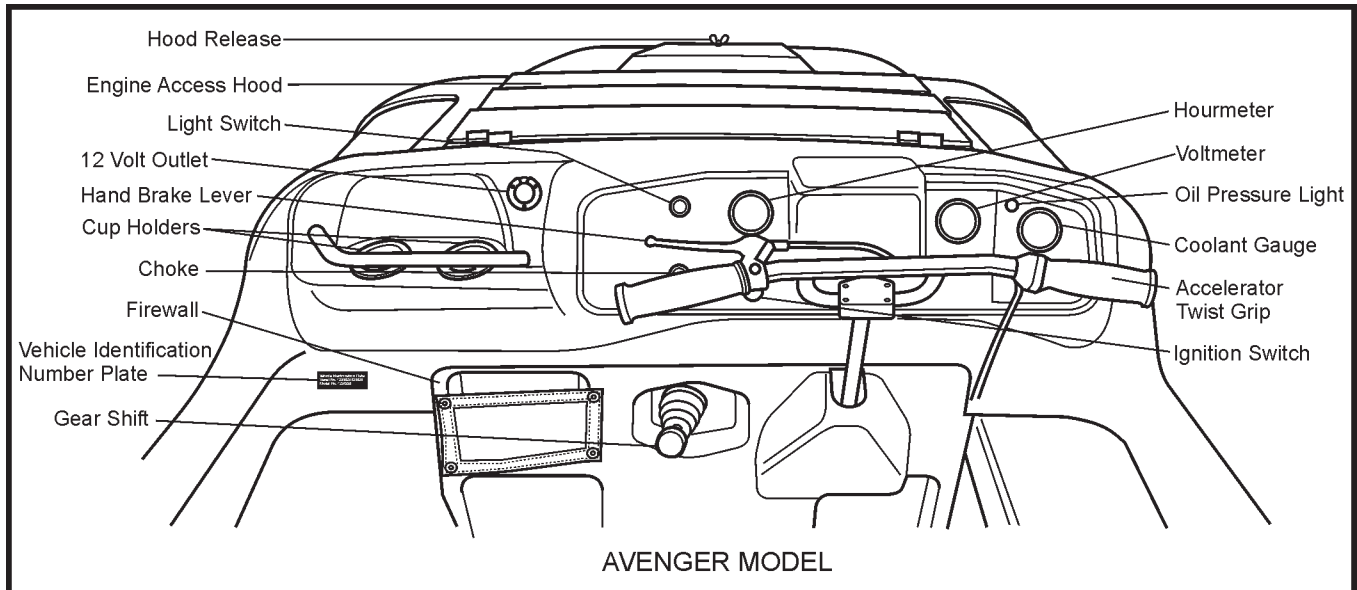
Identification and Location of Controls



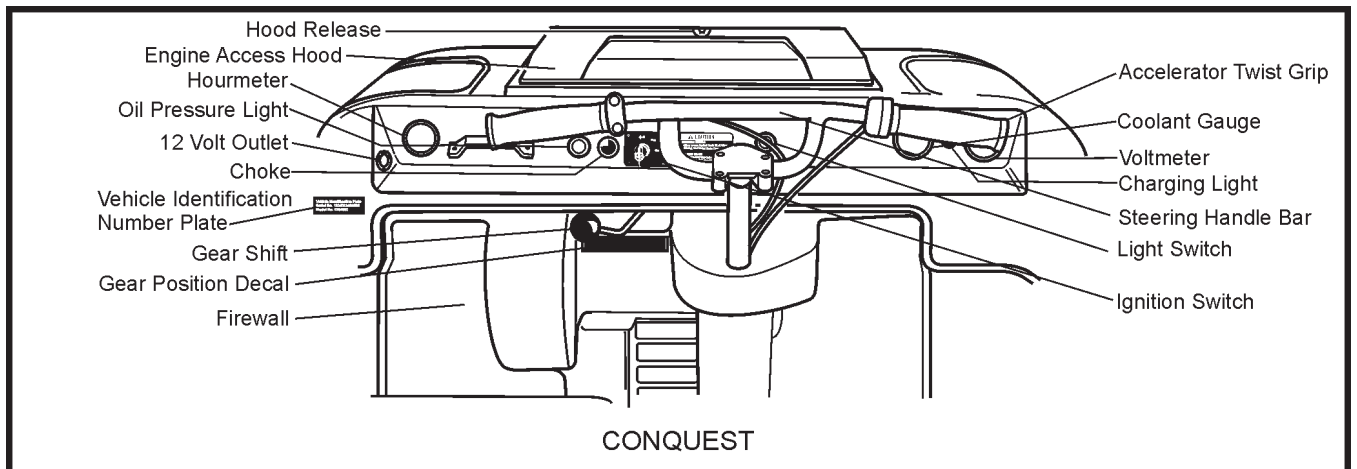
Prior to serial # N14708, B14700, R22452



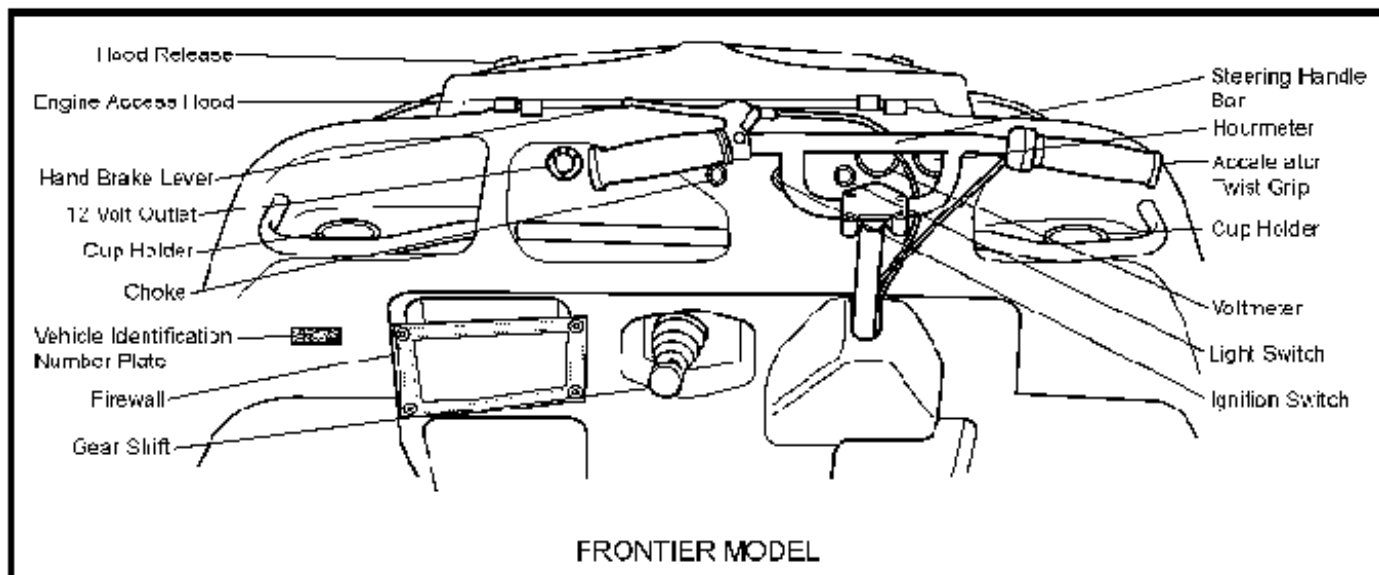
Prior to serial # C22453 & A14743



From serial # N14708, B14700, R22452



From serial # C22453 & A14743



ARGO Model Specifications

AVENGER (V)

