



LABOR TIME GUIDE

POWER & RENTAL SEGMENT

Maintenance Department

GRAVITY OILFIELD SERVICES - 02/01/2018 VERSION 1

Time Allowances

Striving for total accuracy, all the labor times as indicated in hours and tenths of hours published in this guide are based on studies of the actual time required to complete the operation going by the "Law of Averages" set by your peers. Each operation was performed a sufficient number of times to establish an average time or to determine that a fair and equitable time has been developed. All the labor times in this guide do exceed the amount of specified time given in the manufacturer's labor guide. Standard technicians' hand tools are used in performing time studies. No power operated tools are used for time studies.

Overlapping Labor Times

Labor times shown, unless noted otherwise, consider all necessary steps required in performing the operation. However, when multiple operations are performed on equipment, and have overlapping labor times, a reasonable deduction should be made from the total times given. Ethical judgment is the best guide in these situations. Gravity's labor times are intended for computing fair, consistent, and accurate standardized labor times. There are many variations that should always be considered to prevent double dipping or overlapping time.

Technician Efficiency

The labor guide gives Gravity the ability to track Technician Efficiency. This transparent measurement of shop productivity, monitor failure trends, This information provides Gravity with an accurate provide information that will support improvements. Efficiency measurements tell us how well the technician did versus actual clocked hours. Understanding efficiency also enables managers to be more proficient about how well the available technician labor hours are being utilized in the shop. Striving for the best possible ratios in these areas will result in reduced costs and higher profitability for Gravity. The technician efficiency percentage is determined by totaling the labor guide hours from completed RO's in emaint. And divided it by the actual clocked hours worked.

Labor Operations Definitions & Procedures

The following terms should be used in the comments field of the work order to add a more accurate definition to the type of repair, operation, or procedure involved:

REMOVE & REPLACE (R&R) The removal of the part being replaced, the installation of the new part, and any inspection, adjustment, cleaning and lubrication operations which may be required.

REMOVE AND INSTALL (R&I) The removal of a part and the re-installation of the same part in its original position, and any inspection, adjustment, cleaning and lubrication operations which may be required. If an R&I time is not available, R&R times can be used when the steps required to R&R a component are the same procedure steps required to R&I a component.

OVERHAUL (O/H) The disassembly, inspection, cleaning, machining as required, replacement of any or all parts as necessary, and reassembly of an assembly. All necessary adjustments are included.

INSTALL The installation of any part, or kit which has not previously been part of, or attached to the unit. For example this term can be used to describe the installation of a missing part or an aftermarket part, or kit.

REINSTALL The installation of any part, or kit which has previously been part of, or attached to the unit. For example this term can be used to describe the reinstallation or reattachment of a part that was removed or completely missing from the unit.

FABRICATE The fabrication of reinforcements or inserts (new component not cut or manufactured from existing or new part, but from raw stock).

DISCONNECT AND RECONNECT (D&R) To disconnect a part or assembly by unbolting and/or unplug, and set it aside without physically removing it from the equipment to gain access or removal of an adjacent part. The disconnected part or assembly is then reconnected during the assembly process.


TRANSFER TIME (R&R&R) To remove a good part from a salvage assembly and transfer over to another unit to make it operational.

TEST AND INSPECT (T&I) The activities usually associated with a diagnosis to check the status of the equipment (in terms of function, operation, etc.), in order to confirm equipment performance in safe operating conditions. **NOTE: NO LABOR TIME** will be giving unless a sufficient description of the test &/or inspection performed is put in the comments field of the work order by the assigned Technician/Mechanic.


DIAGNOSE OR TROUBLESHOOT To distinguish or identify a root cause by diagnosis. In general, troubleshooting is the identification of diagnosis of a system caused by a failure of some kind. The problem is initially described as symptoms of malfunction, and troubleshooting is the process of determining and remedying the causes of these symptoms. **NOTE: NO LABOR TIME** will be giving unless a detailed description of the diagnosis performed is put in the comments field of the work order by the assigned Technician/Mechanic.

Creating Corrective Work Orders with Generic Labor Operations

GENERIC LABOR LINE The generic operation labor lines should only be used when no description currently exists in the labor guide for the labor operation you are performing. A “Request for Review” form will need to be filled out anytime the generic labor operation is anticipated to be a repetitive. Be sure to select the most applicable generic labor operation from the Labor Guide Operations Menu. Failure to follow these instructions will result in no labor time being given.

WO TYPE:	CORRECTIVE
TASK #:	
Asset Desc:	NATURAL GAS GENERATOR
Model No:	NG90
Category:	COOLING SYSTEM & BELT
Sub-Category:	COOLING SYSTEM & BELT
Labor Operation:	Generic Cooling System & Bel

Select Labop
Belt- Replace with guards removed
Coolant Hose Clamp &/or Tube Clamp-Replace
Coolant Hoses &/or Tube-Replace
Coolant Level Sensor - Replace
Coolant Reservoir- Install - Includes: installation of universal fluid reservoir & applicable parts
Coolant Sight Glass-Replace
Coolant Temperature Sensor-Replace
Coolant Temperature Switch-Replace
Cooling System Pressure Test
Diagnose Cooling System Leak
Diagnose Overheating Condition
Drain & Refill Cooling System
Fan (Cooling)-Replace
Fan Pulley &/or Spacer R&R or R&I
Generic Cooling System & Belt Drive Labor Line - Specify generic labor operation
Guard, Belt- R&R or R&I
Guard, Fan- R&R or R&I
Hot start-Install Includes: Fabrication of mounting bracket
Petcock- R&R or R&I



Labor Operation Time Review Policy

This review policy was established to ensure continuous improvement and accuracy of the service labor time standards. The Maintenance Department is committed to provide all possible assistance in understanding the development process, the content of individual standards, the means for accomplishing repairs within the times established, and the assurance that every effort has been made to maintain the accuracy of these times. The Maintenance Department stands ready to review, and adjust if appropriate, any standard which is inconsistent with the average time actually spent on the repairs which are within the scope and definitions described in this book. To request a new or revise an existing operation and/or time allowances in this labor time guide and all questions or suggestions should be submitted on a "Request for Review" form. These forms and all labor guides can be found in the [Gravity Technical Resources Library](#). When completing this form, it is important to fill in all the applicable equipment information affecting or influencing the operation in question. It is also important to submit a complete (detailed) description of the labor line you're referring to. Once you have filled out the "Request for Review" form please email it to: shawn.diamond@gvty.com please limit your inquiries to one per form. All inquiries received will be acknowledged and reviewed. A review will be conducted of the Labor Time Guide text and procedure ASAP.

Branch Operations Labor Guide

When creating a Branch Operations Work order type be sure to use the applicable branch ID as the asset number. Always utilize non-technical staff for these operations when possible.

Labor Operation Description	Operation Number	Detail
Drivetime Operations		
Labor Operation Description	Operation Number	Detail
DRIVETIME (Field Locations)	BOL001	DRIVETIME OPERATIONS are used to document the various purposes of drive times to and from various locations. When logging drivetimes onto the Daily Work Order Log, The technician/mechanic is responsible to specify the applicable labor operation number, the actual times going to and from a location, a total labor time, and a brief description of the details pertaining to the trip. Without this information no labor time will be given.
DRIVETIME (Item Pick Up &/or Delivery)	BOL002	
DRIVETIME (Transport Equipment)	BOL003	
DRIVETIME (Company Travel)	BOL004	
DRIVETIME - Generic Labor Operation	BOL005	

Shipping & Receiving Operations		
Labor Operation Description	Operation Number	Detail
S&R (Loading &/or Unloading Equipment)	BOL006	S&R OPERATIONS are used to document shipping and receiving related labor times When a technician/mechanic logs a S&R related labor time operation onto their Daily Work Order Log, He or she is responsible to specify the applicable labor operation number, The actual times spent on a specific operation, a total labor time, and a brief description of the specific operation details. Without this information no labor time will be given.
S&R (Loading &/or Unloading Packages)	BOL007	
S&R (Packaging Items to Be Shipped)	BOL008	
S&R - Generic Labor Operation	BOL009	

Safety Operations		
Labor Operation Description	Operation Number	Detail
SAFETY - Online Training	BOL010	SAFETY OPERATIONS are used to document safety related labor times. When a technician/mechanic logs a safety related labor time operation onto their Daily Work Order Log, He or she is responsible to specify the applicable labor operation number, The actual times spent on a specific operation, a total labor time, and a brief description of the specific operation details. Without this information no labor time will be given.
SAFETY - Inspection	BOL011	
SAFETY- Monthly Facility Inspection	BOL012	
SAFETY - Quarterly Facility Inspection	BOL013	
SAFETY - Meetings	BOL014	
SAFETY - Generic Labor Operation	BOL015	

Field Operations		
Labor Operation Description	Operation Number	Detail
FIELD- Restock Truck W/ Supplies	BOL016	FIELD OPERATIONS are used to document field related labor times when a technician/mechanic is required to be on a location but is unable to work, performs a generic field labor operation, etc. When logging field operation labor times onto the Daily Work Order Log, The technician/mechanic is responsible to specify the applicable labor operation number, The actual times spent on a specific operation, a total labor time, and a brief description of the specific operation details. Without this information no labor time will be given.
FIELD- Equipment Rig Up On Location	BOL017	
FIELD- Equipment Rig Down On Location	BOL018	
FIELD- WAITING ON LOCATION &/or STANDBY TIME	BOL019	
FIELD- Generic Labor Operation	BOL020	

Building Maintenance Operations		
Labor Operation Description	Operation Number	Detail
Building Maintenance - Repair	BOL021	BUILDING MAINTENANCE OPERATIONS are used to document building maintenance related labor times. When a technician/mechanic logs a building maintenance related labor time operation onto their Daily Work Order Log, He or she is responsible to specify the applicable labor operation number, The actual times spent on a specific operation, a total labor time, and a brief description of the specific operation details. Without this information no labor time will be given.
Building Maintenance - Maintenance	BOL022	
Building Maintenance - Inspection	BOL023	
Building Maintenance - Clean	BOL024	
Building Maintenance - Generic Labor Operation	BOL025	

Research & Development Operations		
Labor Operation Description	Operation Number	Detail
R&D - Training	BOL026	R&D OPERATIONS are used to document research and development related labor times. When a technician/mechanic logs a building maintenance related labor time operation onto their Daily Work Order Log, He or she is responsible to specify the applicable labor operation number, The actual times spent on a specific operation, a total labor time, and a brief description of the specific operation details. Without this information no labor time will be given.
R&D - Fabrication (Non-Repetitive)	BOL027	
R&D - Testing & Inspection	BOL028	
R&D - Design & Spec.	BOL029	
R&D - Planning Meeting	BOL030	
R&D - Generic Labor Operation	BOL040	

LABOR TIME GUIDE for Air Compressors

Labor Operation Description	Operation Number	Detail	Labor Time				
			MPDS185S	M57/210 CFM	M100/375 CFM	IR2475N	P425/HP375WC
			Nissan TD27	Kubota V2403	Kubota V3800	Kubota V3800-T	QSB 4.5T4i

AIR COMPRESSOR & COMPONENTS

Labor Operation Description	Operation Number	Detail	Labor Time				
			Nissan TD27	Kubota V2403	Kubota V3800	Kubota V3800-T	QSB 4.5T4i
Air Compressor Assembly - R&R or R&I	AIR100		4.0	4.0	4.0	4.0	4.0
Air/ Oil Seperator Filter - Replace	AIR101		0.2	0.2	0.2	0.2	0.2
Air Pressure Gauge - R&R	AIR102		0.5	0.5	0.5	0.5	0.5
Compressor Oil Filter - Replace	AIR103		0.2	0.2	0.2	0.2	0.2
Drain and Refill Air Compressor Oil	AIR104		0.5	0.5	0.5	0.5	0.5
Drain Seperator Reciever Tank	AIR105		0.2	0.2	0.2	0.2	0.2
Pressure Regulator - R&R	AIR106		0.5	0.5	0.5	0.5	0.5
Service Valve - R&R	AIR107	Each	0.2	0.2	0.2	0.2	0.2
Starting / Unloader Valve - R&R	AIR108		0.8	0.8	0.8	0.8	0.8
Generic Air Compressor & Components Labor Line Specify generic labor operation	AIR109						

CABINET & HARDWARE

Labor Operation Description	Operation Number	Detail	Labor Time				
			MPDS185S	M57/210 CFM	M100/375 CFM	IR2475N	P425/HP375WC
Cabinet Door Complete Assy.-Replace Includes: Transfer of all hardware	AIR110	L Side	1.0	1.0	1.0	1.0	1.0
	AIR111	R Side	1.0	1.0	1.0	1.0	1.0
	AIR112	Rear Door	0.5	0.5	0.5	0.5	0.5
Cabinet Door Handle Assy.-Replace	AIR113	Each	0.5	0.5	0.5	0.5	0.5
Cabinet Door Hinges-Replace	AIR114	Each	0.4	0.4	0.4	0.4	0.4
Cabinet Door Seal -Replace	AIR115	Each	0.1	0.1	0.1	0.1	0.1
Cabinet Door Strut	AIR116	Each	0.3	0.3	0.3	0.3	0.3
Install Decal to Cabinet	AIR117	Each	0.5	0.5	0.5	0.5	0.5
Instrument Panel - R&R or R&I	AIR118		0.5	0.5	0.5	0.5	0.5
Generic Cabinet & Hardware Labor Line Specify generic labor operation	AIR119						

COOLING SYSTEM & BELT DRIVE

Labor Operation Description	Operation Number	Detail	Labor Time				
			MPDS185S	M57/210 CFM	M100/375 CFM	IR2475N	P425/HP375WC

Belt- Replace with guards removed	AIR120	Alternator	0.6	0.6	0.6	0.6	0.6
Coolant Temperature Sensor-Replace	AIR121		0.5	0.5	0.5	0.5	0.5
Coolant Temperature Switch-Replace	AIR122		0.5	0.5	0.5	0.5	0.5
Coolant Level Sensor - Replace	AIR123		N/A	N/A	N/A	N/A	0.3
Coolant Hoses &/or Tube-Replace	AIR124	Upper	0.5	0.5	0.5	0.5	0.5
	AIR125	Lower	0.5	0.5	0.5	0.5	0.5
Coolant Hose Clamp &/or Tube Clamp-Replace	AIR126	Upper	0.2	0.2	0.2	0.2	0.2
	AIR127	Lower	0.2	0.2	0.2	0.2	0.2
Coolant Reservoir- Install	AIR128	Install	1.0	1.0	1.0	1.0	1.0
Includes: installation of universal fluid reservoir & applicable parts	AIR129	Replace	0.5	0.5	0.5	0.5	0.5
Coolant Sight Glass-Replace	AIR130		N/A	N/A	N/A	N/A	0.3
Cooling System Pressure Test	AIR131		1.0	1.0	1.0	1.0	1.0
Diagnose Overheating Condition	AIR132		1.0	1.0	1.0	1.0	1.0
Diagnose Cooling System Leak	AIR133		1.0	1.0	1.0	1.0	1.0
Drain & Refill Cooling System	AIR134		0.5	0.5	0.5	1.0	0.5
Fan (Cooling)-Replace	AIR135		0.8	0.8	0.8	1.0	1.0
Fan Pulley &/or Spacer R&R or R&I	AIR136		1.0	1.0	1.0	1.2	1.2
Guard, Fan- R&R or R&I	AIR137		N/A	0.5	0.5	0.5	0.5
Petcock- R&R or R&I	AIR138		0.2	0.2	0.2	0.2	0.2
Pulley-Replace	AIR139	Alternator	0.8	0.8	0.8	0.8	0.8
	AIR140	Fan	1.0	1.0	1.0	1.2	1.2
	AIR141	Tensioner	N/A	N/A	N/A	N/A	0.5
Radiator Assembly-R&R or R&I	AIR142		3.0	3.0	3.0	3.0	3.0
Radiator Cap-Replace	AIR143		0.2	0.2	0.2	0.2	0.2
Serpentine Belt Tensioner-R&R or R&I	AIR144		N/A	N/A	N/A	N/A	0.6
Surge Tank-Replace	AIR145		N/A	0.5	0.5	0.5	0.5
Includes: Transfer all of applicable parts							
Thermostat Housing, Thermostat &/or Gasket - Replace	AIR146	Each	0.8	0.8	0.8	0.8	0.8
Tighten & Adjust All Applicable Belts with guards removed	AIR147		0.2	0.2	0.2	0.2	N/A
Water Pump-Replace	AIR148		1.8	2.0	2.0	2.2	1.5
Generic Cooling System & Belt Drive Labor Line Specify generic labor operation	AIR149						

DC ELECTRICAL

Labor Operation Description	Operation Number	Detail	Labor Time				
			MPDS185S	M57/210 CFM	M100/375 CFM	IR2475N	P425/HP375WC
Alternator R&R or R&I	AIR150		1.2	1.2	1.2	1.2	1.2
Battery or Batteries - D&B or D&I	AIR151	Single	0.5	0.5	0.5	0.5	0.5

Battery or Batteries- R&R or R&I	AIR152	Dual	N/A	N/A	N/A	N/A	1.0
Battery Cable-Replace, Positive R&R or R&I	AIR153	Single	0.5	0.5	0.5	0.5	0.5
	AIR154	Dual	N/A	N/A	N/A	N/A	1.0
Battery Cable-Replace, Positive (Battery to Starter) R&R or R&I	AIR155	Single	0.5	0.5	0.5	0.5	0.5
Battery Cable- Replace, Negative R&R or R&I	AIR156	Single	0.5	0.5	0.5	0.5	0.5
	AIR157	Dual	N/A	N/A	N/A	N/A	1.0
Battery Disconnect Switch-Replace	AIR158		N/A	N/A	N/A	N/A	0.3
Battery Hold Down J-Hook & Bracket- Install	AIR159		0.2	0.2	0.2	0.2	0.2
Battery Terminal End-Replace	AIR160	Each	0.5	0.5	0.5	0.5	0.5
Charging System Check Includes: Battery test, alternator output test, & starter test.	AIR161		0.5	0.5	0.5	0.5	0.5
Charge & Retest Battery or Batteries	AIR162		0.5	0.5	0.5	0.5	0.5
Clean & Tighten Battery Terminals	AIR163	Each	0.2	0.2	0.2	0.2	0.2
Engine Stop Solenoid-Replace	AIR164		N/A	0.5	0.5	0.5	0.5
GPS M5 System - Install	AIR165		1.0	1.0	1.0	1.0	1.0
GPS Function Test (includes visual inspection)	AIR166		0.2	0.2	0.2	0.2	0.2
Ground Strap-Replace	AIR167		0.5	0.5	0.5	0.5	0.5
Indicator Light - R&R or R&I	AIR168	Glow Plug	0.4	0.4	0.4	0.4	0.4
	AIR169	Oil Pressure	0.4	0.4	0.4	0.4	0.4
	AIR170	Coolant Temp	0.4	0.4	0.4	0.4	0.4
	AIR171	Battery	0.4	0.4	0.4	0.4	0.4
	AIR172	Compressor Temp	0.4	0.4	0.4	0.4	0.4
Specific Gravity Battery Test	AIR173	Hydrometer	0.5	0.5	0.5	0.5	0.5
Starter-Replace	AIR174		1.0	1.0	1.0	1.0	1.0
Diagnose ECM Communication Loss	AIR175		N/A	N/A	N/A	N/A	1.0
Diagnose No Start Condition	AIR176		1.0	1.0	1.0	1.0	1.0
Diagnose Fault Code	AIR177		1.0	1.0	1.0	1.0	1.0
Camshaft Position/ Timing Sensor-Replace	AIR178		1.0	1.0	1.0	1.0	1.0
Crankshaft Position Sensor-Replace	AIR179		1.0	1.0	1.0	1.0	1.0
Instrumentation, Wiring, Control , & Monitoring			MPDS185S	M57/210 CFM	M100/375 CFM	IR2475N	P425/HP375WC
DC Fuse-Replace	AIR180		0.1	0.1	0.1	0.1	0.1
ECM - Replace	AIR181		N/A	N/A	N/A	N/A	0.8
Electrical Pigtail Connector Repair	AIR182	Each	0.5	0.5	0.5	0.5	0.5
Engine Wiring Harness-Replace	AIR183		2.0	2.0	2.0	2.0	2.0

Gauge- Replace	AIR184	Fuel	0.5	0.5	0.5	0.5	0.5
	AIR185	Tach	N/A	N/A	N/A	N/A	0.5
	AIR186	Compressor Temp	N/A	N/A	N/A	N/A	0.5
	AIR187	Oil Pressure	N/A	N/A	N/A	N/A	0.5
	AIR188	Coolant Temp	N/A	N/A	N/A	N/A	0.5
Hour Meter-Replace	AIR189	OEM	0.6	0.6	0.6	0.6	0.5
	AIR190	Pre-Settable	1.0	1.0	1.0	1.0	N/A
Main Engine Wiring Harness Heat Shield – R&R &/or	AIR191		0.5	0.5	0.5	0.5	0.5
Starter Switch - R&R or R&I	AIR192		0.3	0.3	0.3	0.3	0.3
Generic DC Electrical Labor Line Specify generic labor operation	AIR193						

ENGINE

Labor Operation Description	Operation Number	Detail	Labor Time				
			MPDS185S	M57/210 CFM	M100/375 CFM	IR2475N	P425/HP375WC
Hydrocarbon Block Test-Perform	AIR194		0.5	0.5	0.5	0.5	0.5
Diagnose No Start Condition	AIR195		1.0	1.0	1.0	1.0	1.0
Diagnose Engine Knock	AIR196		1.0	1.0	1.0	1.0	1.0
Diagnose Excessive Oil Consumption	AIR197		1.0	1.0	1.0	1.0	1.0
Diagnose Oil Leak	AIR198		1.0	1.0	1.0	1.0	1.0
Diagnose Engine Performance Issue	AIR199		1.0	1.0	1.0	1.0	1.0
Diesel Engine Compression Test-Perform	AIR200		1.0	1.0	1.0	1.0	1.0
Diesel Engine Cylinder Leak Down Test-Perform	AIR201		1.0	1.0	1.0	1.0	1.0
Vacuum Gauge Engine Performance Test	AIR202		1.0	1.0	1.0	1.0	1.0
Drill & Extract Broken Bolt	AIR203		1.0	1.0	1.0	1.0	1.0
ENGINE ASSEMBLY, BLOCK, & MOUNTS			MPDS185S	M57/210 CFM	M100/375 CFM	IR2475N	P425/HP375WC
Engine Assembly- Removal & Installation Includes: R&I only those components necessary for the removal of the complete engine assy. DOES NOT include transfer of parts or tune	AIR204		_____	_____	_____	_____	_____
Engine Assembly- Remove, Install, & Overhaul Includes: Replace all applicable rings, sleeves, bearings, & all other misc. internal engine components. DOES NOT include machine work	AIR205		_____	_____	_____	_____	_____
Engine (Long Block)- Remove & Replace Consists of cylinder block fitted with pistons, rings, connecting rods, crankshaft, and all bearings, cylinder head, camshaft timing components, etc. Clean & Transfer all other applicable parts	AIR206		_____	_____	_____	_____	_____

Engine (Short Block) Remove & Replace Consists of cylinder block fitted with pistons, rings, connecting rods, crankshaft, and all bearings. Will require installation of cylinder heads and all other applicable parts	AIR207		_____	_____	_____	_____	_____
Post Engine Overhaul - 1hr. Run Test (NO LOAD!)	AIR208	NO Load	1.0	1.0	1.0	1.0	1.0
Engine Mount and /or Mounts- Replace	AIR209	One Engine Mount	1.0	1.0	1.0	1.0	1.0
	AIR210	Each Additional Mount	0.5	0.5	0.5	0.5	0.5
ENGINE OILING			MPDS185S	M57/210 CFM	M100/375 CFM	IR2475N	P425/HP375WC
Engine Oil Cooler- Replace	AIR211		N/A	N/A	N/A	0.5	N/A
Engine Oil Cooler Pressure Test- Perform	AIR212		N/A	N/A	N/A	0.5	N/A
Engine Oil Cooler Hose- Replace	AIR213		N/A	N/A	N/A	0.3	N/A
Engine Oil Filter- Replace	AIR214		0.3	0.3	0.3	0.3	0.3
Oil Dipstick-Replace	AIR215		0.1	0.1	0.1	0.1	0.1
Oil Dipstick Tube-Replace	AIR216		0.5	0.5	0.5	0.5	0.5
Oil Pan Drain Plug & /or Gasket- Replace	AIR217		0.2	0.2	0.2	0.2	0.2
Oil Filter Adaptor and/or Gasket- Replace	AIR218		0.3	0.3	0.3	0.3	0.3
Oil Fill Cap- Replace or Install- Replace	AIR219		0.2	0.2	0.2	0.2	0.2
Oil Pan and/or Gasket- Replace	AIR220		1.2	1.2	1.2	1.5	1.8
Oil Pan Pre-Installation Leak Test	AIR221		0.5	0.5	0.5	0.5	0.5
Oil Pump- Replace Includes: R&I Shaft When Applicable	AIR222		2.6	2.0	2.0	2.2	2.5
Oil Pressure Switch- Replace	AIR223		0.5	0.5	0.5	0.5	0.5
Oil Pressure Sensor- Replace	AIR224		0.5	0.5	0.5	0.5	0.5
HEAD & VALVETRAIN			MPDS185S	M57/210 CFM	M100/375 CFM	IR2475N	P425/HP375WC
Camshaft- Replace (Engine Removed)	AIR225		_____	_____	_____	_____	_____
Camshaft Bearing Set- Replace	AIR226		_____	_____	_____	_____	_____
Camshaft Gear- Replace	AIR227		_____	_____	_____	_____	_____
Cylinder Head & or Gasket- Replace Includes: Remove carbon, check surfaces for warpage, adjust valves, and ignition timing where	AIR228	One Cylinder Head	4.0	4.0	4.0	4.5	4.5
	AIR229	Each Additional Head	N/A	N/A	N/A	N/A	N/A
Intake Manifold & or Gasket- Replace	AIR230		1.2	1.5	1.5	2.0	2.2
Push Rod- Replace DOES NOT Include: R&I Rocker Arms	AIR231	One Push Rod	0.1	0.1	0.1	0.1	0.1
Rocker Arm &/or Shaft Assembly - Replace Includes: R&I Valve Cover	AIR232	Set	1.0	1.0	1.0	1.0	1.0
Rocker Arm Jam Nut &/or Adjuster - Replace	AIR233	Each	0.2	0.2	0.2	0.2	0.2
Rocker Arm Stud- Replace	AIR234	Each	0.3	0.3	0.3	0.3	0.3
Valve Adjustment Complete (Intake & Exhaust)	AIR235		0.9	0.9	0.9	1.0	1.0

Valve Cover & or Gasket - Replace	AIR236	One Valve Cover	0.5	0.5	0.5	0.7	0.8
Flywheel DOES NOT Include: R&I engine	AIR237		0.7	0.7	0.7	0.7	0.8
Main OIL Seal (Front)-Replace DOES NOT Include: R&I Crankshaft Damper	AIR238		0.7	0.7	0.7	0.8	1.0
Main OIL Seal (Rear), Housing and/or Gasket	AIR239		6.2	6.6	6.6	6.8	7.0
Generic Engine Labor Line Specify generic labor operation	AIR240						

Fuel, Exhaust, & Emissions

Labor Operation Description	Operation Number	Detail	Labor Time				
			MPDS185S	M57/210 CFM	M100/375 CFM	IR2475N	P425/HP375WC
Air Filter Element-Replace	AIR241		0.3	0.3	0.3	0.3	0.3
Air Filter Housing- R&R or R&I	AIR242		0.7	0.7	0.7	0.7	0.7
Air Filter Housing Lid- R&R or R&I	AIR243		0.2	0.2	0.2	0.2	0.2
Air Inlet Elbow-Replace (Air filter housing to tube)	AIR244		0.3	0.3	0.3	0.3	0.3
Air Inlet Elbow-Replace (tube to adaptor)	AIR245		0.3	0.3	0.3	0.3	0.3
Air Inlet Tube-Replace (Elbow to elbow)	AIR246		0.3	0.3	0.3	0.3	0.3
CAC Boot - R&R or R&I	AIR247	Each	N/A	N/A	N/A	0.2	0.2
CAC Tube/Pipe - R&R or R&I	AIR248		N/A	N/A	N/A	0.5	0.5
CCV Filter-R&R or R&I	AIR249		N/A	N/A	N/A	0.5	0.5
CCV Filter Housing- R&R or R&I	AIR250		N/A	N/A	N/A	0.8	N/A
Diagnose Backfiring Condition	AIR251		1.0	1.0	1.0	1.0	1.0
Engine Control Module (ECM) -R&R or R&I	AIR252		N/A	N/A	N/A	N/A	1.0
EXHAUST			MPDS185S	M57/210 CFM	M100/375 CFM	IR2475N	P425/HP375WC
Catalytic Converter-R&R or R&I	AIR253		N/A	N/A	N/A	N/A	1.0
DOC / DPF Filter Assembly - R&R or R&I	AIR254		N/A	N/A	N/A	N/A	1.0
DPD Regeneration	AIR255		N/A	N/A	N/A	N/A	1.5
EGR Systems-Check	AIR256		N/A	N/A	N/A	N/A	0.5
EGR Valve-Replace	AIR257		N/A	N/A	N/A	N/A	0.5
EGR Cooler (1PC)-Replace	AIR258		N/A	N/A	N/A	N/A	0.8
EGR Position Sensor - R&R or R&I	AIR259		N/A	N/A	N/A	N/A	0.3
Exhaust System Back Pressure Test	AIR260		1.0	1.0	1.0	1.0	1.0
Exhaust Clamp-Replace or Install	AIR261	Specify	0.3	0.3	0.3	0.3	0.3
Exhaust Manifold & or Gaskets	AIR262		1.3	1.0	1.0	1.5	1.5
Exhaust Pipe / Muffler Assembly-Replace	AIR263		0.5	0.5	0.5	0.5	0.5
Exhaust Pipe Assembly-Replace	AIR264		0.3	0.3	0.3	0.3	1.5
Exhaust Rain Cap-Replace or Install	AIR265		N/A	0.3	0.3	0.3	N/A

Labor Time Guide for 25-70 Portable Diesel Generators

LABOR OPERATION DESCRIPTION	Operation Number	Detail	Labor Time							
			H20YT6	WACK20IT4	H25YT6	DCA25SSIT1	DCA25SSIT3	DCA25SSIT4I	DCA25USIT4I	DCA45SSIT1
			4TNV88T4	4LE1	4TNV84T4	BV-4LE2	BV-4LE2	BV-4LE2	4LE2	4JG1T
AC ELECTRICAL										
AC Alternator Assy.- R&R or R&I Includes: Transfer of all required parts	AC500		6.4	6.4	6.4	5.6	5.6	5.6	5.6	6.4
AC Alternator ID Plate- R&R or R&I	AC501		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Adjust AVR Setting	AC502		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Automatic Voltage Regulator (AVR) -R&R or R&I	AC503		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Auxiliary Breakers -Replace	AC504		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Current Transformer (CT)- R&R or R&I	AC505	Each	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Diagnose Inoperative AC Alternator	AC506		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose AC Electrical Concern	AC507		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diode Test-Perform	AC508		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Insulation Testing (Megger)	AC509		1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Line Cable-Replace	AC510		0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Lug Assembly -Install, R&R or R&I	AC511		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Main Circuit Breaker -R&R or R&I	AC512		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Mount AC Alternator-Replace	AC513		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Outlet Receptacle-Replace	AC514	120V	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	AC515	240V	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Over Current Relay- Replace	AC516		N/A	N/A	N/A	0.8	0.8	0.8	0.8	0.8
Phase Rotation-Check	AC517		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Resistance Check	AC518		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
SAE/ Flywheel Adaptor - R&R or R&I	AC519		See AC Alternator Assy.- R&R or R&I							
SAE/ Flywheel Adaptor Dust Cover- R&R or R&I ADD: .5 per additional dust cover plate	AC520	ALL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
SAE/ Flywheel Adaptor Housing - R&R or R&I	AC521		See AC Alternator Assy.- R&R or R&I							
V-Leg Relay- Replace	AC522		N/A	N/A	N/A	0.5	0.5	0.5	0.5	0.5
Voltage Rheostat- Replace	AC523		N/A	N/A	N/A	0.5	0.5	0.5	0.5	0.5
Voltage Selection Switch- Replace	AC524		N/A	N/A	N/A	2.0	2.0	2.0	2.0	2.0
Generic AC Electrical Labor Line Specify generic labor operation	AC525		See AC Alternator Assy.- R&R or R&I							
Cabinet & Hardware										
LABOR OPERATION DESCRIPTION	Operation		Labor Time							