Engine: Kohler 685 cc (25 h.p.) or Kohler 690cc (26 h.p.)
 V-twin 4 cycle, liquid cooled
Transmission: 2 forward speeds, neutral and reverse
Clutch: Variable speed torque converter
Fuel Capacity: 29 Litre (6.3 Imp. Gal., 7.6 U.S. Gal.)
Steering/Brakes: Hydraulic Caliper, 10.25" with holding brake system
Drive Chains: Double RC-50 roller chains & Single RC 60 Roller chain
Electrical: 12 volt D.C. battery, 495 cranking amps at 0 F;
 25 Amp charging system, electronic ignition
Speed: Land - 32 km/hr (20mph)
 Water - 3 km/h (2 mph)
Load Capacity: Land - 6 persons or 522kg (1150lbs)
SEE SECT.1.4.1 Water - 4 adults or 317kg (700lbs)
Tires: 25x11.5-9NHS, 2 ply
Dry Weight: 542kg (1195lbs)

ARGO CONQUEST (CB)(C)

Serial Number: CB-10847
Engine: Kawasaki 620 cc (20 h.p.) V-twin 4 cycle,
 liquid cooled
Transmission: 2 forward speeds, neutral and reverse
Clutch: Variable speed torque converters
Fuel Capacity: 32 litres (7.0 Imp. Gal., 8.4 U.S. Gal.)
Steering/Brakes: Hydraulic Caliper, 9" disc with holding
 brake system
Drive Chains: Double RC-50 roller chains & Single RC 60 Roller chain
Electrical: 12 volt D.C. battery, 495 cranking amps at 0 F; 20 Amp
 charging system, battery ignition
Speed: Land - 30 km/h (20 mph)
 Water - 3 km/h (2 mph)
Load Capacity: Land - 6 persons or 454 kg (1000 lbs.)

ARGO 8 x 8 RESPONSE (RB)(R)

Serial Number: RB-12075
Engine: Briggs & Stratton Vanguard, 570 cc (18
 h.p.) V-Twin, 4 cycle, air cooled
Transmission: 2 forward speeds, neutral and reverse
Clutch: Variable speed torque converters
Fuel Capacity: 32 litres (7.0 Imp. Gal., 8.4 U.S. Gal.)
Steering/Brakes: Hydraulic, 9" disc with holding brake system
Drive Chains: Double RC-50 roller chain & Single RC 60
 Roller chain
Electrical: 12 volt D.C. battery, 495 cranking amps at 0 F;
 20 Amp magneto type charging system,
 electronic ignition
Speed: Land - 30 km/h (20 mph)
 Water - 3 km/h (2 mph)
Load Capacity: Land - 6 persons or 454 kg (1000 lbs.)
 Water - 4 adults or 317 kg (700 lbs.)
Tires: 22x10.00-8NHS, 2 ply
Dry Weight: 436 kg (960 lbs.)

ARGO 6 x 6 CONQUEST (C)(A)

Serial Number: C-12747
Engine: Kawasaki 620 cc (20 h.p.) V-twin 4 cycle, liquid cooled
Transmission: 2 forward speeds, neutral and reverse
Clutch: Variable speed torque converters
Fuel Capacity: 32 litres (7.0 Imp. Gal., 8.4 U.S. Gal.)
Steering/Brakes: Hydraulic, 9" disc with holding brake system
Drive Chains: Double RC-50 roller chain and single RC-60 roller chain
Electrical: 12 volt D.C. battery, 495 cranking amps at 0 F; 20 Amp
 charging system, battery ignition
Speed: Land - 35 km/h (22 mph)
 Water - 3 km/h (2 mph)
Load Capacity: Land - 2 persons or 317 kg (700 lbs.)
 Water - 2 adults or 158 kg (350 lbs.)
Tires: 25x12.00-9NHS, 2 ply
Dry Weight: 450 kg (990 lbs.)

ARGO Model Specifications

ARGO 6 x 6 BIGFOOT (BF)(B)

Serial Number: BF-9212
 Engine: Briggs & Stratton Vanguard, 570 cc (18h.p.)
 V-Twin, 4 cycle, air cooled
 Transmission: 2 forward speeds, neutral and reverse
 Clutch: Variable speed torque converters
 Fuel Capacity: 32 litres (7.0 Imp. Gal., 8.4 U.S. Gal.)
 Steering/Brakes: Hydraulic, 9" disc with holding brake system
 Drive Chains: Double RC-50 roller chain and single RC-60 roller chain
 Electrical: 12 volt D.C. battery, 495 cranking amps at 0 F;
 20 Amp or 20/50 amp magneto type charging system,
 electronic ignition
 Speed: Land - 39 km/h (24 mph)
 Water - 3 km/h (2 mph)
 Load Capacity: Land - 4 persons or 317 kg (700 lbs.)
 Water - 2 adults or 158 kg (350 lbs.)
 Tires: 25x12.00-9NHS, 2 ply
 Dry Weight: 414 kg (910 lbs.)

ARGO FRONTIER (F)

Engine: Briggs & Stratton Vanguard, 627 cc cooler cleaner
 running (18 h.p.) V-Twin, 4 cycle, air cooled
 Transmission: 2 forward speeds, neutral and reverse
 Clutch: Variable speed torque converter
 Fuel Capacity: 29 Litre (6.3 Imp. Ga., 7.6 U.S. Gal.)
 Steering/Brakes: Hydraulic Caliper, 10.25" with holding brake system
 Drive Chains: Single RC-60 roller chain
 Electrical: 12 volt D.C. battery, 435 cranking amps at 0 F;
 20/50 Amp magneto type charging system,
 electronic ignition
 Speed: Land - 39 km/h (24 mph)
 Water - 3 km/h (2 mph)
 Load Capacity: Land - 4 persons or 317 kg (700 lbs.)
SEE SECT.1.4.1 Water - 2 adults or 158 kg (350 lbs.)
 Tires: 24x10.00-8NHS, 8 ply
 Dry Weight: 414 kg (910 lbs.)

ARGO 6 x 6 VANGUARD2 (SN)

Serial Number: SN-7888
 Engine: Briggs & Stratton Vanguard, 480 cc (16 h.p.)
 V-Twin, 4 cycle, air cooled
 Transmission: 2 forward speeds, neutral and reverse
 Clutch: Variable speed torque converters
 Fuel Capacity: 32 litres (7.0 Imp. Gal., 8.4 U.S. Gal.)
 Steering/Brakes: Hydraulic, 9" disc with holding brake system
 Drive Chains: Double RC-50 roller chain and single RC-60 roller chain
 Electrical: 12 volt D.C. battery, 495 cranking amps at 0 F;
 16 Amp magneto type charging system, electronic ignition
 Speed: Land - 35 km/h (22 mph)
 Water - 3 km/h (2 mph)
 Load Capacity: Land - 4 persons or 317 kg (700 lbs.)
 Water - 2 adults or 158 kg (350 lbs.)
 Maximum Rear
 Capacity: Land and Water - 63 kg (140 lbs.)
 Tires: 22x10.00-8NHS, 2 ply
 Dry Weight: 348 kg (765 lbs.)

ARGO 6 x 6 VANGUARD (S)

Serial Number: S-6999
 Engine: Briggs & Stratton Vanguard, 480 cc (16 h.p.)
 V-Twin, 4 cycle, air cooled
 Transmission: 2 forward speeds, neutral and reverse
 Clutch: Variable speed torque converters
 Fuel Capacity: 32 litres (7.0 Imp. Gal., 8.4 U.S. Gal.)
 Steering/Brakes: Mechanical, 9" disc with holding brake system
 Drive Chains: Double RC-50 roller chain and single RC-60 roller chain
 Electrical: 12 volt D.C. battery, 435 cranking amps at 0 F;
 16 Amp magneto type charging system, electronic ignition
 Speed: Land - 35 km/h (22 mph)
 Water - 3 km/h (2 mph)
 Load Capacity: Land - 4 persons or 317 kg (700 lbs.)
 Water - 2 adults or 158 kg (350 lbs.)
 Maximum Rear
 Capacity: Land and Water - 63 kg (140 lbs.)
 Tires: 22x10.00-8NHS, 2 ply
 Dry Weight: 348 kg (765 lbs.)

INFORMATION LABELS

There are labels on all models which indicate operating hazards and provide special operating instructions. Information about the use of the holding brake system, the use of the vehicle in water, correct fueling procedures and placement of the floorpans has been provided on distinctive coloured labels fastened to the various locations on the Argo.

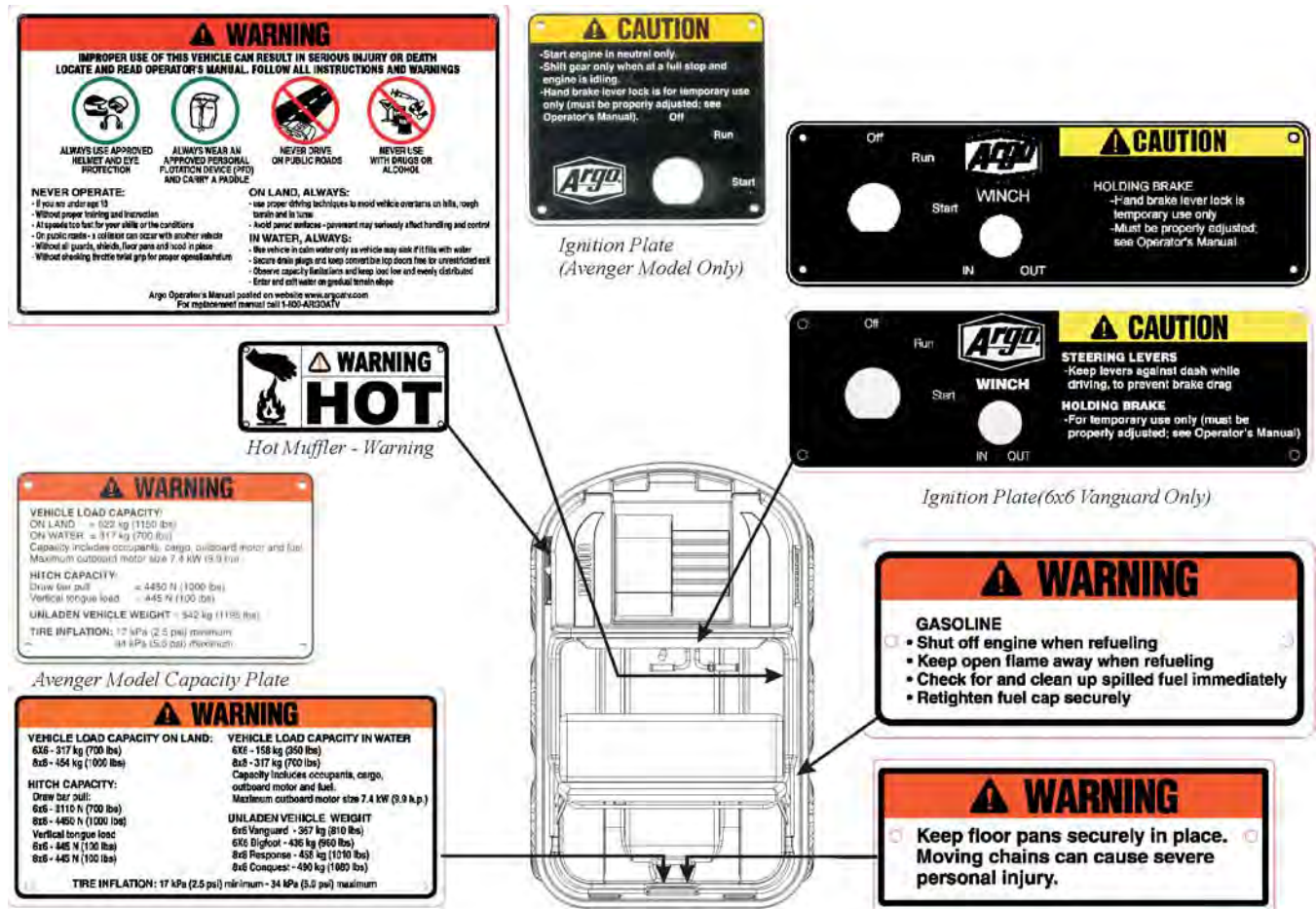


Figure 1-1 Location of Information Labels - All Models

The label shown below is located behind the seat in the rear compartment of all 6-wheel models.

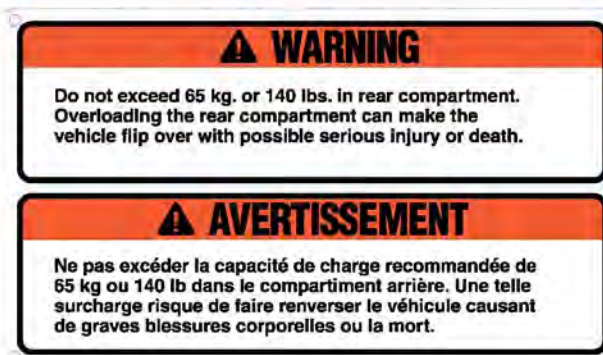


Figure 1-2 Rear Compartment Capacity Label - All 6x6 Models

ARGO Torque Specifications

Transmission

Side Cover Bolts.....	216 IN. LBS.	24.3Nm
Differential Bolts.....	35 FT. LBS.	47.5Nm
Shifter Plate Bolts (Avenger).....	75 IN. LBS	8.5Nm