Gauge- Replace	DC539	Water	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	DC540	DC Volts / Amp	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	DC541	Tach / Hourmeter	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	DC542	Fuel	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Hour Meter-Replace	DC543	OEM	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	DC544	Pre-Settable	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Main Engine Wiring Harness Heat Shield – R&R &/or Install	DC545		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Tachometer Sensor - Replace	DC546		0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Generic DC Electrical Labor Line	DC547									

Engine

LABOR OPERATION DESCRIPTION	Operation Number	Detail	Labor Time							
			H20YT6	WACK20IT4	H25YT6	DCA25SSIT1	DCA25SSIT3	DCA25SSIT4I	DCA25USIT4I	DCA45SSIT1
			4TNV88T4	4LE1	4TNV84T4	BV-4LE2	BV-4LE2	BV-4LE2	4LE2	4JG1T
Hydrocarbon Block Test-Perform	D5000		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Diagnose No Start Condition	D5001		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Engine Knock	D5002		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Excessive Oil Consumption	D5003		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Oil Leak	D5004		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Engine Performance Issue	D5005		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diesel Engine Compression Test-Perform	D5021	Glow Plug Hole	N/A	1.0	N/A	1.0	1.0	1.0	1.0	N/A
		Nozzle Hole	1.0	N/A	1.0	N/A	N/A	N/A	N/A	1.0
Diesel Engine Cylinder Leak Down Test-Perform	D5022		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Drill & Extract Broken Bolt	D5023		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
ENGINE ASSEMBLY, BLOCK & MOUNTS	Operation Number	Detail	H20YT6	WACK20IT4	H25YT6	DCA25SSIT1	DCA25SSIT3	DCA25SSIT4I	DCA25USIT4I	DCA45SSIT1
			4TNV88T4	4LE1	4TNV84T4	BV-4LE2	BV-4LE2	BV-4LE2	4LE2	4JG1T
Engine Assembly- Removal & Installation	E9001									
Engine Assembly- Remove, Install, & Overhaul	E9002									
Engine (Long Block)- Remove & Replace	E9003									
Engine Mount and /or Mounts- Replace	E9005	One Engine Mount	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	E9006	Each Additional Mount	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
ENGINE OILING	Operation Number	Detail	H20YT6	WACK20IT4	H25YT6	DCA25SSIT1	DCA25SSIT3	DCA25SSIT4I	DCA25USIT4I	DCA45SSIT1
			4TNV88T4	4LE1	4TNV84T4	BV-4LE2	BV-4LE2	BV-4LE2	4LE2	4JG1T
Auxiliary Engine Oil Cooler- Replace	E9007		N/A	0.3	N/A	0.3	0.3	0.3	0.3	0.3
Engine Oil Cooler- Replace	E9008		0.8	N/A	0.8	N/A	N/A	N/A	N/A	N/A
Engine Oil Cooler Hose- Replace	E9009	each	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Engine Oil Filter- Replace	E9010		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Oil Dipstick-Replace	E9011		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Oil Dipstick Tube-Replace	E9012		0.3	N/A	0.3	N/A	N/A	N/A	N/A	N/A

Perform Catalyst Inspection	AIR266		N/A	N/A	N/A	N/A	1.0
Fuel, Exhaust, & Emissions Cont.			MPDS185S	M57/210 CFM	M100/375 CFM	IR2475N	P425/HP375WC
Fuel Filter - Replace	AIR267	Spin-on	0.2	0.2	0.2	0.2	0.2
Fuel / Water Seperator Filter - Replace	AIR268	Canister	0.3	0.3	0.3	0.3	0.3
Fuel Injector- Replace	AIR269	Each	0.3	0.3	0.3	0.3	0.3
(Includes QR Programming when applicable)	AIR270	All	1.0	1.0	1.0	1.0	1.0
Fuel Injector Line - R&R	AIR271	Each	0.2	0.2	0.2	0.2	0.2
Fuel Injection Pump - R&R or R&I	AIR272		3.2	3.5	3.5	3.5	4.0
Fuel Lift Pump - R&R or R&I (electromagnetic)	AIR273		0.8	0.8	0.8	0.8	0.8
Fuel Pick Up Tube - R&R	AIR274		0.3	0.3	0.3	0.3	0.3
Fuel Pressure Sensor-R&R or R&I	AIR275		0.5	0.5	0.5	0.5	0.5
Fuel Return Line - Replace	AIR276		0.5	0.5	0.5	0.5	0.5
Fuel Shut-Off Valve-R&R or R&I	AIR277		1.0	1.0	1.0	1.0	N/A
Fuel Suction Line - Replace	AIR278		0.5	0.5	0.5	0.5	0.5
Fuel Tank - R&R or R&I	AIR279		2.0	2.0	2.0	2.0	2.0
Glow plug - R&R	AIR280	Each	0.2	0.2	0.2	0.2	0.2
Heated Oxygen Sensor-R&R or R&I	AIR281		N/A	N/A	N/A	N/A	0.8
Perform Engine Wiring Harness Repair Specify circuit or pigtail connector receiving repair in description.	AIR282		0.9	0.9	0.9	0.9	0.9
Labor Operation Description	Operation Number	Detail	Labor Time				
			MPDS185S	M57/210 CFM	M100/375 CFM	IR2475N	P425/HP375WC
Temp Manifold Pressure Sensor (TMAP)-Replace	AIR283		N/A	N/A	N/A	N/A	0.5
Turbocharger-R&R or R&I	AIR284		N/A	N/A	N/A	1.0	2.0
Turbo Inspection-Perform Includes: R&I of CAC hoses & piping	AIR285		N/A	N/A	N/A	0.5	0.5
Turbo Intercooler - R&R or R&I (Includes all applicable components)	AIR286		N/A	N/A	N/A	3.0	3.0
Vacuum Line-Replace Add .1 per additional Vacuum line	AIR287		N/A	N/A	N/A	0.3	N/A
Waste Gate Actuator-Replace	AIR288		N/A	N/A	N/A	0.6	1.0
Generic Fuel, Exhaust, & Emissions Labor Line Specify generic labor operation	AIR289						
Make Ready & PM Tasks							
Labor Operation Description	Operation Number	Detail	Labor Time				
			MPDS185S	M57/210 CFM	M100/375 CFM	IR2475N	P425/HP375WC
150 Hr PM A - Air Compressors	PM1014		1.0	1.0	1.0	1.0	1.0
250 Hr PM B - Air Compressors	PM1002		1.0	1.0	1.0	1.0	1.0

500 Hr PM C - Air Compressors			1.3	1.3	1.3	1.3	1.3
1000 Hr PM D - Air Compressors			2.0	2.0	2.0	2.0	2.0
2000 Hr PM E - Air Compressors			3.5	3.5	3.5	3.5	3.5
AIR COMPRESSOR - MAKE READY PROCEDURES			1.2	1.2	1.2	1.2	1.2
DOT Annual Trailer Inspection (STATE REQUIRED)	MR1015		1.0	1.0	1.0	1.0	1.0
Pre-Deployment Quality Control Equipment Inspection	AIR296		0.5	0.5	0.5	0.5	0.5
Field Quality Control Equipment Inspection (Applies to equipment on location)	AIR297		0.5	0.5	0.5	0.5	0.5

Trailer

Labor Operation Description	Operation Number	Detail	Labor Time				
			MPDS185S	M57/210 CFM	M100/375 CFM	IR2475N	P425/HP375WC
Axle Assy. -Replace	AIR298		2.0	2.0	2.0	2.0	2.0
Axle Seal- Replace	AIR299		1.3	1.3	1.3	1.3	1.3
Diagnose Inoperative Trailer Wiring	AIR300		0.5	0.5	0.5	0.5	0.5
Document Holder- R&R, R&I, or Install	AIR301		0.2	0.2	0.2	0.2	0.2
DOT Trailer Inspection (FMCSR)	AIR302		1.0	1.0	1.0	1.0	1.0
DOT Reflective Tape-Replace <small>.1 per section of tape replaced</small>	AIR303	Each	0.1	0.1	0.1	0.1	0.1
Equalizer Rod- R&R, R&I, or Adjust	AIR304		0.5	0.5	0.5	0.5	0.5
Fender-Replace &/or Resecure	AIR305		0.5	0.5	0.5	0.5	0.5
Hub Cap- R&R, R&I, or Install	AIR306	Dust	0.2	0.2	0.2	0.2	0.2
	AIR307	Oil Bath	0.5	0.5	0.5	0.5	0.5
Landing Leg / Crank Handle-Replace	AIR308		0.3	0.3	0.3	0.3	0.3
Leaf Spring-Replace	AIR309		1.5	1.5	1.5	1.5	1.5
Light Bulb - Replace	AIR310		0.2	0.2	0.2	0.2	0.2
Marker Light Assy.-Replace	AIR311	Each	0.2	0.2	0.2	0.2	0.2
Mount & Balance Tire	AIR312	Each	0.25	0.25	0.25	0.25	0.25
Taillight Assy.-Replace	AIR313	Each	0.5	0.5	0.5	0.5	0.5
Tag Bracket or License Plate- R&R, R&I, or Install	AIR314		0.2	0.2	0.2	0.2	0.2
Trailer 4-Pin Wire Connector-Replace	AIR315		0.4	N/A	0.4	N/A	N/A
Trailer Wiring Repair	AIR316		0.2	0.2	0.2	0.2	0.2
Valve Stem Assy.-Replace	AIR317		0.3	0.3	0.3	0.3	0.3
Valve Stem Cap-Install	AIR318		0.1	0.1	0.1	0.1	0.1
Valve Stem Core-Replace	AIR319		0.2	0.2	0.2	0.2	0.2
Safety Chain- R&R, R&I, or Install	AIR320	Pin-On	0.2	0.2	0.2	0.2	0.2
	AIR321	Weld-On	0.5	0.5	0.5	0.5	0.5
Safety Chain Clevis- R&R, R&I, or Install	AIR322		0.2	0.2	0.2	0.2	0.2
Wheel & Tire-R&I	AIR323		0.1	0.1	0.1	0.2	0.1

Wheel Bearings- Replace Includes: Inner & Outer Bearings	AIR324		1.3	1.3	1.3	1.3	1.3
Generic Trailer Labor Line Specify generic labor operation	AIR325						
Leaf Spring-Replace	AIR326		1.5	1.5	1.5	1.5	1.5
Light Bulb – Replace	AIR327		0.2	0.2	0.2	0.2	0.2
Marker Light Assy.-Replace	AIR328	Each	0.2	0.2	0.2	0.2	0.2
Mount & Balance Tire	AIR329	Each	0.25	0.25	0.25	0.25	0.25
Taillight Assy.-Replace	AIR330	Each	0.5	0.5	0.5	0.5	0.5
Tag Bracket or License Plate- R&R, R&I, or Install	AIR331		0.2	0.2	0.2	0.2	0.2
Trailer 7-Way Wire Connector-Replace	AIR332		0.5	0.5	0.5	0.5	0.5
Trailer 4-Pin Wire Connector-Replace	AIR333		0.4	N/A	0.4	N/A	N/A
Trailer Wiring Repair	AIR334		0.2	0.2	0.2	0.2	0.2
Valve Stem Assy.-Replace	AIR335		0.3	0.3	0.3	0.3	0.3
Valve Stem Cap-Install	AIR336		0.1	0.1	0.1	0.1	0.1
Valve Stem Core-Replace	AIR337		0.2	0.2	0.2	0.2	0.2
Safety Chain- R&R, R&I, or Install	AIR338	Pin-On	0.2	0.2	0.2	0.2	0.2
	AIR339	Weld-On	0.5	0.5	0.5	0.5	0.5
Safety Chain Clevis- R&R, R&I, or Install	AIR340		0.2	0.2	0.2	0.2	0.2
Wheel & Tire-R&I	AIR341		0.1	0.1	0.1	0.2	0.1
Wheel Bearings- Replace Includes: Inner & Outer Bearings	AIR342		1.8	1.8	1.8	0.2	1.8
Generic Trailer Labor Line Specify generic labor operation	AIR343						

LABOR TIME GUIDE for Cooling Trailers

Labor Operation Description	Operation Number	Detail	Labor Time
			Cooling Trailers
Cooling System			
Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
Ball Valve R&R	CT0001	EACH	0.5
Belt Pulley R&R	CT0002		1.1
Boiler Drain Valve R&R	CT0003		0.5
Bonnet Brace R&R	CT0004		0.3
Brass Inlet Fitting R&R	CT0005		0.5
Brass Swivel R&R	CT0006		0.6
Caster - R&R	CT0007	EACH	0.4
Clamp Fastener R&R	CT0008		0.5
Drain Valve -R&R	CT0009		0.4
Electrical Cord R&R	CT0010		0.9
Fan Blade - R&R	CT0011		1.5
Fan Belt- Replace	CT0012		0.8
Fan Hub Assy. R&R	CT0013		1.5
Fan Motor	CT0014		1.2
Fan Screen R&R	CT0015		0.8
Front Flap R&R	CT0016		0.2
Float Valve R&R	CT0017		0.4
Gate Valve R&R	CT0018		0.5
Hose (Inlet to Float) R&R	CT0019		0.8
Hose (FLB to Pump) R&R	CT0020		0.8
Hose (Spray Bar to FLB) R&R	CT0021		0.8
Motor Mount R&R	CT0022		0.8
Pad R&R (COILS)	CT0023	1 &/or All	0.5
PAD Trough R&R	CT0024		0.6
Pump - Replace	CT0025		1.2
SPD Electrical Box R&R	CT0026		0.5
Speed Switch R&R	CT0027		0.5
Spray Bar R&R	CT0028		0.8

Switchplate R&R (1 SPD only)	CT0029		0.5
Toggle Switch R&R	CT0030		0.5
Water Holding Tank R&R	CT0031		1.8
Water Holding Tank Hold Downs R&R	CT0032		1.8
Water Pressure Regulator R&R	CT0033		0.7
Wiring Harness (SPD Motor)	CT0034		1.5

Make Ready & PM Tasks

Labor Operation Description	Operation Number	Detail	Labor Time
			Cooling Trailers
DOT Annual Trailer Inspection <small>(STATE REQUIRED)</small>	MR1015		1.0

TRAILER LABOR OPERATIONS

Labor Operation Description	Operation Number	Detail	Labor Time
			Cooling Trailers
Axle Assy. -Replace	CT0035	W/ Electric Brakes	3.0
	CT0036	W/O Electric Brakes	2.5
Axle Seal- Replace <small>Includes: Grease & Repack inner & outer wheel bearings</small>	CT0037		1.8
Break Away Switch-Replace	CT0038		0.5
Break Away System Battery-Replace	CT0039		0.4
Break Away System Complete - R&R, R&I, or Install	CT0040		0.9
Charge & Retest Break Away Battery	CT0041		0.25
Diagnose Inoperative Trailer Wiring	CT0042		0.5
Document Holder- R&R, R&I, or Install	CT0043		0.2
DOT Trailer Inspection (FMCSR)	CT0044		1.0
DOT Reflective Tape-Replace <small>.1 per section of tape replaced</small>	CT0045	Each	0.1
Drain & Refill Axle Gear Oil	CT0046		N/A
Electric Brake Shoe/Backer Plate Assy.	CT0047		2.5
Equalizer Rod- R&R, R&I, or Adjust	CT0048		0.5
Fender-Replace &/or Resecure	CT0049		0.5
Gooseneck Adjustable Coupler-Replace	CT0050		0.2
Hub Cap- R&R, R&I, or Install	CT0051	Dust	0.2
	CT0052	Oil Bath	0.5
Landing Leg / Crank Handle-Replace	CT0053		0.3
Leaf Spring-Replace	CT0054		1.5
Light Bulb - Replace	CT0055		0.2
Marker Light Assy.-Replace	CT0056	Each	0.2