Intake & Exhaust

Kawasaki Exhaust Manifold to Engine.....	204 IN. LBS.	23.2Nm
Kawasaki Muffler to Engine.....	204 IN. LBS	23.2Nm
Briggs Muffler to Engine.....	204 IN. LBS	23.2Nm
Briggs Exhaust Man. to Engine.....	204 IN. LBS.	23.2Nm
Kohler Exhaust Man. to Engine (Avenger).....	204 IN. LBS	23.2Nm

Clutch System

Driver Clutch Nut on Clutch.....	100 FT. LBS.	135.6Nm
Driver Clutch Bolt to Briggs Engine.....	50 FT. LBS.	67.8Nm
Driver Clutch Bolt to Kohler Engine (Avenger).....	40 FT. LBS	54.3Nm
Driver Clutch Bolt to Kaw. Engine	50 FT. LBS.	67.8Nm
Driven Clutch Bolt to Input Shaft.....	15 FT. LBS.	20.3Nm
Spring Cover Cap Screws.....	85in. lbs.	9.6Nm

Powerpak Assembly

Engine to Powerpak Frame (Kaw).....	30 FT. LBS.	40.7Nm
Engine to Powerpak Frame (Briggs).....	24 FT. LBS.	32.6Nm
Engine to Powerpak Frame (Kohler).....	35 FT. LBS	47.5Nm
Transmission to Powerpak Frame.....	75 FT. LBS.	101.7Nm
Brake Cooling Air Duct to Frame.....	35 in.lbs.	4.0Nm
Master Cylinder Mounting Bolts.....	96 IN. LBS.	10.7Nm
Belt Guard to Transmission.....	30 FT. LBS.	40.7Nm
Brake Bracket Mounting Bolts.....	240 IN. LBS.	27.1Nm
Power Pack Bolts to Main Vehicle Frame.....	80 FT. LBS.	108.2Nm

Brake System - Hydraulic

Brake Caliper to Transmission.....	45 FT. LBS.	61.0Nm
Brake Caliper Assembly Bolts (M10) (Gremica).....	33 FT. LBS.	44.8Nm
Brake Caliper Assembly Bolts (M8) (Gremica).....	17 FT. LBS.	23.2Nm
Hydraulic Hose Bolts.....	180 IN. LBS.	20.3Nm
Avenger Brake Caliper Assembly Bolts	218 IN. LBS	24.6Nm

Argo Torque Specifications

Brake Disc to Output Shaft.....	30FT.LBS	40.7 Nm
Brake Sprocket to Disc (Avenger).....	15 FT. LBS	20.3Nm
Master Cylinder Lid Screws.....	Snug By Hand	
Upper Handle Bar Clamp Bolts (Avenger).....	12 Ft. LBS	16.3Nm
Steering Shaft Nut.....	Tighten snug. Back off until lower washer can be turned by hand. Ensure shaft can be turned with minimal end play	

Vehicle Body and Firewall

Hood Hinge Mounting Bolts.....	Snug By Hand	
Rear Seat Mounting Bolts.....	Snug By Hand	
Trailer Hitch Mounting Bolts.....	35 FT. LBS.	47.5Nm
Trailer Hitch Ball.....	100 FT. LBS.	135.6Nm

Frame and Drive System

Wheel Nuts.....	45 FT. LBS.	61.0Nm
Bearing Extensions	30 FT. LBS.	40.7Nm
Bearing Extension Bolts.....	240 IN. LBS.	27.1Nm
Bearing Extension Flange Nuts (Avenger).....	30 FT. LBS	40.7Nm
Axle Flange Bolts.....	30 FT. LBS.	40.7Nm
Battery Bracket to Frame.....	30 FT. LBS.	40.7Nm
Axle Sprocket Retaining Screws.....	144 IN. LBS	16.4Nm
Axle Bearing Set Screws.....	10-15 IN. LBS	1.1-1.6Nm
Axle Retaining Bolt.....	35 FT. LBS	47.5Nm
Wheel Stud Extensions.....	45 FT. LBS	61.0Nm

Fuel System and Seat Assembly

Handrail Assembly to Upperbody.....	Hand Tight Approx... 48 IN. LBS	5.4Nm
Backpad to Handrail Assembly.....	72 IN.LBS	8.1Nm
Angle Bracket to Seat Assembly.....	72 IN.LBS	8.1Nm
Seat Frame Assembly to Frame.....	72 IN.LBS	8.1Nm
Seat Frame Assembly to Body.....	Snug By Hand	

Electrical System

Battery Retaining Bracket.....	Snug By Hand	
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	BEFORE EACH USE	AFTER INITIAL			EVERY					SECTION REF.
		2hrs.	8hrs.	20hrs.	10hrs.	25hrs.	50hrs.	100hrs.	250hrs.	
COOLANT LEVEL (CONQUEST & AVENGER)	X									
FAN BELT TENSION (CONQUEST & AVENGER)	X									
CHECK FUEL LEVEL	X									2.2
CHECK TIRE INFLATION	X									7.2.6
CHECK TWIST GRIP THROTTLE OPER.	X									2.2
CHECK STEERING LEVER TRAVEL	X									2.2
CHECK ENGINE INTAKE/EXH. FOR OBSTR.	X									2.2
CHECK THAT DRAIN PLUGS ARE IN PLACE	X									5.6
CHECK ENGINE OIL LEVEL	X									6.1.1
CHANGE ENGINE OIL & OIL FILTER										
- KAWASAKI & KOHLER			X			X				6.1.3
- BRIGGS & STRATTON		X				X				6.1.3
CHECK TRANSMISSION OIL LEVEL		X				X				6.2.1
CHANGE TRANSMISSION OIL			X				X			6.2.2
CLEAN AIR PRE-CLEANER (Briggs & Kaw. only)					X					6.3.1
CHECK CLEAN/REPLACE AIR FILTER							X			6.3.1
REPLACE FUEL FILTER								X		6.3.2
LUBRICATE DRIVEN CLUTCH						X				6.4.2
SERVICE DRIVER & DRIVEN CLUTCH								X		6.4.2
LUBRICATE DRIVE CHAINS				X						6.4.3
REMOVE, CLEAN & LUBE. DRIVE CHAINS							X			6.4.3
LUBRICATE IDLER CHAINS				X						6.4.4
REMOVE, CLEAN & LUBE. IDLER CHAINS							X			6.4.4
LUBRICATE AXLE FLANGE - OUTER CAVITY					X					6.4.5
LUBRICATE AXLE FLANGE - INNER CAVITY							X			6.4.5
LUBRICATE INNER AXLE BEARINGS							X			6.4.7
LUBRICATE IDLER BEARINGS								X		6.4.6
LUBRICATE STEERING LEVERS					X					
CHECK BATTERY FLUID LEVEL & CAPS						X				7.1.2
CLEAN BATTERY TERMINALS & CONNEX.							X			7.1.2
CLEAN BATTERY								X		7.1.2
CLEAN, ADJUST/REPLACE SPARK PLUGS							X			7.1.4
CHECK THE DRIVE BELT					X					7.2.1
CHECK NYLON SLIDERS - DRIVEN CLUTCH						X				7.2.2
CHECK SLIDERS - CHAIN TAKE-UP SYSTEM	X			X		X				7.2.4
CHECK & ADJUST IDLER CHAINS	X					X				7.2.5
SERVICE THE CLUTCH UNITS								X		6.4.2
INSPECT BRAKE PADS					X					7.3.1
ADJUST HOLDING BRAKE					X					7.3.5
CHECK HYD. BRAKE FLUID LEVEL/COND.						X				7.4.2
CHECK FUEL TANK CONNECTIONS/LINES							X			
INSPECT WIRING HARNESS							X			
TIGHTEN BEARING EXT. BOLTS		X					X			7.2.8
CLEAN OUT SPARK ARRESTER						X				7.1.5

The intervals shown on the schedule are based on average operating conditions. Vehicles which are subjected to severe use and wet or dusty conditions will require more frequent servicing. Use only Argo replacement parts to ensure safe operation of the vehicle and to comply with the warranty coverage.

We strongly recommend that an Argo Dealer perform a complete check-over of your vehicle after the initial 20 hours of operation, then once each year. This will reduce maintenance costs over the life of your vehicle.

MALFUNCTION (SYMPTOM)	PROBABLE CAUSE	CORRECTIVE ACTION
Electric starter inoperative	<ol style="list-style-type: none"> 1. Loose electrical connections 2. Battery charge low or dead 3. Faulty starter motor 	<ol style="list-style-type: none"> 1. Clean and re-tighten electrical connections 2. Recharge battery or replace as necessary 3. Remove and replace or repair the starter motor.
Engine turns over but will not start	<ol style="list-style-type: none"> 1. Engine is cold and choke is not pulled out 2. Fuel tank is empty 3. Blocked fuel or air filter 4. Carburetor adjustment too lean 5. Spark plugs defective or fouled 6. Ignition system inoperative 7. Insufficient compression 8. Improperly operating electric fuel pump or fuel shut off solenoid. KAWASAKI ENGINE ONLY. 	<ol style="list-style-type: none"> 1. Pull out the choke and try to start again 2. Refill tank 3. Remove obstruction or replace filter as necessary 4. Adjust as detailed in the engine manufacturer's manual 5. Clean and re-gap or replace 6. Refer to the Briggs & Stratton engine service manual 7. Take the vehicle to a factory authorized engine repair outlet 8. Check that electric fuel pump is operating. Make sure fuel shut off solenoid is activated to allow fuel into carburetor.
Engine will not run		<ol style="list-style-type: none"> 1. Refer to engine manual
Vehicle will not move or turn	<ol style="list-style-type: none"> 1. Transmission in neutral or not properly engaged in gear 2. Drive belt worn (see Section 7.2.1) 3. Clutch not engaging 4. Transmission failure 5. Brakes not functioning 6. Idler chain broken 7. Idler sprocket weld broken 	<ol style="list-style-type: none"> 1. Place gear shift properly in gear 2. Replace belt if worn excessively 3. Service clutches 4. Same as 3. above 5. Adjust caliper or replace brake pads 6. Repair or replace 7. Replace idler sprocket
Vehicle pulls to right	<ol style="list-style-type: none"> 1. Right tire pressure too low 2. Left tire pressure too high 3. Right brake engaged 4. Right side drive chain broken 	<ol style="list-style-type: none"> 1. Inflate all tires to the correct pressure 2. Same as above 3. Make sure the steering lever is held forward against the dash. Adjust brake assembly if required. 4. Repair or replace
Vehicle pulls to left	<ol style="list-style-type: none"> 1. See "Vehicle pulls to right" - substitute right with left 	

MALFUNCTION (SYMPTOM)	PROBABLE CAUSE	CORRECTIVE ACTION
Severe vibration when vehicle service.	<ol style="list-style-type: none"> 1. Engine loose on mounts 2. Driver or driven clutch or engine defective 3. Axle bent 4. Wheel rim bent 5. Worn or damaged drive belt 	<ol style="list-style-type: none"> 1. Secure engine mounts 2. Same as above. 3. Remove and straighten or replace. 4. Replace. 5. Replace. Clutch service may be required.
Water leaks into lower body	<ol style="list-style-type: none"> 1. Leak has developed at the axle bearing flange 2. Bearing flange seal has been damaged 3. Water is leaking in around the outer bearing flange bolts 4. Lower body is cut or punctured 5. Drain plugs not in place 	<ol style="list-style-type: none"> 1. Replace the bearing flange gaskets. 2. Replace the bearing flange seal. 3. Caulk under 103-81 bolt heads with silicone sealer. 4. Repair or replace vehicle lower body 5. Secure drain plugs.
Tire leaks air	<ol style="list-style-type: none"> 1. Tire is punctured 2. Tire is not properly seated on bead 3. Position of air leak is not obvious 4. Defective valve 	<ol style="list-style-type: none"> 1. Remove tire from rim and repair the hole with a radial tire patch or install a tube in the tire. 2. Deflate tire and carefully push tire bead off the rim. Clean the rim bead area to remove dirt and foreign matter. Re-inflate tire. 3. Submerge tire and rim in a water tank. Air may be escaping through the rim halves or the valve stem. Repair as required. 4. Replace defective valve.
Hydraulic brakes are spongy, or there is excessive steering lever travel	<ol style="list-style-type: none"> 1. Air in hydraulic system 2. Leak in system 3. Loose brakes 	<ol style="list-style-type: none"> 1. Bleed the brake system and add fluid. 2. Check all fittings, hoses, calipers and seals for loose connections or leakage. Refill as needed. 3. Adjust or tighten.
Brakes ineffective	<ol style="list-style-type: none"> 1. Pads have overheated and glazed 2. Pads worn beyond 0.10" 3. Pads are contaminated with lubricant 	<ol style="list-style-type: none"> 1. Replace or clean pads 2. Replace. 3. Clean or replace pads
There is a loud bang when the vehicle is turned right or left	<ol style="list-style-type: none"> 1. Idler chains worn/loose 2. Drive chains worn/loose 	<ol style="list-style-type: none"> 1. Adjust/replace idler chains as required 2. Adjust/replace drive chains as required