Mount & Balance Tire	CT0057	Each	0.25
Taillight Assy.-Replace	CT0058	Each	0.5
Tag Bracket or License Plate- R&R, R&I, or Install	CT0059		0.2
Trailer 7-Way Wire Connector-Replace	CT0060		0.5
Trailer 4-Pin Wire Connector-Replace	CT0061		0.4
Trailer Wiring Repair	CT0062		0.2
Valve Stem Assy.-Replace	CT0063		0.3
Valve Stem Cap-Install	CT0064		0.1
Valve Stem Core-Replace	CT0065		0.2
Safety Chain- R&R, R&I, or Install	CT0066	Pin-On	0.2
	CT0067	Weld-On	0.5
Safety Chain Clevis- R&R, R&I, or Install	CT0068		0.2
Wheel & Tire-R&I	CT0069		0.1
Wheel Bearings- Replace Includes: Inner & Outer Bearings	CT0070		1.8
Generic Cooling Trailer Labor Line	CT0071		

Diagnose Overheating Condition	CB515		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Cooling System Leak	CB516		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Drain & Refill Cooling System	CB517		0.5	0.5	0.5	0.5	0.8	0.8	0.5
Fan (Cooling)-Replace	CB518		0.8	1.0	0.8	0.8	1.0	1.0	1.0
Fan Pulley &/or Spacer R&R or R&I	CB519		0.9	1.0	0.8	0.8	1.5	1.5	1.0
Guard, Belt- R&R or R&I	CB520	Top	0.5	0.5	N/A	N/A	0.8	0.8	N/A
	CB521	Bottom	0.5	0.5	N/A	N/A	N/A	N/A	N/A
Guard, Fan- R&R or R&I	CB522	L Top	0.5	0.5	0.5	0.5	1.0	1.0	0.5
	CB523	R Top	0.5	0.5	0.5	0.5	N/A	N/A	N/A
	CB524	L Bottom	N/A	N/A	0.5	0.5	N/A	N/A	0.5
	CB525	R Bottom	N/A	N/A	0.5	N/A	N/A	N/A	0.5
Coolant Heater - R&R or R&I	CB526		0.7	0.7	0.7	0.7	0.7	0.7	
Pulley-Replace	CB527	Alternator	N/A	0.8	N/A	0.8	1.1	0.8	0.8
	CB528	A/C Delete	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	CB529	Idler	N/A	N/A	N/A	N/A	0.5	N/A	N/A
	CB530	Fan	0.9	1.0	0.8	0.8	1.0	1.0	1.0
	CB531	Tensioner	N/A	N/A	N/A	N/A	0.8	N/A	N/A
Radiator Assembly-R&R or R&I	CB532		3.5	3.8	3.8	4.0	5.2	5.2	4.0
Radiator Cap-Replace	CB533		0.1	0.1	0.1	0.1	0.1	0.1	0.1
Serpentine Belt Tensioner-R&R or R&I	CB534		0.7	N/A	N/A	N/A	0.6	0.6	N/A
Surge Tank-R&R or R&I	CB535		N/A	N/A	N/A	N/A	N/A	0.8	N/A
Thermostat Housing, Thermostat &/or Gasket - Replace	CB536	Each	0.9	0.5	0.8	0.5	0.8	0.8	0.5
Tighten & Adjust All Applicable Belts with guards removed	CB537		N/A	0.3	0.3	0.3	N/A	N/A	0.3
Water Pump-Replace	CB538		1.2	0.8	1.4	0.8	1.2	1.2	0.8
Generic Cooling System & Belt Drive Labor Line Specify generic labor operation	CB539								

DC Electrical

LABOR OPERATION DESCRIPTION	Operation Number	Detail	Labor Time						
			CUMM100	MMD100I	SHIN100	DCA125SSIT3	CUMM150	DCA150SSCT4I	DCA150SSIT3
			QSB5-G5	4HK1	6BG1	4HK1XYGD-03	QSB7-G5	QSB7-G7	6HK1
Alternator R&R or R&I	DC500		0.9	0.8	0.8	0.8	1.2	1.2	0.8
Battery or Batteries- R&R or R&I	DC501	Single	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	DC102	Dual	N/A	N/A	1.0	N/A	N/A	1.0	1.0
Battery Cable-Replace, Positive R&R or R&I	DC503	Single	0.5	0.5	0.5	N/A	0.5	0.5	0.5
	DC504	Dual	N/A	N/A	1.0	N/A	N/A	1.0	1.0
Battery Cable-Replace, Positive (Battery to Starter) R&R or R&I	DC505	Single	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	DC506	Dual	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Battery Cable- Replace, Negative R&R or R&I	DC507	Single	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	DC508	Dual	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Battery Disconnect Switch-Replace	DC509		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Battery Hold Down J-Hook & Bracket- Install	DC510		0.2	0.2	0.2	0.2	0.2	0.2	0.2

Tachometer Sensor - Replace	DC546		0.4	0.4	0.4	0.4	0.4	0.4	0.4
Generic DC Electrical Labor Line	DC547								

Engine

LABOR OPERATION DESCRIPTION	Operation Number	Detail	Labor Time						
			CUMM100	MMD100I	SHIN100	DCA125SSIT3	CUMM150	DCA150SSCT4I	DCA150SSIT3
			QSB5-G5	4HK1	6BG1	4HK1XYGD-03	QSB7-G5	QSB7-G7	6HK1
Hydrocarbon Block Test-Perform	D5000		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Diagnose No Start Condition	D5001		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Engine Knock	D5002		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Excessive Oil Consumption	D5003		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Oil Leak	D5004		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Engine Performance Issue	D5005		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diesel Engine Compression Test-Perform	D5021	Glow Plug Hole	N/A	1.0	N/A	1.0	N/A	N/A	1.0
		Nozzle Hole	1.0	N/A	1.0	N/A	1.0	1.0	N/A
Diesel Engine Cylinder Leak Down Test-Perform	D5022		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Drill & Extract Broken Bolt	D5023		1.0	1.0	1.0	1.0	1.0	1.0	1.0
ENGINE ASSEMBLY, BLOCK & MOUNTS	Operation Number	Detail	CUMM100	MMD100I	SHIN100	DCA125SSIT3	CUMM150	DCA150SSCT4I	DCA150SSIT3
			QSB5-G5	4HK1	6BG1	4HK1XYGD-03	QSB7-G5	QSB7-G7	6HK1
Engine Assembly- Removal & Installation <small>Includes: R&I only those components necessary for the removal of the complete engine assy. Includes transfer of all necessary parts</small>	E9001		---	---	---	---	10.0	---	---
Engine Assembly- Remove, Install, & Overhaul <small>Includes: Replace all applicable rings, sleeves, bearings, & all other misc. internal engine components. DOES NOT include machine work</small>	E9002		---	---	---	---	29.8	---	---
Engine (Long Block)- Remove & Replace <small>Consists of cylinder block fitted with pistons, rings, connecting rods, crankshaft, and all bearings, cylinder head, camshaft timing components, etc. Clean & Transfer all other applicable parts</small>	E9003		---	---	---	---	17.3	---	---
Engine Mount and /or Mounts- Replace	E9005	One Engine Mount	---	---	---	---	1.0	---	---
	E9006	Each Additional Mount	---	---	---	---	0.5	---	---
ENGINE OILING	Operation Number	Detail	CUMM100	MMD100I	SHIN100	DCA125SSIT3	CUMM150	DCA150SSCT4I	DCA150SSIT3
			QSB5-G5	4HK1	6BG1	4HK1XYGD-03	QSB7-G5	QSB7-G7	6HK1
Auxiliary Engine Oil Cooler- Replace	E9007		N/A	N/A	0.5	N/A	N/A	N/A	0.5
Engine Oil Cooler- Replace	E9008		1.5	3.3	3.1	3.3	1.3	1.3	3.8
Engine Oil Cooler Hose- Replace	E9009	each	N/A	N/A	0.3	0.6	N/A	N/A	0.3
Engine Oil Filter- Replace	E9010		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Oil Dipstick-Replace	E9011		0.1	0.1	0.1	0.1	0.1	0.1	0.1
Oil Dipstick Tube-Replace	E9012		0.5	N/A	0.5	N/A	0.5	0.5	N/A
Oil Pan Drain Plug & /or Gasket- Replace	E9013		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Oil Pan Drain Valve - Replace	E9014		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Oil Filter Adaptor and/or Gasket- Replace	E9015		1.0	0.4	0.4	0.4	1.0	1.0	0.4

Air Restriction Indicator - R&R	FE507		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Boost Pressure Sensor - Replace	FE508		0.3	0.3	N/A	0.3	0.3	0.3	0.3
Boost Temperature Sensor- Replace	FE509		0.3	0.3	N/A	0.3	0.3	0.3	0.3
Breather Filter-R&R or R&I	FE510		0.5	0.3	N/A	0.3	0.5	0.5	0.3
Breather Filter Housing- R&R or R&I	FE511		N/A	N/A	N/A	N/A	0.5	0.5	N/A
Breather Tube - R&R or R&I	FE512		0.3	0.3	0.4	0.3	0.3	0.3	0.3
Diagnose No Start	FE513		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Fuel System Issue	FE514		1.0	1.0	1.0	1.0	1.0	1.0	1.0
EGR Systems-Check	FE515		0.5	0.5	0.5	0.5	0.5	0.5	0.5
EGR Valve-Replace	FE516		N/A	1.0	0.5	1.0	0.5	0.5	0.5
EGR Lead Valve-Replace	FE517		N/A	0.5	0.5	0.5	N/A	N/A	0.5
EGR Cooler (1PC)-Replace	FE518		N/A	0.6	N/A	0.6	1.0	1.0	0.5
EGR Cooler (2PC)-Replace	FE519		N/A	N/A	N/A	N/A	N/A	N/A	0.8
EGR Position Sensor - R&R or R&I	FE520		N/A	Non-Serviceable	N/A	Non-Serviceable	N/A	N/A	Non-Serviceable
DOC / DPF Filter Assembly - R&R or R&I	FE521		N/A	N/A	N/A	N/A	N/A	2.5	N/A
Exhaust Muffler Assembly - R&R or R&I	FE522		2.0	2.0	2.0	2.0	2.0	N/A	2.0
Exhaust Clamp-Replace or Install	FE523		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Exhaust Backpressure Sensor - Replace	FE524		0.3	N/A	N/A	N/A	0.5	0.5	N/A
Exhaust Differential Pressure Sensor - Replace	FE524		N/A	N/A	N/A	N/A	0.5	0.5	N/A
Exhaust Gas Oxygen/Temp Sensor - Replace	FE525		N/A	N/A	N/A	N/A	0.4	0.4	N/A
Exhaust Manifold &/or Gaskets	FE526		1.6	1.7	1.2	1.7	1.5	1.5	1.7
Exhaust Pipe Assembly-Replace	FE527		0.8	0.8	0.8	0.8	0.8	0.8	0.8
Intake Air Temperature (IAT) Sensor - Replace	FE528		0.3	0.4	N/A	0.4	0.5	0.5	0.4
Intercooler / Charge Air Cooler (CAC) - R&R or R&I	FE529		3.9	3.9	3.9	3.9	5.7	5.7	3.9
Intercooler / Charge Air Cooler (CAC) Tube- R&R or R&I	FE530	Upper	0.3	0.3	0.5	0.3	0.3	0.3	0.3
	FE531	Lower	0.4	0.4	0.8	0.4	0.4	0.4	0.4
Fuel Cap - Replace	FE532		0.1	0.1	0.1	0.1	0.1	0.1	0.1
Fuel Cap /Level Gauge- Replace	FE533		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Fuel Drain Valve - R&R or R&I	FE534		0.4	0.4	0.4	0.4	0.4	0.4	0.4
Fuel Filter &/or Fuel/Water Separator - Replace	FE535	Spin-on	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	FE536	Cartridge	0.3	0.3	0.3	0.3	0.4	0.4	0.3
Fuel Injector- Replace (Includes QR Programming when applicable)	FE537	All	2.9	2.5	3.4	2.5	3.4	3.4	3.4
	FE538	Each	0.9	0.8	0.8	0.8	0.8	0.8	0.8
Fuel Pressure Sensor - Replace	FE539		0.5	Non-Serviceable	N/A	Non-Serviceable	0.5	0.5	Non-Serviceable
Fuel Pressure Regulator - Replace	FE540		0.5	Non-Serviceable	N/A	Non-Serviceable	0.5	0.5	Non-Serviceable

Fuel Temperature Sensor - Replace	FE541		N/A	Non-Serviceable	N/A	Non-Serviceable	N/A	N/A	Non-Serviceable
Fuel Injection Control Unit / Common Rail Assembly - R&R	FE542		1.5	1.5	N/A	1.5	1.7	1.7	1.5
Fuel Injector Supply Line &/or Pipe - R&R or R&I	FE543	Each	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Fuel Injection Pump - Replace	FE544		2.0	1.5	2.9	1.5	1.6	1.6	1.5
Fuel Filler Neck - Replace	FE545		0.8	0.8	0.8	0.8	0.8	0.8	0.8
Fuel Primer Pump - R&R or R&I	FE546		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Fuel Pump - Replace (Electromagnetic)	FE547		1.2	0.5	0.8	0.5	1.2	1.2	0.5
Fuel Pump Inspection - Perform (Electromagnetic)	FE548		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Injection System Air Bleeding Procedure	FE549		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Suction Control Valve (SCV) - R&R or R&I	FE550		N/A	0.5	N/A	0.5	N/A	N/A	N/A
Turbo Inspection-Perform	FE551		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Turbocharger-R&R or R&I	FE552		0.9	0.8	2.0	0.8	1.5	1.5	0.8
Turbocharger Coolant Line - R&R	FE553	Feed	0.4	N/A	N/A	N/A	N/A	0.4	N/A
	FE554	Return	0.4	N/A	N/A	N/A	N/A	0.4	N/A
Turbocharger Exhaust Pipe - R&R	FE555		0.8	0.8	0.8	0.8	0.8	0.8	0.8
Turbocharger Oil Line - R&R	FE556	Feed	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	FE557	Return	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Turbocharger Vane Position Sensor -R&R	FE558		N/A	N/A	N/A	N/A	N/A	0.2	N/A
Turbocharger Vane Position Solenoid Valve - R&R	FE559		N/A	N/A	N/A	N/A	N/A	0.5	N/A
Vacuum Pump-Replace	FE560		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Waste Gate Actuator-Replace	FE561		0.8	N/A	N/A	N/A	0.4	0.6	N/A
Generic Fuel, Exhaust, & Emissions Labor Line	FE562								

Make Ready & PM Tasks

LABOR OPERATION DESCRIPTION	Operation Number	Detail	Labor Time						
			CUMM100	MMD100I	SHIN100	DCA125SSIT3	CUMM150	DCA150SSCT4I	DCA150SSIT3
			QSB5-G5	4HK1	6BG1	4HK1XYGD-03	QSB7-G5	QSB7-G7	6HK1
PM A - Diesel Generator 250 hr.	PM1000		1.0	1.0	1.0	1.0	1.0	1.0	1.0
PM B - Diesel Generator 400 hr.	PM1003		1.0	1.0	1.0	1.0	1.0	1.0	1.0
PM Task #1008- Diesel GENERATOR ONLY - MAKE READY	PM1008		1.5	1.5	1.5	1.5	1.5	1.5	1.5
PM Task #1012 - 2000 HR Generator Load Bank	PM1012		1.1	1.1	1.1	1.1	1.1	1.1	1.1
PM Task #1013 - 4500 Hr Generator Air Cooler	PM1013		2.5	2.5	2.5	2.5	2.5	2.5	2.5
PM Task #1015 DOT Annual Trailer Inspection (STATE	PM1015		1.0	1.0	1.0	1.0	1.0	1.0	1.0
PM Task #1016 - 20 Minute Load Test Generators	PM1016		0.6	0.6	0.6	0.6	0.6	0.6	0.6
Pre-Deployment Quality Control Inspection	MR504		1.5	1.5	1.5	1.5	1.5	1.5	1.5
Pressure Wash NG Generator (Clean)	MR501	Mild	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	MR502	Heavy	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	MR503	Severe	2.0	2.0	2.0	2.0	2.0	2.0	2.0

NOTE: These PM's & Make Ready's are already included in the PM/MR type WORK ORDERS as TASK #'s from the PM/MR Task list. We just need to revise the hrs for these tasks.

Technical Service Bulletins (TSB's)

LABOR OPERATION DESCRIPTION	Operation Number	Detail	Labor Time						
			CUMM100	MMD100I	SHIN100	DCA125SSIT3	CUMM150	DCA150SSCT4I	DCA150SSIT3

Valve Stem Core-Replace	TR531		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Safety Chain- R&R, R&I, or Install	TR532	Pin-On	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	TR533	Weld-On	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Safety Chain Clevis- R&R, R&I, or Install	TR534		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Wheel & Tire-R&I	TR535		0.1	0.1	0.1	0.1	0.1	0.1	0.1
Wheel Bearings- Replace	TR536		1.8	1.8	1.8	1.8	1.8	1.8	1.8
Generic Trailer Labor Line	TR537								

Cabinet Door Hinges-Replace	CH508	Each	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Cabinet Door Keep Latch-Replace	CH509	Each	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Drip Rail-Replace	CH510	Each	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Install Decal to Cabinet	CH511	Each	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Install Unit to Trailer	CH112		1.8	1.8	1.8	1.8	1.8	1.8	1.8
Install Cabinet Enclosure to Skid (Complete)	CH513		3.0	3.0	3.0	3.0	3.0	3.0	3.0
PANEL, Corner-Replace	CH115	L Front	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	CH516	R Front	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	CH117	L Rear	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	CH518	R Rear	1.5	1.5	1.5	1.5	1.5	1.5	1.5
PANEL, Header-Replace	CH519		1.5	1.5	1.5	1.5	1.5	1.5	
PANEL, Top-Replace	CH521	Each	1.0	1.0	1.0	1.0	1.0	1.0	
Remove Decal from Cabinet	CH524	Each	0.8	0.8	0.8	0.8	0.8	0.8	
Remove Cabinet Enclosure from Skid (Complete)	CH525		3.0	3.0	3.0	3.0	3.0	3.0	
Remove Unit to Trailer-Replace	CH526		0.8	0.8	0.8	0.8	0.8	0.8	
Rear Door Glass & Gasket-Replace	CH527		0.8	0.8	0.8	0.8	0.8	0.8	
Skid Drain Valve-Replace	CH128		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generic Cabinet & Hardware Labor Line	CH529								

Cooling System & Belt Drive

LABOR OPERATION DESCRIPTION	Operation Number	Detail	Labor Time						
			CUMM250	DCA250SSIT3	DCA300SSCT3	DCA300SSCT4I	DCA300SSKT3	CUMM350	DCA400SSIT3
			QSB7-G5	6UZ1	QSL9-G3	QSL9-G8	SAA6D125E	QSM11-G4	6WG1
Belt- Replace with guards removed	CB500	Fan	0.4	0.4	0.5	0.5	0.4	0.5	0.4
	CB101	Alternator	N/A	N/A	N/A	N/A	N/A	N/A	0.8
Coolant Temperature Sensor-Replace	CB502		0.8	0.5	0.5	0.5	0.5	0.5	0.5
Coolant Temperature Switch-Replace	CB103		0.8	0.5	0.5	0.5	0.8	0.8	0.5
Coolant Hoses &/or Tube-Replace	CB504	Upper	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	CB105	Lower	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	CB506	Bypass	0.5	0.6	0.5	0.5	0.5	0.5	0.6
Coolant Hose Clamp &/or Tube Clamp-Replace	CB507	Upper	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	CB508	Lower	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	CB509	Bypass	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Coolant Reservoir- Replace	CB510	Install	1.0	1.0	N/A	N/A	1.0	N/A	N/A
	CB511	Replace	0.5	0.5	N/A	N/A	0.5	N/A	N/A
Coolant Drain Valve- Install	CB540		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Coolant Sight Glass-Replace	CB512		0.3	N/A	0.3	0.3	0.3	0.3	N/A
Cooling System Pressure Test	CB513		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Cooling System Bleed Procedure - Perform	CB514		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Diagnose Overheating Condition	CB515		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Cooling System Leak	CB516		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Drain & Refill Cooling System	CB517		1.0	1.0	1.0	1.0	1.0	1.5	1.5
Fan (Cooling)-Replace	CB518		1.0	0.3	0.8	0.8	1.0	1.0	0.3
Fan Pulley &/or Spacer R&R or R&I	CB519		1.5	0.4	0.8	0.8	1.5	1.5	0.4
Guard, Belt- R&R or R&I, as applicable for location on unit (left/right)	CB520	Top	0.8	0.5	N/A	N/A	0.8	0.8	N/A

Crankshaft Damper and/or Timing Cover Seal -	E9034		1.5	1.5	1.5	1.5	1.5	1.5	1.5
Crankshaft Damper R&R R&I	E9041		1.5	1.5	1.5	1.5	1.5	1.5	1.5
Crankshaft Damper Bolts - Replace	E9042	Each	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Flywheel DOES NOT Include: R&I engine	E9035		1	1	1	1	1	1	1
Main OIL Seal (Front)-Replace	E9036		0.8	0.8	0.8	0.8	0.8	0.8	0.8
Main OIL Seal (Rear), Housing and/or Gasket	E9037								
Main Bearings	E9038								
Piston, Rod and/or Rings -Replace	E9039								
Generic Engine Labor Line	E9040								

Fuel, Exhaust, & Emissions

LABOR OPERATION DESCRIPTION	Operation Number	Detail	Labor Time						
			CUMM250	DCA250SSIT3	DCA300SSCT3	DCA300SSCT4I	DCA300SSKT3	CUMM350	DCA400SSIT3
			QSB7-G5	6UZ1	QSL9-G3	QSL9-G8	SAA6D125E	QSM11-G4	6WG1
Air Filter Element-Replace	FE500		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Air Filter Housing- R&R or R&I	FE501		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Air Filter Housing Hood- R&R or R&I	FE502		N/A	N/A	N/A	N/A	N/A	0.2	0.2
Air Filter Housing Lid- R&R or R&I	FE503		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Air Inlet Elbow-Replace (Air filter housing to tube)	FE504		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Air Inlet Elbow-Replace (tube to adaptor)	FE505		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Air Inlet Tube-Replace (Elbow to elbow)	FE506		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Air Restriction Indicator - R&R	FE507		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Boost Pressure Sensor - Replace	FE508		0.3	0.3	N/A	0.3	0.3	0.3	0.3
Boost Temperature Sensor- Replace	FE509		0.3	0.3	N/A	0.3	0.3	0.3	0.3
Breather Filter-R&R or R&I	FE510		0.5	0.3	N/A	0.3	0.5	0.5	0.3
Breather Filter Housing- R&R or R&I	FE511		0.5	N/A	N/A	N/A	0.5	0.5	N/A
Breather Tube - R&R or R&I	FE512		0.3	0.3	0.4	0.3	0.3	0.3	0.3
Diagnose No Start	FE513		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Fuel System Issue	FE514		1.0	1.0	1.0	1.0	1.0	1.0	1.0
EGR Systems-Check	FE515		0.5	0.5	0.5	0.5	0.5	0.5	0.5
EGR Valve-Replace	FE516		0.5	0.8	0.5	1.0	0.5	0.5	0.8
EGR Lead Valve-Replace	FE517		N/A	0.3	0.5	0.5	N/A	N/A	0.3
EGR Cooler (1PC)-Replace	FE518		1.0	1.0	N/A	0.6	1.0	1.0	1.0
EGR Cooler (2PC)-Replace	FE519		N/A	1.4	N/A	N/A	N/A	N/A	1.4
EGR Position Sensor - R&R or R&I	FE520		N/A	Non-Serviceable	N/A	Non-Serviceable	N/A	N/A	Non-Serviceable
DOC / DPF Filter Assembly - R&R or R&I	FE521		N/A	N/A	N/A	N/A	N/A	2.5	N/A
DPD Regeneration	E9041		N/A	N/A	N/A	1	N/A	N/A	N/A
Exhaust Muffler Assembly - R&R or R&I	FE522		2.0	2.0	2.0	2.0	2.0	N/A	2.0
Exhaust Clamp-Replace or Install	FE523		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Exhaust Backpressure Sensor - Replace	FE524		0.5	N/A	N/A	N/A	0.5	0.5	N/A
Exhaust Differential Pressure Sensor - Replace	FE524		0.5	N/A	N/A	N/A	0.5	0.5	N/A
Exhaust Gas Oxygen/Temp Sensor - Replace	FE525		0.4	N/A	N/A	N/A	0.4	0.4	N/A
Exhaust Manifold &/or Gaskets	FE526		1.5	1.8	1.2	1.7	1.5	1.5	1.8

Exhaust Pipe Assembly-Replace	FE527		0.8	0.8	0.8	0.8	0.8	0.8	0.8
External Fuel Valves- Install	FE563	T Valve- Each	N/A	0.75	0.75	0.75	N/A	N/A	0.75
	FE564	Selector Valve	1.5	1.5	1.5	1.5	1.5	1.5	1.5
External Fuel Lines- Install Bulk Head Fittings			N/A	1.5	1.5	1.5	1.5	N/A	1.5
Intake Air Temperature (IAT) Sensor - Replace	FE528		0.5	0.4	N/A	0.4	0.5	0.5	0.4
Intercooler / Charge Air Cooler (CAC) - R&R or R&I	FE529		5.7	3.9	4.5	3.9	5.7	5.7	4.4
Intercooler / Charge Air Cooler (CAC) Tube/Hose/Boot- R&R or R&I	FE530	Upper	0.3	0.3	0.5	0.3	0.3	0.3	0.3
	FE531	Lower	0.4	0.4	0.8	0.4	0.4	0.4	0.4
Fuel Cap - Replace	FE532		0.1	0.1	0.1	0.1	0.1	0.1	0.1
Fuel Cap /Level Gauge- Replace	FE533		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Fuel Drain Valve - R&R or R&I	FE534		0.4	0.4	0.4	0.4	0.4	0.4	0.4
Fuel Filter &/or Fuel/Water Separator - Replace	FE535	Spin-on	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	FE536	Cartridge	0.4	0.3	0.3	0.3	0.4	0.4	0.3
Fuel Injector- Replace (Includes QR Programming when applicable)	FE537	All	3.4	2.5	3.4	2.5	3.4	3.4	2.5
	FE538	Each	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Fuel Pressure Sensor - Replace	FE539		0.5	Non-Serviceable	N/A	Non-Serviceable	0.5	0.5	Non-Serviceable
Fuel Pressure Regulator - Replace	FE540		0.5	Non-Serviceable	N/A	Non-Serviceable	0.5	0.5	Non-Serviceable
Fuel Temperature Sensor - Replace	FE541		N/A	Non-Serviceable	N/A	Non-Serviceable	N/A	N/A	Non-Serviceable
Fuel Injection Control Unit / Common Rail Assembly -	FE542		1.7	1.5	N/A	1.5	1.7	1.7	1.5
Fuel Injector Supply Line &/or Pipe - R&R or R&I	FE543	Each	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Fuel Injection Pump - Replace	FE544		1.6	1.5	2.9	1.5	1.6	1.6	1.5
Fuel Filler Neck - Replace	FE545		0.8	0.8	0.8	0.8	0.8	0.8	0.8
Fuel Primer Pump - R&R or R&I	FE546		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Fuel Pump - Replace (Electromagnetic)	FE547		1.2	0.5	0.8	0.5	1.2	1.2	0.5
Fuel Pump Inspection - Perform (Electromagnetic)	FE548		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Injection System Air Bleeding Procedure	FE549		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Suction Control Valve (SCV) - R&R or R&I	FE550		N/A	0.5	N/A	N/A	N/A	N/A	N/A
Turbo Inspection-Perform	FE551		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Turbocharger-R&R or R&I	FE552		1.5	1.2	1.5	1.5	1.5	1.5	1.2
Turbocharger Coolant Line - R&R	FE553	Feed	N/A	N/A	N/A	N/A	N/A	0.4	N/A
	FE554	Return	N/A	N/A	N/A	N/A	N/A	0.4	N/A
Turbocharger Exhaust Pipe - R&R	FE555		0.8	0.8	0.8	0.8	0.8	0.8	0.8
Turbocharger Oil Line - R&R	FE556	Feed	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	FE557	Return	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Turbocharger Vane Position Sensor -R&R	FE558		N/A	N/A	N/A	N/A	N/A	0.2	N/A
Turbocharger Vane Position Solenoid Valve - R&R	FE559		N/A	N/A	N/A	N/A	N/A	0.5	N/A
Vacuum Pump-Replace	FE560		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Waste Gate Actuator-Replace	FE561		0.4	Non-Serviceable	0.4	0.4	0.4	0.6	N/A
Generic Fuel, Exhaust, & Emissions Labor Line	FE562								

Hub Cap- R&R, R&I, or Install	TR516	Oil Bath	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Hydraulic Brake Line - Replace	TR517	Each	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Hydraulic Brake Shoe/Backer Plate Assy.	TR517		2.5	2.5	2.5	2.5	2.5	2.5	2.5
Hydraulic Brake System - Bleed	TR518		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Hydraulic Brake Wheel Cylinder - Replace (Hub assem)	TR519	Each	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Install LED Box Tail Lights	TR539		N/A	1.5	1.5	1.5	1.5	N/A	1.5
Landing Leg / Crank Handle-Replace	TR520		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Leaf Spring-Replace	TR521		1.5	1.5	1.5	1.5	1.5	1.5	1.5
Light Bulb – Replace	TR522		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Marker Light Assy.-Replace	TR523	Each	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Mount & Balance Tire	TR524	Each	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Taillight Assy.-Replace	TR525	Each	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Tag Bracket or License Plate- R&R, R&I, or Install	TR526		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Trailer 7-Way Wire Connector-Replace	TR527		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trailer Brake Conversion-Hyd to Electric	TR540		N/A	10.0	N/A	N/A	N/A	N/A	N/A
Trailer Wiring Repair (one circuit)	TR528	Each	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Valve Stem Assy.-Replace	TR529		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Valve Stem Cap-Install	TR530		0.1	0.1	0.1	0.1	0.1	0.1	0.1
Valve Stem Core-Replace	TR531		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Safety Chain- R&R, R&I, or Install	TR532	Pin-On	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	TR533	Weld-On	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Safety Chain Clevis- R&R, R&I, or Install	TR534		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Wheel & Tire-R&I	TR535		0.1	0.1	0.1	0.1	0.1	0.1	0.1
Wheel Bearings- Replace Includes: Inner & Outer Bear	TR536		1.8	1.8	1.8	1.8	1.8	1.8	1.8
Generic Trailer Labor Line Specify generic labor operat	TR537								

	CH506	Rear Door	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Cabinet Door Handle Assy.-Replace	CH107	Each	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Cabinet Door Hinges-Replace	CH508	Each	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Cabinet Door Keep Latch-Replace	CH509	Each	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Drip Rail-Replace	CH510	Each	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Install Decal to Cabinet	CH511	Each	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Install Unit to Trailer	CH112		1.8	1.8	1.8	1.8	1.8	1.8	1.8
Install Cabinet Enclosure to Skid (Complete)	CH513		3.0	3.0	3.0	3.0	3.0	3.0	3.0
PANEL, Corner-Replace	CH115	L Front	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	CH516	R Front	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	CH117	L Rear	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	CH518	R Rear	1.5	1.5	1.5	1.5	1.5	1.5	1.5
PANEL, Header-Replace	CH519		1.5	1.5	1.5	1.5	1.5	1.5	
PANEL, Top-Replace	CH521	Each	1.0	1.0	1.0	1.0	1.0	1.0	
Remove Decal from Cabinet	CH524	Each	0.8	0.8	0.8	0.8	0.8	0.8	
Remove Cabinet Enclosure from Skid (Complete)	CH525		3.0	3.0	3.0	3.0	3.0	3.0	
Remove Unit to Trailer-Replace	CH526		0.8	0.8	0.8	0.8	0.8	0.8	
Rear Door Glass & Gasket-Replace	CH527		0.8	0.8	0.8	0.8	0.8	0.8	
Skid Drain Valve-Replace	CH128		N/A	N/A	N/A	0.3	N/A	N/A	N/A
Generic Cabinet & Hardware Labor Line	CH529								