FLAT RATE SCHEDULE ARGO SERVICE

Job Number	Description	Maximum Time (Hours)					
		Conq	Resp	Bigf	Van2	Van	Aveng
Transmission							
1000	Transmission Re & Re	2.0	2.0	2.0	2.0	2.0	2.0
1500	Transmission Re & Re & Overhaul	5.0	5.0	5.0	5.0	5.0	5.0
1750	Transmission Shift Lever Re & Re	.1	.1	.1	.1	.1	.1
Intake & Exhaust System							
2100	Muffler Re & Re	.5	.5	.5	.5	.5	.5
2200	Tailpipe & Spark Arrestor Re & Re	.3	.3	.3	.3	.3	.3
2300	Muffler Shield Assembly	1.6	.8	.8	.8	.8	.8
2600	Intake Duct Assembly Re & Re	1.7	.1	.1	.1	.1	
2700	Radiator Seal Assembly Re & Re	.3	none	none	none	none	
2800	Engine Duct Re & Re	none	.6	.6	.6	.6	2.5
Clutch System							
3000	Driver Clutch Re & Re	.6	.6	.6	.6	.6	.6
3200	Driver Clutch Re & Re & Overhaul	1.4	1.4	1.4	1.4	1.4	1.4
3500	Driven Clutch Re & Re	.3	.3	.3	.3	.3	.3
3700	Driven Clutch Re & Re & Overhaul	.8	.8	.8	.8	.8	.8
Powerpack Assembly							
4000	Engine Re & Re	4.8	2.5	2.5	2.5	2.5	2.5
4100	Powerpack Frame Re & Re	5.0	3.1	3.1	3.1	3.1	
4200	Throttle Cable Re & Re	.4	.4	.4	.4	.4	
4300	Choke Cable Re & Re	.3	.3	.3	.3	.3	
4400	Twist Grip Assembly Re & Re	.3	.3	.3	.3	.3	
4600	Steering Lever Re & Re	.3	.3	.3	.3	.3	
4700	Steering Bracket Assembly Re & Re	.5	.5	.5	.5	none	
4800	Brake Disc Re & Re	.8	.8	.8	.8	.8	
4900	Guard - Belt Protect	.5	.5	.5	.5	.5	
Brake System							
5000	Caliper Re & Re	0.5	0.5	0.5	0.5	0.5	0.5
-----	Both Calipers	0.7	0.7	0.7	0.7	0.7	0.5
5200	Caliper Re & Re & Overhaul	1.0	1.0	1.0	1.0	.8	1.0
5500	Master Cylinder Re & Re	.6	.6	.6	.6	none	.6
5300	Master Cylinder Re & Re & Overhaul	.7	.7	.7	.7	none	.7
5700	Blower Fan Re & Re	.9	.4	.4	none	none	.9

Number		FLAT RATE SCHEDULE ARGO SERVICE					
Job	Description	Maximum Time (Hours)					
		Conq	Resp	Bigf	Van2	Van	Aveng
5800	Intake Hose Re & Re	.3	.3	.3	none	none	
5900	Brake Cooling Air Duct Re & Re	1.8	.6	.6	none	none	
Vehicle Body & Firewall							
6000	Firewall Re & Re	.1	.1	.1	.1	.2	.1
6100	Front Floorpan Re & Re	.1	.1	.1	.1	.1	.1
6150	Rear Floorpan Re & Re	.1	.1	.1	.1	.1	.1
6200	Intake Screen Re & Re	.5	none	none	none	none	
6250	Exhaust Screen Re & Re	.5	.5	.5	.5	.5	
6300	Rear Seats Re & Re & Reassemble	.3	.3	.1	.1	.1	.3
6350	Vinyl Bumper Re & Re	.3	.3	.3	.3	.3	.3
6400	Hood Frame Assembly Re & Re	.9	.8	.8	.8	.8	
6500	Upper Body Re & Re	6.4	5.5	5.5	4.8	4.8	
6550	Upper Body Sub-Assembly	1.8	1.4	1.4	1.1	1.1	
6600	Skidplate Re & Re	5.0	5.0	4.0	4.0	4.0	.5
6700	Trailer Hitch Re & Re	.2	.2	.2	none	none	.2
-----	Hood	0.5	0.5	0.5	0.5	0.5	0.5
6800	Lower body Re & Re	25.6	20.6	22.6	18.2	18.2	30.0
Frame & Drive System							
7000	Front Axle Re & Re	1.5	1.5	1.5	1.5	1.5	1.5
7100	Rear Axle Re & Re	1.5	1.5	1.5	1.5	1.5	1.5
7200	Middle Axle Re & Re	1.5	1.5	1.5	1.5	1.5	1.5
7250	Chain Tensioner Re & Re	.3	.3	.3	.3	.3	.3
7300	Idler Shaft (LH) Re & Re	2.5	2.5	2.5	2.5	2.5	
7350	Idler Shaft (RH) Re & Re	2.6	2.6	2.6	2.6	2.6	
7400	Idler Shaft Alignment Only	.3	.3	.3	1.4	1.4	.3
7500	Battery Frame Re & Re	.3	.3	.3	.3	.3	N/A
7600	Tire Re & Re	.3	.3	.3	.3	.3	.3
7650	Rim Re & Re	.3	.3	.3	.3	.3	.3
Fuel System & Seat Assembly							
8000	Handrail Re & Re	.2	.2	.2	.2	.2	.2
8100	Backpad Re & Re	.1	.1	.1	.1	.1	.1
8200	Bench Seat Re & Re & Subassemble	.2	.2	.2	.2	.2	.2
8300	Tool Box Re & Re	0.3	.3	.3	.3	.3	
8400	Fuel Tank Re & Re	1.4	1.4	1.4	1.4	1.4	1.4

FLAT RATE SCHEDULE ARGO SERVICE

Number

Job	Description	Maximum Time (Hours)					
		Conq	Resp	Bigf	Van2	Van	Aveng
8500	Seat Frame Assembly Re & Re	1.5	1.5	1.5	1.5	1.5	
8600	Filler Hose Re & Re	.8	.8	.8	.8	.8	
8700	Vent Hose Re & Re	.9	.9	.9	.9	.9	.9
Electrical System							
9000	Hourmeter Re & Re (Includes Testing)	.2	.2	.2	.2	.2	.2
9100	Voltmeter Re & Re (Includes Testing)	.5	none	.3	none	none	.5
9200	Coolant Gauge Re & Re (Includes Testing)	.5	none	none	none	none	.5
9300	Battery Re & Re & Service	.4	.4	.4	.4	.4	.3
9400	Wiring Harness Re & Re	2.5	1.3	1.3	1.3	1.3	
9500	Headlight Re & Re	.2	.2	.2	.2	.2	
9550	Headlight Bulb Re & Re	.2	.2	.2	.2	.2	
9600	Light Switch	.2	.2	.2	.2	.2	.2
9700	Warning Light	.3	.3	none	none	none	.3
9800	Ignition Switch	.2	.2	.2	.2	.2	.2
-----	Winch Solenoid	0.5	0.5	0.5	0.5	0.5	
9900	Starter Relay	0.3	0.3	0.3	0.3		
-----	Starter Motor	1.0	1.0	1.0	1.0	1.0	