Cooling System & Belt Drive

LABOR OPERATION DESCRIPTION	Operation Number	Detail	DCA150SSVT1	MMD150I	SHIN150	WACK150IT3	CUMM180	DCA180SSIT3	DCA220SSVT1
			TAD720GE	6HK1	6HK1	6HK1	QSB7-G3	6HK1	TAD741GE
			Belt- Replace with guards removed	CB500	Fan	0.5	N/A	N/A	N/A
	CB101	Alternator	0.5	0.8	0.8	0.8	N/A	0.8	0.5
Coolant Temperature Sensor-Replace	CB502		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Coolant Temperature Switch-Replace	CB103		0.5	0.5	0.5	0.5	0.8	0.5	0.5
Coolant Hoses &/or Tube-Replace	CB504	Upper	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	CB105	Lower	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	CB506	Bypass	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Coolant Hose Clamp &/or Tube Clamp-Replace	CB507	Upper	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	CB508	Lower	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	CB509	Bypass	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Coolant Reservoir- Replace	CB510	Install	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	CB511	Replace	0.5	0.5	0.5	0.5	0.8	0.5	0.5
Coolant Sight Glass-Replace	CB512		0.3	N/A	N/A	N/A	0.3	N/A	N/A
Cooling System Pressure Test	CB513		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Cooling System Bleed Procedure - Perform	CB514		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Diagnose Overheating Condition	CB515		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Cooling System Leak	CB516		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Drain & Refill Cooling System	CB517		0.5	0.5	0.5	0.5	0.8	0.5	0.5
Fan (Cooling)-Replace	CB518		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Fan Pulley &/or Spacer R&R or R&I	CB519		1.0	1.0	1.0	1.0	1.5	1.0	1.0
Guard, Belt- R&R or R&I	CB520	Top	N/A	0.5	N/A	0.5	0.8	0.5	0.5
	CB521	Bottom	N/A	0.5	N/A	0.5	N/A	0.5	0.5

Specific Gravity Battery Test	DC521	Hydrometer	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Starter-Replace	DC522		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Instrumentation, Wiring, Control , & Monitoring	Operation Number	Detail	DCA150SSVT1	MMD150I	SHIN150	WACK150IT3	CUMM180	DCA180SSIT3	DCA220SSVT1
			TAD720GE	6HK1	6HK1	6HK1	QSB7-G3	6HK1	TAD741GE
Camshaft Position Sensor-Replace	DC523		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Crankshaft Position Sensor-Replace	DC524		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Can Enabled Dual Band GPS System-Install	DC525	M8	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Can Enabled CT Monitor System-Install (Controls Inc. Model# XCAN-AC)	DC526	XCAN-AC	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Controller-Replace Includes: Complete Assy. W/ relays, junction strips, fuses, & breakers, if applicable	DC527	Cummins	N/A	N/A	N/A	N/A	1	N/A	N/A
	DC528	Isuzu	N/A	1	1	1	N/A	1	N/A
	DC529	Analog	1	N/A	N/A	N/A	N/A	N/A	1
DC Fuse-Replace	DC530		0.1	0.1	0.1	0.1	0.1	0.1	0.1
Engine Control Module (ECM) –R&R or R&I	DC531		0.5	0.5	0.5	0.5	1.0	0.5	0.5
Electrical Pigtail Connector Repair	DC532	Each	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Engine Wiring Harness-Replace	DC533		2.0	2.0	2.0	2.0	2.4	2.0	2.0
Fuel Level Sender	DC534		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Gauge- Replace	DC535	Hertz	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	DC536	AC Voltmeter	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	DC537	Load %	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	DC538	Oil Pressure	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	DC539	Water	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	DC540	DC Volts / Amp	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	DC541	Tach / Hourmeter	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	DC542	Fuel	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Hour Meter-Replace	DC543	OEM	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	DC544	Pre-Settable	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Main Engine Wiring Harness Heat Shield – R&R &/or Install	DC545		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Tachometer Sensor - Replace	DC546		0.4	0.4	0.4	0.4	0.4	0.4	0.4
Generic DC Electrical Labor Line	DC547								

Engine

LABOR OPERATION DESCRIPTION	Operation Number	Detail	DCA150SSVT1	MMD150I	SHIN150	WACK150IT3	CUMM180	DCA180SSIT3	DCA220SSVT1
			TAD720GE	6HK1	6HK1	6HK1	QSB7-G3	6HK1	TAD741GE
Hydrocarbon Block Test-Perform	D5000		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Diagnose No Start Condition	D5001		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Engine Knock	D5002		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Excessive Oil Consumption	D5003		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Oil Leak	D5004		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Engine Performance Issue	D5005		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diesel Engine Compression Test-Perform	D5021	Glow Plug Hole	N/A	1.0	1.0	1.0	N/A	1.0	N/A
		Nozzle Hole	1.0	N/A	N/A	N/A	1.0	N/A	1.0

Diesel Engine Cylinder Leak Down Test-Perform	D5022		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Drill & Extract Broken Bolt	D5023		1.0	1.0	1.0	1.0	1.0	1.0	1.0
ENGINE ASSEMBLY, BLOCK & MOUNTS	Operation Number	Detail	DCA150SSVT1	MMD150I	SHIN150	WACK150IT3	CUMMM180	DCA180SSIT3	DCA220SSVT1
			TAD720GE	6HK1	6HK1	6HK1	QSB7-G3	6HK1	TAD741GE
Engine Assembly- Removal & Installation Includes: R&I only those components necessary for the removal of the complete engine assy. Includes transfer of all necessary parts	E9001		---	---	---	---	---	---	---
Engine Assembly- Remove, Install, & Overhaul Includes: Replace all applicable rings, sleeves, bearings, & all other misc. internal engine components. DOES NOT include machine work	E9002		---	---	---	---	---	---	---
Engine (Long Block)- Remove & Replace Consists of cylinder block fitted with pistons, rings, connecting rods, crankshaft, and all bearings, cylinder head, camshaft timing components, etc. Clean & Transfer all other applicable parts	E9003		---	---	---	---	---	---	---
Engine Mount and /or Mounts- Replace	E9005	One Engine Mount	---	---	---	---	---	---	---
	E9006	Each Additional Mount	---	---	---	---	---	---	---
ENGINE OILING	Operation Number	Detail	DCA150SSVT1	MMD150I	SHIN150	WACK150IT3	CUMMM180	DCA180SSIT3	DCA220SSVT1
			TAD720GE	6HK1	6HK1	6HK1	QSB7-G3	6HK1	TAD741GE
Auxiliary Engine Oil Cooler- Replace	E9007		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Engine Oil Cooler- Replace	E9008		3.5	3.8	3.8	3.8	1.3	3.8	3.5
Engine Oil Cooler Hose- Replace	E9009	each	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Engine Oil Filter- Replace	E9010		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Oil Dipstick-Replace	E9011		0.1	0.1	0.1	0.1	0.1	0.1	0.1
Oil Dipstick Tube-Replace	E9012		0.5	N/A	N/A	N/A	0.5	N/A	0.3
Oil Pan Drain Plug & /or Gasket- Replace	E9013		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Oil Pan Drain Valve - Replace	E9014		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Oil Filter Adaptor and/or Gasket- Replace	E9015		0.5	0.4	0.4	0.4	1.0	0.4	0.8
OIL Return Line (Remote Filter/Crossover Line) - R&R	E9041	Return	N/A	0.75	0.75	0.75	N/A	0.75	N/A
OIL Supply Line (Remote Filter/Crossover Line) - R&R	E9042	Supply	N/A	0.75	0.75	0.75	N/A	0.75	N/A
Oil Fill Cap- Replace or Install	E9016		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Oil Pan and/or Gasket- Replace	E9017		2.0	1.5	1.5	1.5	2.5	1.5	2.0
Oil Pump- Replace	E9018		3.0	15.0	15.0	15.0	8.4	15.0	3.0
Oil Pressure Test-Perform	E9019		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Oil Pressure Switch- Replace	E9020		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Oil Pressure Sensor- Replace	E9021		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Oil Thermostat- Replace	E9022								
HEAD & VALVETRAIN	Operation Number	Detail	DCA150SSVT1	MMD150I	SHIN150	WACK150IT3	CUMMM180	DCA180SSIT3	DCA220SSVT1
			TAD720GE	6HK1	6HK1	6HK1	QSB7-G3	6HK1	TAD741GE
Cylinder Head & or Gasket- Replace	E9023		---	---	---	---	---	---	---
Intake Manifold &/or Gasket- Replace	E9024		2.4	2.4	2.4	2.4	2.2	2.4	2.4
Push Rod- Replace DOES NOT Include: R&I Rocker Arms	E9025		---	---	---	---	---	---	---
Rocker Arm &/or Shaft Assembly - Replace	E9026		---	---	---	---	---	---	---
Valve Adjustment Complete (Intake & Exhaust)	E9027		1.5	1.5	1.5	1.5	1.2	1.5	1.5
Valve Cover & or Gasket - Replace	E9028	each	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Valve Lifters-Replace	E9029		---	---	---	---	---	---	---
Valve Spring and or Seal-Replace	E9030		---	---	---	---	---	---	---

DOES NOT Include: R&I Cylinder Head									
PISTON ASSEMBLIES, BEARINGS & CRANKSHAFT	Operation Number	Detail	DCA150SSVT1	MMD150I	SHIN150	WACK150IT3	CUMM180	DCA180SSIT3	DCA220SSVT1
			TAD720GE	6HK1	6HK1	6HK1	QSB7-G3	6HK1	TAD741GE
Connecting Rod Bearings-Replace	E9032		---	---	---	---	---	---	---
Crankshaft-Replace	E9033		---	---	---	---	---	---	---
Crankshaft Damper and/or Timing Cover Seal - Replace	E9034		---	---	---	---	---	---	---
Flywheel DOES NOT Include: R&I engine	E9035		---	---	---	---	---	---	---
Main OIL Seal (Front)-Replace DOES NOT Include: R&I Crankshaft Damper	E9036			2.0	2.0	2.0		2.0	
Main OIL Seal (Rear), Housing and/or Gasket	E9037		---	---	---	---	---	---	---
Main Bearings	E9038		---	---	---	---	---	---	---
Piston, Rod and/or Rings -Replace	E9039		---	---	---	---	---	---	---
Generic Engine Labor Line	E9040								

Fuel, Exhaust, & Emissions

LABOR OPERATION DESCRIPTION	Operation Number	Detail	DCA150SSVT1	MMD150I	SHIN150	WACK150IT3	CUMM180	DCA180SSIT3	DCA220SSVT1
			TAD720GE	6HK1	6HK1	6HK1	QSB7-G3	6HK1	TAD741GE
Air Filter Element-Replace	FE500		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Air Filter Housing- R&R or R&I	FE501		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Air Filter Housing Hood- R&R or R&I	FE502		0.2	0.2	N/A	N/A	N/A	0.2	N/A
Air Filter Housing Lid- R&R or R&I	FE503		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Air Inlet Elbow-Replace (Air filter housing to tube)	FE504		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Air Inlet Elbow-Replace (tube to adaptor)	FE505		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Air Inlet Tube-Replace (Elbow to elbow)	FE506		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Air Restriction Indicator - R&R	FE507		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Boost Pressure Sensor - Replace	FE508		N/A	0.3	0.3	0.3	0.3	0.3	N/A
Boost Temperature Sensor- Replace	FE509		N/A	0.3	0.3	0.3	0.3	0.3	N/A
Breather Filter-R&R or R&I	FE510		0.3	0.3	0.3	0.3	0.5	0.3	0.3
Breather Filter Housing- R&R or R&I	FE511		N/A	N/A	N/A	N/A	0.5	N/A	N/A
Breather Tube - R&R or R&I	FE512		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Diagnose No Start	FE513		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Fuel System Issue	FE514		1.0	1.0	1.0	1.0	1.0	1.0	1.0
EGR Systems-Check	FE515		N/A	0.5	0.5	0.5	0.5	0.5	N/A
EGR Valve-Replace	FE516		N/A	0.5	0.5	0.5	0.5	0.5	N/A
EGR Lead Valve-Replace	FE517		N/A	0.5	0.5	0.5	N/A	0.5	N/A
EGR Cooler (1PC)-Replace	FE518		N/A	0.5	0.5	0.5	1.0	0.5	N/A
EGR Cooler (2PC)-Replace	FE519		N/A	0.8	0.8	0.8	N/A	0.8	N/A
EGR Position Sensor - R&R or R&I	FE520		N/A	Non-Serviceable	Non-Serviceable	Non-Serviceable	N/A	Non-Serviceable	N/A
DOC / DPF Filter Assembly - R&R or R&I	FE521		N/A	N/A	N/A	2.5	2.5	N/A	N/A
Exhaust Muffler Assembly - R&R or R&I	FE522		2.0	2.0	2.0	N/A	2.0	2.0	2.0
Exhaust Clamp-Replace or Install	FE523		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Exhaust Backpressure Sensor - Replace	FE524		N/A	N/A	N/A	N/A	0.5	N/A	N/A
Exhaust Differential Pressure Sensor - Replace	FE524		N/A	N/A	N/A	N/A	0.5	N/A	N/A
Exhaust Gas Oxygen/Temp Sensor - Replace	FE525		N/A	N/A	N/A	N/A	0.4	N/A	N/A

Exhaust Manifold &/or Gaskets	FE526		1.7	1.7	1.7	1.7	1.5	1.7	2.0
Exhaust Pipe Assembly-Replace	FE527		0.8	0.8	0.8	0.8	0.8	0.8	0.8
Intake Air Temperature (IAT) Sensor - Replace	FE528		N/A	0.4	0.4	0.4	0.5	0.4	N/A
Intercooler / Charge Air Cooler (CAC) - R&R or R&I	FE529		4.4	3.9	3.9	3.9	5.6	3.9	4.4
Intercooler / Charge Air Cooler (CAC) Tube-R&R or R&I	FE530	Upper	0.3	0.3	0.3	0.3	0.3	0.3	0.3
	FE531	Lower	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Fuel Cap - Replace	FE532		0.1	0.1	0.1	0.1	0.1	0.1	0.1
Fuel Cap /Level Gauge- Replace	FE533		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Fuel Drain Valve - R&R or R&I	FE534		0.4	0.4	0.4	0.4	0.4	0.4	0.4
Fuel Filter &/or Fuel/Water Separator - Replace	FE535	Spin-on	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	FE536	Cartridge	0.3	0.3	0.3	0.3	0.4	0.3	0.3
Fuel Injector- Replace (Includes QR Programming when applicable)	FE537	All	3.4	3.3	3.3	3.3	3.4	3.3	3.5
	FE538	Each	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Fuel Pressure Sensor - Replace	FE539		N/A	Non-Serviceable	Non-Serviceable	Non-Serviceable	0.5	Non-Serviceable	N/A
Fuel Pressure Regulator - Replace	FE540		N/A	Non-Serviceable	Non-Serviceable	Non-Serviceable	0.5	Non-Serviceable	N/A
Fuel Temperature Sensor - Replace	FE541		N/A	Non-Serviceable	Non-Serviceable	Non-Serviceable	N/A	Non-Serviceable	N/A
Fuel Injection Control Unit / Common Rail Assembly - R&R	FE542		N/A	1.5	1.5	1.5	1.7	1.5	N/A
Fuel Injector Supply Line &/or Pipe - R&R or R&I	FE543	Each	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Fuel Injection Pump - Replace	FE544		0.8	1.5	1.5	1.5	1.6	1.5	2.0
Fuel Filler Neck - Replace	FE545		0.8	0.8	0.8	0.8	0.8	0.8	0.8
Fuel Primer Pump - R&R or R&I	FE546		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Fuel Pump - Replace (Electromagnetic)	FE547		0.5	0.5	0.5	0.5	1.2	0.8	0.8
Fuel Pump Inspection - Perform (Electromagnetic)	FE548		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Injection System Air Bleeding Procedure	FE549		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Suction Control Valve (SCV) - R&R or R&I	FE550		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Turbo Inspection-Perform	FE551		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Turbocharger-R&R or R&I	FE552		1.0	0.8	0.8	0.8	1.5	0.8	1.0
Turbocharger Coolant Line - R&R	FE553	Feed	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	FE554	Return	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Turbocharger Exhaust Pipe - R&R	FE555		0.8	0.8	0.8	0.8	0.8	0.8	0.8
Turbocharger Oil Line - R&R	FE556	Feed	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	FE557	Return	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Turbocharger Vane Position Sensor -R&R	FE558		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Turbocharger Vane Position Solenoid Valve - R&R	FE559		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vacuum Pump-Replace	FE560		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Waste Gate Actuator-Replace	FE561		N/A	N/A	N/A	N/A	0.6	N/A	N/A
Generic Fuel, Exhaust, & Emissions Labor Line	FE562								