FLAT RATE SCHEDULE ARGO ACCESSORY INSTALLATION

<u>Part No.</u>	<u>Description</u>	<u>No.of Hours</u>
614-06	Cargo Tie-Down Kit	.8
615-42K	6 Wheel Track Set - Assembly	2.0
	- Installation	.5
	- Removal	.5
615-37K	Bigfoot Track Set - Assembly	3.0
	- Installation	.5
	- Removal	.5
615-10	Tire Chain Kit	.2
617-00	Outboard Motor Bracket	.3
617-10	Outboard Motor Bracket (Avenger)	.5
618-00	Outboard Motor Support	.1
618-10	Outboard Motor Bracket - Side Mount	1.0
621-30	Utility Pouch	.2
622-21	Winch Bracket Kit	1.0
622-40	Winch & Bracket Assembly	3.0
622-70	Winch Kit - Vanguard2/Response	3.0
622-78	Winch Bracket Kit - Vanguard2/Response	1.0
622-80	Winch Kit - Avenger	3.0
622-96	Receiver Winch Kit	1.0
624-00	Dual Tail Light Kit	.5
624-10	Brake/Tailight Kit	1.5
625-42K	6 Wheel Super Track Set - Assembly	2.0
	- Installation	1.0
	- Removal	.5
625-37K	Bigfoot Super Track Set - Assembly	3.0
	- Installation	1.0
	- Removal	.5
625-20	Ice Cleat Kit - Installation	1.0
626-10	Trailer Hitch	.3
632-15	Hourmeter	.5
633-10	Voltmeter	.5
634-08	Engine Oil Pressure Light	1.0
634-11	Oil Temperature Gauge	.5
638-25	Bilge Pump Kit	1.5
638-30	Bilge Pump	1.5
639-20	6x6 Hand Rail Kit	1.2
642-00	Tow Hook Kit	.2
642-20	Brush Guard - Avenger	1.5
648-15	Roll Bar Kit	2.0
648-75	Fold Down Windshield - Installation	1.0
	- Removal	.5
648-40	ROPS Kit - 6x6	4.0
649-31	Convertible Top, Front - Installation	1.0
	- Removal	.5

FLAT RATE SCHEDULE ARGO ACCESSORY INSTALLATION

<u>Part No.</u>	<u>Description</u>	<u>No.of Hours</u>
649-50	Convertible Top ASM - Installation	1.0
	- Removal	.5
650-60	Alternator Kit - Vanguard2	2.5
657-00	Snow Plow Kit (Seasonal Availability)	2.0
663-10	Full Length Skid Plate - 6x6	2.0
663-11K	Full Length Skid Plate - 6x6 (V699-51/V699-55)	2.0
668-02	Brake Cooling Fan - Vanguard	2.0
695-75	Amphibious Trailer ASM	3.0
815-42K	8 Wheel Track Set - Assembly	2.5
	- Installation	.5
	- Removal	.5
825-42K	8 Wheel Super Track Set	
	- Assembly	2.5
	- Installation	1.3
	- Removal	.5
825-20	Ice Cleat Kit - Installation	1.2
825-50	Rubber Track Kit - assembly	4.0
	-installation without hinge kit	2.0
	-with hinge kit	1.0
825-55	Hinge Kit	2.0
839-20	Hand Rail Kit - 8x8	1.2
839-30	Hand Rail Kit 8x8 Avenger	1.2
848-10	Heater Kit - Conquest	3.5
848-32	Heater Kit - Avenger	7.0
848-40-2	ROPS Kit - 8x8 c/w 2 Seat belts	4.0
848-40-4	ROPS Kit + Rear Bench Seat	5.5
849-50	Convertible Top ASM - Installation	1.5
	- Removal	.5
849-60	Rear Bench Seat	2.5
849-80	Rear Bench Seat	1.0
850-40	Alternator Kit - Conquest	2.5
849-90-2	ROPS Kit 8x8 c/w 2 seat belts	4.0
849-90-4	ROPS Kit 8x8 + Rear Bench Seat	5.5
850-60	Alternator Kit - Response	2.5
863-10	Full Length Skid Plate - 8x8	2.5
NPN	Installation of front/rear bearing extensions on: Vanguard/Vanguard2/Response	4.0
642-05	Brush Guard Kit	1.5
648-50	Roll Bar Lights	1.5
835-00	Powered Dump Box	4.0
835-01	Manual Dump Box	3.5
	Pre-service	2.0
	Pre-service (6x6 Conquest C/W Roll Bar)	4.0

ARGO Tool List

1/2" Impact	Ext. Retaining Ring Pliers 4R
5/8" Socket	Ext. Retaining Ring Pliers 490R
Nylon Mallet [large] x2	Side Cutters
Torque Wrench	Channel Lock Pliers
Air Gun	Flat Head Screw Driver(long]
Pry Bars	Star Head Screw Driver [short]
9/16" Wrench	Star Head Screw Driver [medium]
1/2" Air Ratchet	9/16" to 1/2" Wrench
9/16" Socket	9/16" Modified Combination Wrench
3/8" Ratchet	1/2" Hand Ratchet
3/4" Socket	Stapler
5/8" Wrench	Needle Nose Pliers [small, notched]
90 Degree Drill	1 1/16" Socket
9/16" Wrench	1/2" Die 13 NC
7/8" Drill Bit	7/16" Combination Wrench
Urethane Mallet	7/16" Socket
5/8" Drill Bit	1/6" to 3/8" Drill
Flat Head Screw Driver [med]	1/2" Socket
Deburring Tool	1/4" Socket
Air Rivet Gun	Gaping Tool
Needle Nose Pliers	Angled Needle Nose Pliers
1/8" Allen Wrench	12mm Combination Socket-Wrench
5/32" T Allen Wrench	Angle Drill
C-Clamps 11R	3/8" Socket
Air Silicone Gun	Angled Side Cutters
Modified C-Clamps (See Special Tools)	#3 Phillips
Center Square Clamps	1/2" Combination Wrench
Nylon and Rubber Mallet	7/16" Combination Wrench
15/16" Socket	Magnet Extension
7/16" Socket	1/4" Drive Air Ratchet
3/8 Air Ratchet	1/4" Extension
Flat Head Screw Driver	5/16" Socket
Impact Wrench (1/2" Drive)	Wire Strippers
Impact Wrench (3/8" Drive)	Jig Saw
15/16" Pivot Socket	1/4" Extension
Air Gun	Star Screw Driver [short]
Med. Ball Peen Hammer	3/16" 'T' Allen Hex Key
15/16" Socket	9/16" Combination Wrench

ARGO Tool List

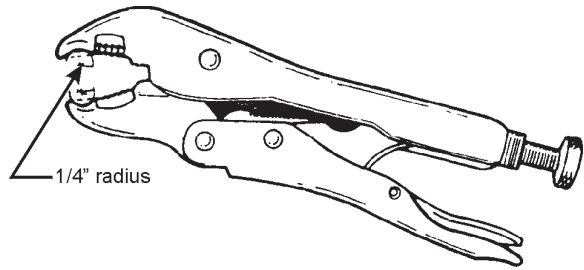
#2 Star Screw Driver [long]	10mm Nut Driver
11/32" Nut Driver	8mm Combination Wrench
1/8" Hex Key	6mm Hex Socket [short]
5mm Hex Key	10mm Socket
4mm Hex Key	13mm Combination Wrench & Socket
3mm Hex Key	Switch Knife
3/4" Combination Wrench	8" - 200mm Click stop
8mm Combination Wrench	12mm Combination Wrench
10mm Angled Combination Wrench	1/2" Hand Ratchet [long]
1/4" Nut Driver	17mm Socket
Hand Die N-32NF	Hand Crimping Tool
Vise Grips 7WR	File [small]
Needle Nosed Vise Grips	3/4" Combination Wrench
Light Tester	12mm Socket
Electric Screwdriver [Star Head]	6mm Hex Key
1/2" Extension (6 Inch)	#2 Star Screw Driver [short]
1/2" Torque Wrench	6mm Hex Socket [long]
Heat Gun	3/8"-1/4" Socket Adapter
Flat Head Screw Driver [medium]	3/8" Torque Wrench [small]
0-5/6" Drill Chuck	3/8" Palm Impact Wrench
Butterfly Ratchet	Rubber and Nylon Mallet
1/4" Square Head Socket	10mm Nut Driver
21mm Socket	8mm Combination Wrench
Exacto Knife	6mm Hex Socket
C-Clamps 11R	13mm Combination Wrench & Socket
Claw Hammer	Switch Knife
Die Grinder	8" - 200mm Click stop
Metal File	17mm Combination Wrench
Disk Grinder	12mm Combination Wrench
Small Hammer	1/2" Hand Ratchet [long]
Small Exacto Knife	17mm Socket
5/16" Nut Driver	Hand Crimping Tool
Flat Head Screw Driver [small]	File [small]
Deburrer	
Router With Drill Bit	6mm Hex Key
Valve Stem Remover	#2 Star Screw Driver [green]
Calking Gun	6mm Hex Socket [long]
3/32" Hex Key [long]	3/8"-1/4" Socket Adapter

ARGO Tool List

3/8" Torque Wrench [small]
3/8" Palm Impact Wrench
3/8" Torque Wrench [small]
1/4" Nut Driver
Retaining Ring Pliers 2R
Angled Air Ratchet
3/8" Box End Air Ratchet Wrench
1/4" - 1/2" Tapping Socket
#21 Drill Bit
13/64" Drill Bit
29/64" Drill Bit
3/32" Drill Bit
3/4" Drill Bit
9/16" Drill Bit
21/64" Drill Bit
2 1/8" Hole Drill Bit
2 3/8" Hole Drill
3/8" Drill Bit
7/8" Drill Bit
Rivet Gun
Reciprocating Saw
1/4" Driving Air Ratchet Wrench
Small Side Cutters

7R VICE GRIP MODIFICATION

A pair of modified 7R Vice Grips is required to hold the ends of the drive chain together while inserting the connecting link. This tool can also be used to hold the ends of the idler chain together while inserting the connecting link. Grind the undercut and sides of the vice grip jaw to fit over 2 chain rollers. The undercut is approximately 1/4" radius as shown.



658-04 Bearing Removal Tool



658-05 Needle Bearing/Oilite Bushing Remover/Installer



658-06 Output Shaft Puller



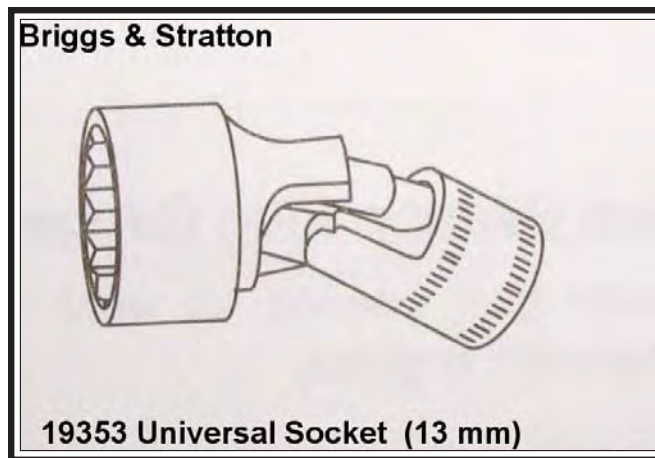
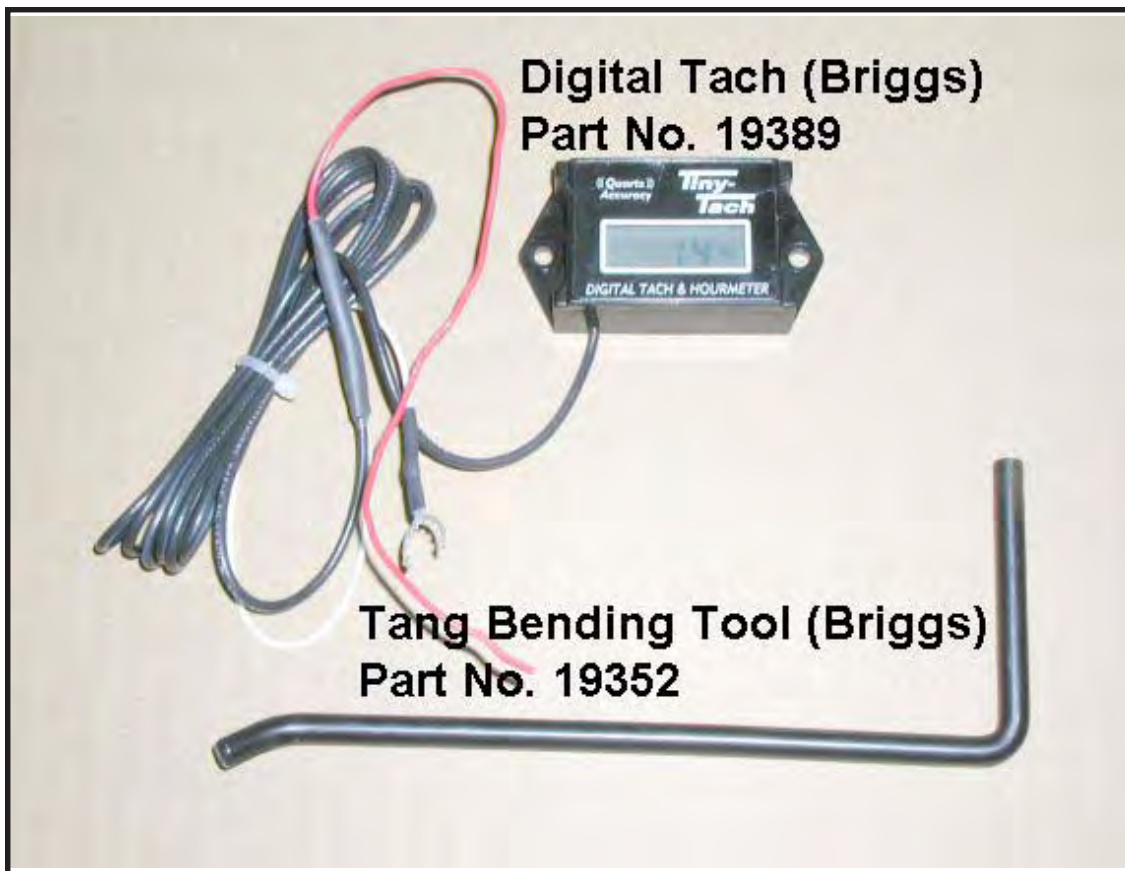
658-07 Installation Tool for 101-15 Bearing



658-16 Right Angled Grease Coupler for Inside Idler Bearings



658-20 Tool, Driven Clutch Service



Starter Removal