Make Ready & PM Tasks

LABOR OPERATION DESCRIPTION	Operation Number	Detail	DCA150SSVT1	MMD150I	SHIN150	WACK150IT3	CUMM180	DCA180SSIT3	DCA220SSVT1
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Hydraulic Brake Wheel Cylinder - Replace (Hub assembly removed)	TR519	Each	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Landing Leg / Crank Handle-Replace	TR520		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Leaf Spring-Replace	TR521		1.5	1.5	1.5	1.5	1.5	1.5	1.5
Light Bulb - Replace	TR522		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Marker Light Assy.-Replace	TR523	Each	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Mount & Balance Tire	TR524	Each	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Taillight Assy.-Replace	TR525	Each	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Tag Bracket or License Plate- R&R, R&I, or Install	TR526		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Trailer 7-Way Wire Connector-Replace	TR527		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trailer Wiring Repair (one circuit)	TR528	Each	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Valve Stem Assy.-Replace	TR529		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Valve Stem Cap-Install	TR530		0.1	0.1	0.1	0.1	0.1	0.1	0.1
Valve Stem Core-Replace	TR531		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Safety Chain- R&R, R&I, or Install	TR532	Pin-On	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	TR533	Weld-On	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Safety Chain Clevis- R&R, R&I, or Install	TR534		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Wheel & Tire-R&I	TR535		0.1	0.1	0.1	0.1	0.1	0.1	0.1
Wheel Bearings- Replace	TR536		1.8	1.8	1.8	1.8	1.8	1.8	1.8
Generic Trailer Labor Line	TR537								

Cabinet Door Hinges-Replace	CH508	Each	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Cabinet Door Keep Latch-Replace	CH509	Each	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Drip Rail-Replace	CH510	Each	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Install Decal to Cabinet	CH511	Each	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Install Unit to Trailer	CH112		1.8	1.8	1.8	1.8	1.8	1.8	1.8
Install Cabinet Enclosure to Skid (Complete)	CH513		3.0	3.0	3.0	3.0	3.0	3.0	3.0
PANEL, Corner-Replace	CH115	L Front	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	CH516	R Front	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	CH117	L Rear	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	CH518	R Rear	1.5	1.5	1.5	1.5	1.5	1.5	1.5
PANEL, Header-Replace	CH519		1.5	1.5	1.5	1.5	1.5	1.5	
PANEL, Top-Replace	CH521	Each	1.0	1.0	1.0	1.0	1.0	1.0	
Remove Decal from Cabinet	CH524	Each	0.8	0.8	0.8	0.8	0.8	0.8	
Remove Cabinet Enclosure from Skid (Complete)	CH525		3.0	3.0	3.0	3.0	3.0	3.0	
Remove Unit to Trailer-Replace	CH526		0.8	0.8	0.8	0.8	0.8	0.8	
Rear Door Glass & Gasket-Replace	CH527		0.8	0.8	0.8	0.8	0.8	0.8	
Skid Drain Valve-Replace	CH128		N/A	N/A	N/A	N/A	N/A	N/A	
Generic Cabinet & Hardware Labor Line	CH529								

Cooling System & Belt Drive

LABOR OPERATION DESCRIPTION	Operation Number	Detail	Labor Time						
			CUMM250	DCA250SSIT3	DCA300SSCT3	DCA300SSCT4I	DCA300SSKT3	CUMM350	DCA400SSIT3
			QSB7-G5	6UZ1	QSL9-G3	QSL9-G8	SAA6D125E	QSM11-G4	6WG1
Belt- Replace with guards removed	CB500	Fan	0.4	0.4	0.5	0.5	0.4	0.5	0.4
	CB101	Alternator	N/A	N/A	N/A	N/A	N/A	N/A	0.8
Coolant Temperature Sensor-Replace	CB502		0.8	0.5	0.5	0.5	0.5	0.5	0.5
Coolant Temperature Switch-Replace	CB103		0.8	0.5	0.5	0.5	0.8	0.8	0.5
Coolant Hoses &/or Tube-Replace	CB504	Upper	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	CB105	Lower	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	CB506	Bypass	0.5	0.6	0.5	0.5	0.5	0.5	0.6
Coolant Hose Clamp &/or Tube Clamp-Replace	CB507	Upper	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	CB508	Lower	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	CB509	Bypass	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Coolant Reservoir- Replace	CB510	Install	1.0	1.0	N/A	N/A	1.0	N/A	N/A
	CB511	Replace	0.5	0.5	N/A	N/A	0.5	N/A	N/A
Coolant Drain Valve- Install	CB540		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Coolant Sight Glass-Replace	CB512		0.3	N/A	0.3	0.3	0.3	0.3	N/A
Cooling System Pressure Test	CB513		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Cooling System Bleed Procedure - Perform	CB514		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Diagnose Overheating Condition	CB515		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Cooling System Leak	CB516		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Drain & Refill Cooling System	CB517		1.0	1.0	1.0	1.0	1.0	1.5	1.5
Fan (Cooling)-Replace	CB518		1.0	0.3	0.8	0.8	1.0	1.0	0.3
Fan Pulley &/or Spacer R&R or R&I	CB519		1.5	0.4	0.8	0.8	1.5	1.5	0.4
Guard, Belt- R&R or R&I, as applicable for location on unit (left/right)	CB520	Top	0.8	0.5	N/A	N/A	0.8	0.8	N/A

Crankshaft Damper and/or Timing Cover Seal -	E9034		1.5	1.5	1.5	1.5	1.5	1.5	1.5
Crankshaft Damper R&R R&I	E9041		1.5	1.5	1.5	1.5	1.5	1.5	1.5
Crankshaft Damper Bolts - Replace	E9042	Each	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Flywheel DOES NOT Include: R&I engine	E9035		1	1	1	1	1	1	1
Main OIL Seal (Front)-Replace	E9036		0.8	0.8	0.8	0.8	0.8	0.8	0.8
Main OIL Seal (Rear), Housing and/or Gasket	E9037								
Main Bearings	E9038								
Piston, Rod and/or Rings -Replace	E9039								
Generic Engine Labor Line	E9040								

Fuel, Exhaust, & Emissions

LABOR OPERATION DESCRIPTION	Operation Number	Detail	Labor Time						
			CUMM250	DCA250SSIT3	DCA300SSCT3	DCA300SSCT4I	DCA300SSKT3	CUMM350	DCA400SSIT3
			QSB7-G5	6UZ1	QSL9-G3	QSL9-G8	SAA6D125E	QSM11-G4	6WG1
Air Filter Element-Replace	FE500		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Air Filter Housing- R&R or R&I	FE501		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Air Filter Housing Hood- R&R or R&I	FE502		N/A	N/A	N/A	N/A	N/A	0.2	0.2
Air Filter Housing Lid- R&R or R&I	FE503		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Air Inlet Elbow-Replace (Air filter housing to tube)	FE504		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Air Inlet Elbow-Replace (tube to adaptor)	FE505		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Air Inlet Tube-Replace (Elbow to elbow)	FE506		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Air Restriction Indicator - R&R	FE507		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Boost Pressure Sensor - Replace	FE508		0.3	0.3	N/A	0.3	0.3	0.3	0.3
Boost Temperature Sensor- Replace	FE509		0.3	0.3	N/A	0.3	0.3	0.3	0.3
Breather Filter-R&R or R&I	FE510		0.5	0.3	N/A	0.3	0.5	0.5	0.3
Breather Filter Housing- R&R or R&I	FE511		0.5	N/A	N/A	N/A	0.5	0.5	N/A
Breather Tube - R&R or R&I	FE512		0.3	0.3	0.4	0.3	0.3	0.3	0.3
Diagnose No Start	FE513		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Fuel System Issue	FE514		1.0	1.0	1.0	1.0	1.0	1.0	1.0
EGR Systems-Check	FE515		0.5	0.5	0.5	0.5	0.5	0.5	0.5
EGR Valve-Replace	FE516		0.5	0.8	0.5	1.0	0.5	0.5	0.8
EGR Lead Valve-Replace	FE517		N/A	0.3	0.5	0.5	N/A	N/A	0.3
EGR Cooler (1PC)-Replace	FE518		1.0	1.0	N/A	0.6	1.0	1.0	1.0
EGR Cooler (2PC)-Replace	FE519		N/A	1.4	N/A	N/A	N/A	N/A	1.4
EGR Position Sensor - R&R or R&I	FE520		N/A	Non-Serviceable	N/A	Non-Serviceable	N/A	N/A	Non-Serviceable
DOC / DPF Filter Assembly - R&R or R&I	FE521		N/A	N/A	N/A	N/A	N/A	2.5	N/A
DPD Regeneration	E9041		N/A	N/A	N/A	1	N/A	N/A	N/A
Exhaust Muffler Assembly - R&R or R&I	FE522		2.0	2.0	2.0	2.0	2.0	N/A	2.0
Exhaust Clamp-Replace or Install	FE523		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Exhaust Backpressure Sensor - Replace	FE524		0.5	N/A	N/A	N/A	0.5	0.5	N/A
Exhaust Differential Pressure Sensor - Replace	FE524		0.5	N/A	N/A	N/A	0.5	0.5	N/A
Exhaust Gas Oxygen/Temp Sensor - Replace	FE525		0.4	N/A	N/A	N/A	0.4	0.4	N/A
Exhaust Manifold &/or Gaskets	FE526		1.5	1.8	1.2	1.7	1.5	1.5	1.8

Exhaust Pipe Assembly-Replace	FE527		0.8	0.8	0.8	0.8	0.8	0.8	0.8
External Fuel Valves- Install	FE563	T Valve- Each	N/A	0.75	0.75	0.75	N/A	N/A	0.75
	FE564	Selector Valve	1.5	1.5	1.5	1.5	1.5	1.5	1.5
External Fuel Lines- Install Bulk Head Fittings			N/A	1.5	1.5	1.5	1.5	N/A	1.5
Intake Air Temperature (IAT) Sensor - Replace	FE528		0.5	0.4	N/A	0.4	0.5	0.5	0.4
Intercooler / Charge Air Cooler (CAC) - R&R or R&I	FE529		5.7	3.9	4.5	3.9	5.7	5.7	4.4
Intercooler / Charge Air Cooler (CAC) Tube/Hose/Boot- R&R or R&I	FE530	Upper	0.3	0.3	0.5	0.3	0.3	0.3	0.3
	FE531	Lower	0.4	0.4	0.8	0.4	0.4	0.4	0.4
Fuel Cap - Replace	FE532		0.1	0.1	0.1	0.1	0.1	0.1	0.1
Fuel Cap /Level Gauge- Replace	FE533		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Fuel Drain Valve - R&R or R&I	FE534		0.4	0.4	0.4	0.4	0.4	0.4	0.4
Fuel Filter &/or Fuel/Water Separator - Replace	FE535	Spin-on	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	FE536	Cartridge	0.4	0.3	0.3	0.3	0.4	0.4	0.3
Fuel Injector- Replace (Includes QR Programming when applicable)	FE537	All	3.4	2.5	3.4	2.5	3.4	3.4	2.5
	FE538	Each	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Fuel Pressure Sensor - Replace	FE539		0.5	Non-Serviceable	N/A	Non-Serviceable	0.5	0.5	Non-Serviceable
Fuel Pressure Regulator - Replace	FE540		0.5	Non-Serviceable	N/A	Non-Serviceable	0.5	0.5	Non-Serviceable
Fuel Temperature Sensor - Replace	FE541		N/A	Non-Serviceable	N/A	Non-Serviceable	N/A	N/A	Non-Serviceable
Fuel Injection Control Unit / Common Rail Assembly -	FE542		1.7	1.5	N/A	1.5	1.7	1.7	1.5
Fuel Injector Supply Line &/or Pipe - R&R or R&I	FE543	Each	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Fuel Injection Pump - Replace	FE544		1.6	1.5	2.9	1.5	1.6	1.6	1.5
Fuel Filler Neck - Replace	FE545		0.8	0.8	0.8	0.8	0.8	0.8	0.8
Fuel Primer Pump - R&R or R&I	FE546		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Fuel Pump - Replace (Electromagnetic)	FE547		1.2	0.5	0.8	0.5	1.2	1.2	0.5
Fuel Pump Inspection - Perform (Electromagnetic)	FE548		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Injection System Air Bleeding Procedure	FE549		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Suction Control Valve (SCV) - R&R or R&I	FE550		N/A	0.5	N/A	N/A	N/A	N/A	N/A
Turbo Inspection-Perform	FE551		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Turbocharger-R&R or R&I	FE552		1.5	1.2	1.5	1.5	1.5	1.5	1.2
Turbocharger Coolant Line - R&R	FE553	Feed	N/A	N/A	N/A	N/A	N/A	0.4	N/A
	FE554	Return	N/A	N/A	N/A	N/A	N/A	0.4	N/A
Turbocharger Exhaust Pipe - R&R	FE555		0.8	0.8	0.8	0.8	0.8	0.8	0.8
Turbocharger Oil Line - R&R	FE556	Feed	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	FE557	Return	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Turbocharger Vane Position Sensor -R&R	FE558		N/A	N/A	N/A	N/A	N/A	0.2	N/A
Turbocharger Vane Position Solenoid Valve - R&R	FE559		N/A	N/A	N/A	N/A	N/A	0.5	N/A
Vacuum Pump-Replace	FE560		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Waste Gate Actuator-Replace	FE561		0.4	Non-Serviceable	0.4	0.4	0.4	0.6	N/A
Generic Fuel, Exhaust, & Emissions Labor Line	FE562								

Hub Cap- R&R, R&I, or Install	TR516	Oil Bath	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Hydraulic Brake Line - Replace	TR517	Each	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Hydraulic Brake Shoe/Backer Plate Assy.	TR517		2.5	2.5	2.5	2.5	2.5	2.5	2.5
Hydraulic Brake System - Bleed	TR518		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Hydraulic Brake Wheel Cylinder - Replace (Hub assem)	TR519	Each	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Install LED Box Tail Lights	TR539		N/A	1.5	1.5	1.5	1.5	N/A	1.5
Landing Leg / Crank Handle-Replace	TR520		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Leaf Spring-Replace	TR521		1.5	1.5	1.5	1.5	1.5	1.5	1.5
Light Bulb – Replace	TR522		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Marker Light Assy.-Replace	TR523	Each	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Mount & Balance Tire	TR524	Each	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Taillight Assy.-Replace	TR525	Each	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Tag Bracket or License Plate- R&R, R&I, or Install	TR526		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Trailer 7-Way Wire Connector-Replace	TR527		0.5	0.5	0.5	0.5	0.5	0.5	0.5
Trailer Brake Conversion-Hyd to Electric	TR540		N/A	10.0	N/A	N/A	N/A	N/A	N/A
Trailer Wiring Repair (one circuit)	TR528	Each	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Valve Stem Assy.-Replace	TR529		0.3	0.3	0.3	0.3	0.3	0.3	0.3
Valve Stem Cap-Install	TR530		0.1	0.1	0.1	0.1	0.1	0.1	0.1
Valve Stem Core-Replace	TR531		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Safety Chain- R&R, R&I, or Install	TR532	Pin-On	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	TR533	Weld-On	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Safety Chain Clevis- R&R, R&I, or Install	TR534		0.2	0.2	0.2	0.2	0.2	0.2	0.2
Wheel & Tire-R&I	TR535		0.1	0.1	0.1	0.1	0.1	0.1	0.1
Wheel Bearings- Replace Includes: Inner & Outer Bear	TR536		1.8	1.8	1.8	1.8	1.8	1.8	1.8
Generic Trailer Labor Line Specify generic labor operat	TR537								

Oil Dipstick-Replace	E9011		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Oil Dipstick Tube-Replace	E9012		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Oil Pan Drain Plug & /or Gasket- Replace	E9013		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Oil Pan Drain Valve - Replace	E9014		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Oil Filter Adaptor and/or Gasket- Replace	E9015		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Oil Fill Cap- Replace or Install	E9016		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Oil Pan and/or Gasket- Replace	E9017		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Oil Pressure Test-Perform	E9019		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Oil Pressure Sensor- Replace	E9021		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Valve Adjustment Complete (Intake & Exhaust)	E9027		1.0	1.0	1.0	1.0	1.2	1.2	1.0	1.0	1.0	1.0	1.5	1.5
Valve Cover & or Gasket - Replace	E9028		0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.5	0.5
Generic Engine Labor Line	E5055													
Specify generic labor operation														

Fuel, Exhaust, & Emissions

Labor Operation Description	Operation Number	Detail	Labor Time											
			MAXI HEAT 1000 Isuzu 3CD1	MAXI HEAT 1000 Isuzu 3CE1	MAXI HEAT 1000 Caterpillar C1.5	550 FLAMELESS Isuzu 4LE1	750 FLAMELESS Isuzu 4JJ1	950 FLAMELESS Isuzu 4JJ1	400 HC INDIRECT Kubota V1505	H150 Kubota EA300	TD 375 -100A Kubota V2403	TD 500 Kubota 3800	TD 750 Caterpillar C6.6	900 Dr. Heater Caterpillar C6.6
Air Filter Element-Replace	FE500		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Air Filter Housing -R&R or R&I	FE501		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Air Filter Housing Lid- R&R or R&I	FE503		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Air Inlet Elbow-Replace	FE504		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Air Restriction Indicator - R&R	FE507		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Breather Filter-R&R or R&I	FE510		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.2	0.2
Breather Tube - R&R or R&I	FE512		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.2	0.2
Diagnose No Start	FE513		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Fuel System Issue	FE514		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
EGR Systems-Check	FE515		N/A	N/A	N/A	N/A	0.5	0.5	N/A	N/A	N/A	N/A	0.5	0.5
EGR Valve-Replace	FE516		N/A	N/A	N/A	N/A	0.5	0.5	N/A	N/A	N/A	N/A	0.5	0.5
EGR Position Sensor - R&R or R&I	FE520		N/A	N/A	N/A	N/A	0.3	0.3	N/A	N/A	N/A	N/A	0.3	0.3
Exhaust Muffler Assembly - R&R or R&I	FE522		1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Exhaust Clamp-Replace or Install	FE523		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Exhaust Manifold &/or Gaskets	FE526		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.2	1.2	1.2
Exhaust Pipe Assembly-Replace	FE527		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Intercooler / Charge Air Cooler (CAC) - R&R	FE529		N/A	N/A	N/A	N/A	3.0	3.0	N/A	N/A	N/A	3.0	4.0	4.0
Intercooler / Charge Air Cooler (CAC) Tube-R&R or R&I	FE530	Upper	N/A	N/A	N/A	N/A	0.3	0.3	N/A	N/A	N/A	0.3	0.3	0.3
	FE531	Lower	N/A	N/A	N/A	N/A	0.3	0.3	N/A	N/A	N/A	0.3	0.3	0.3
Fuel Cap - Replace	FE532		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Fuel Drain Valve - R&R or R&I	FE534		0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Fuel Filter &/or Fuel/Water Separator - Replace	FE535	Spin-on	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	FE536	Cartridge	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Fuel Injector- Replace <small>(Includes QR Programming when applicable)</small>	FE537	All	1.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.2
	FE538	Each	0.6	0.6	0.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Fuel Pressure Sensor - Replace	FE539		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Fuel Pressure Regulator - Replace	FE540		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Fuel Injector Supply Line &/or Pipe - R&R or R&I	FE543	Each	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Fuel Injection Pump - Replace	FE544		1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Fuel Filler Neck - Replace	FE545		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Fuel Primer Pump - R&R or R&I	FE546		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Fuel Pump - Replace (Electromagnetic)	FE547		0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Fuel Pump Inspection - Perform <small>(Electromagnetic)</small>	FE548		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Injection System Air Bleeding Procedure	FE549		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Suction Control Valve (SCV) - R&R or R&I	FE550		0.3	0.3	N/A	0.3	0.3	0.3	N/A	N/A	N/A	N/A	N/A	N/A
Turbo Inspection-Perform	FE551		N/A	N/A	N/A	N/A	0.5	0.5	N/A	N/A	N/A	0.5	0.5	0.5
Turbocharger-R&R or R&I	FE552		N/A	N/A	N/A	N/A	0.8	0.8	N/A	N/A	N/A	1.0	1.3	1.3
Turbocharger Exhaust Pipe - R&R	FE555		N/A	N/A	N/A	N/A	0.5	0.5	N/A	N/A	N/A	0.5	0.5	0.5
	FE556	Feed	N/A	N/A	N/A	N/A	0.3	0.3	N/A	N/A	N/A	0.3	0.3	0.3
Turbocharger Oil Line - R&R	FE557	Return	N/A	N/A	N/A	N/A	0.3	0.3	N/A	N/A	N/A	0.3	0.3	0.3
Waste Gate Actuator-Replace <small>(Includes adjustment)</small>	FE561		N/A	N/A	N/A	N/A	0.4	0.4	N/A	N/A	N/A	0.4	0.5	0.5

	TR127	Weld-On	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Safety Chain Clevis- R&R, R&I, or Install	TR128		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Wheel & Tire-R&I	TR129		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Wheel Bearings- Replace Includes: Inner & Outer Bearings	TR130		1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Generic Trailer Labor Line Specify generic labor operation	TR131													

LABOR TIME GUIDE for Diesel Pumps

Labor Operation Description	Operation Number	Detail	Labor Time				
			BARCO 4"GORMAN	BARCO 6"GORMAN	GODWIN	GODWIN	GODWIN
			T4A60S-F3L	T6A60S-F4L	CD225	CD225M	HL200M
			DEUTZ D914L03	DEUTZ D914L04	John Deere 4045T	John Deere 4045T	CATERPILLAR C7 (T3 Flex)

COOLING SYSTEM & BELT DRIVE

Labor Operation Description	Operation Number	Detail	Labor Time				
			T4A60S-F3L	T6A60S-F4L	CD225	CD225M	HL200M
			DEUTZ D914L03	DEUTZ D914L04	John Deere 4045T	John Deere 4045T	CATERPILLAR C7 (T3 Flex)
Belt- Replace with guards removed	DP000	Fan	N/A	N/A	N/A	N/A	N/A
	DP001	Alternator	0.4	0.4	0.4	0.4	0.4
Coolant Temperature Sensor-Replace	DP002		N/A	N/A	0.5	0.5	0.5
Coolant Temperature Switch-Replace	DP003		N/A	N/A	0.5	0.5	0.5
Coolant Hoses &/or Tube-Replace	DP004	Bypass	N/A	N/A	0.5	0.5	0.5
	DP005	Upper	N/A	N/A	0.5	0.5	0.5
	DP006	Lower	N/A	N/A	0.5	0.5	0.5
Coolant Hose Clamp &/or Tube Clamp-Replace	DP007	Bypass	N/A	N/A	0.2	0.2	0.2
	DP008	Upper	N/A	N/A	0.2	0.2	0.2
	DP009	Lower	N/A	N/A	0.2	0.2	0.2
Coolant Reservoir- Replace	DP010	Install	N/A	N/A	1.0	1.0	1.0
	DP011	Replace	N/A	N/A	0.5	0.5	0.5
Coolant Sight Glass-Replace	DP012	Replace	N/A	N/A	0.3	0.3	0.3
Cooling System Pressure Test	DP013		N/A	N/A	0.5	0.5	0.5
Cooling System Bleed Procedure - Perform	DP014		N/A	N/A	0.3	0.3	0.3
Diagnose Overheating Condition	DP015		N/A	N/A	1.0	1.0	1.0
Diagnose Cooling System Leak	DP016		N/A	N/A	1.0	1.0	1.0
Drain & Refill Cooling System	DP017		N/A	N/A	0.5	0.5	0.5
Fan (Cooling)-Replace	DP018		N/A	N/A	0.4	0.4	0.4
Fan Pulley &/or Spacer R&R or R&I	DP019		N/A	N/A	0.4	0.4	0.4
Guard, Belt, P&P or P&I	DP020	Top	0.5	0.5	0.5	0.5	0.5

Guard, Belt- R&R or R&I	DP021	Bottom	0.5	0.5	0.5	0.5	0.5
Guard, Fan- R&R or R&I	DP022	L Top	N/A	N/A	N/A	N/A	N/A
	DP023	R Top	N/A	N/A	N/A	N/A	N/A
	DP024	L Bottom	N/A	N/A	N/A	N/A	N/A
	DP025	R Bottom	N/A	N/A	N/A	N/A	N/A
Coolant Heater - R&R or R&I	DP026		N/A	N/A	0.7	0.7	0.7
Pulley-Replace	DP027	Alternator	0.5	0.5	0.5	0.5	0.5
	DP028	A/C Delete	N/A	N/A	N/A	N/A	N/A
	DP029	Idler	0.4	0.4	N/A	N/A	N/A
	DP030	Fan	N/A	N/A	0.4	0.4	0.4
	DP031	Tensioner	0.4	0.4	0.4	0.4	0.4
Radiator Assembly-R&R or R&I	DP032		N/A	N/A	3.5	3.5	4.0
Radiator Cap-Replace	DP033		N/A	N/A	0.1	0.1	0.1
Serpentine Belt Tensioner-R&R or R&I	DP034		N/A	N/A	0.6	0.6	0.6
Surge Tank-R&R or R&I	DP035		N/A	N/A	N/A	N/A	N/A
Thermostat Housing, Thermostat &/or Gasket - Replace	DP036		N/A	N/A	0.6	0.6	0.6
Tighten & Adjust All Applicable Belts with guards removed	DP037		0.4	0.4	N/A	N/A	N/A
Water Pump-Replace	DP038		N/A	N/A	1.0	1.0	2.0
Generic Cooling System & Belt Drive Labor Line Specify generic labor operation	DP039						

DC ELECTRICAL

LABOR OPERATION DESCRIPTION	Operation Number	Detail	Labor Time				
			T4A60S-F3L	T6A60S-F4L	CD225	CD225M	HL200M
			DEUTZ D914L03	DEUTZ D914L04	John Deere 4045T	John Deere 4045T	CATERPILLAR C7 (T3 Flex)
Alternator R&R or R&I	DP040		0.8	0.8	0.8	0.8	0.8
Battery or Batteries- R&R or R&I	DP041	Single	0.5	0.5	0.5	0.5	0.5
	DP042	Dual	N/A	N/A	N/A	N/A	N/A
Battery Box - R&R or R&I	DP043	Single	0.5	0.5	0.5	0.5	0.5
	DP044	Dual	N/A	N/A	N/A	N/A	N/A
Battery Cable-Replace, Positive R&R or R&I	DP045	Single	0.5	0.5	0.5	0.5	0.5
	DP046	Dual	N/A	N/A	N/A	N/A	N/A
Battery Cable-Replace, Positive (Battery to	DP047	Single	0.5	0.5	0.5	0.5	0.5

Starter) R&R or R&I	DP048	Dual	N/A	N/A	N/A	N/A	N/A
Battery Cable- Replace, Negative R&R or R&I	DP049	Single	0.5	0.5	0.5	0.5	0.5
	DP050	Dual	N/A	N/A	N/A	N/A	N/A
Battery Disconnect Switch-Replace	DP051		0.5	0.5	0.5	0.5	0.5
Battery Hold Down J-Hook & Bracket- Install	DP052		0.2	0.2	0.2	0.2	0.2
Battery Terminal End-Replace	DP053	Each	0.3	0.3	0.3	0.3	0.3
Charging System Check Includes: Battery test, alternator output test, & starter test.	DP054		0.5	0.5	0.5	0.5	0.5
Charge & Retest Battery or Batteries	DP055		0.5	0.5	0.5	0.5	0.5
Clean & Tighten Battery Terminals	DP056	Each	0.2	0.2	0.2	0.2	0.2
Diagnose ECM Communication Loss	DP057		1.0	1.0	1.0	1.0	1.0
Diagnose No Start Condition	DP058		1.0	1.0	1.0	1.0	1.0
Diagnose Fault Code	DP059		1.0	1.0	1.0	1.0	1.0
Engine Stop Solenoid-Replace	DP060		0.5	0.5	0.5	0.5	0.5
Glow Plug - R&R or R&I Includes: Inspection	DP061	Each	0.3	0.3	0.3	0.3	0.3
Ground Strap-Replace	DP062		0.5	0.5	0.5	0.5	0.5
Specific Gravity Battery Test	DP063	Hydrometer	0.5	0.5	0.5	0.5	0.5
Starter-Replace	DP064		0.8	0.8	0.8	0.8	0.8
Instrumentation, Wiring, Control , & Monitoring	Operation Number	Detail	T4A60S-F3L	T6A60S-F4L	CD225	CD225M	HL200M
			DEUTZ D914L03	DEUTZ D914L04	John Deere 4045T	John Deere 4045T	CATERPILLAR C7 (T3 Flex)
Camshaft Position Sensor-Replace	DP065		0.5	0.5	0.5	0.5	0.5
Crankshaft Position Sensor-Replace	DP066		0.5	0.5	0.5	0.5	0.5
Can Enabled Dual Band GPS System-Install	DP067	M8	2.0	2.0	2.0	2.0	2.0
Can Enabled CT Monitor System-Install (Controls Inc. Model# XCAN-AC)	DP068	XCAN-AC	N/A	N/A	N/A	N/A	N/A
Controller-Replace Includes: Complete Assy. W/ relays, junction strips, fuses, & breakers, if applicable	DP069		N/A				
	DP070		N/A				
	DP071	Analog	0.8	0.8	0.8	0.8	0.8
DC Fuse-Replace	DP072		0.1	0.1	0.1	0.1	0.1
Engine Control Module (ECM) –R&R or R&I	DP073		0.5	0.5	0.5	0.5	0.5
Electrical Pigtail Connector Repair	DP074	Each	0.5	0.5	0.5	0.5	0.5

Engine Wiring Harness-Replace	DP075		1.5	1.5	1.5	1.5	1.5
Fuel Level Sender	DP076		0.8	0.8	0.8	0.8	0.8
Gauge- Replace	DP077	Hertz	N/A	N/A	N/A	N/A	N/A
	DP078	AC Voltmeter	N/A	N/A	N/A	N/A	N/A
	DP079	Load %	N/A	N/A	N/A	N/A	N/A
	DP080	Oil Pressure	0.5	0.5	0.5	0.5	0.5
	DP081	Water	N/A	N/A	0.5	0.5	0.5
	DP082	DC Volts / Amp	0.5	0.5	0.5	0.5	0.5
	DP083	Tach / Hourmeter	0.5	0.5	0.5	0.5	0.5
Hour Meter-Replace	DP084	Fuel	0.5	0.5	0.5	0.5	0.5
	DP085	OEM	0.5	0.5	0.5	0.5	0.5
Hour Meter-Replace	DP086	Pre-Settable	0.8	0.8	0.8	0.8	0.8
	DP087		0.5	0.5	0.5	0.5	0.5
Main Engine Wiring Harness Heat Shield – R&R &/or Install	DP087		0.5	0.5	0.5	0.5	0.5
Tachometer Sensor - Replace	DP088		0.4	0.4	0.4	0.4	0.4
Generic DC Electrical Labor Line Specify generic labor operation	DP089						

ENGINE

Labor Operation Description	Operation Number	Detail	Labor Time				
			T4A60S-F3L	T6A60S-F4L	CD225	CD225M	HL200M
			DEUTZ D914L03	DEUTZ D914L04	John Deere 4045T	John Deere 4045T	CATERPILLAR C7 (T3 Flex)
Hydrocarbon Block Test-Perform	DP090		N/A	N/A	0.5	0.5	0.5
Diagnose No Start Condition	DP091		1.0	1.0	1.0	1.0	1.0
Diagnose Engine Knock	DP092		1.0	1.0	1.0	1.0	1.0
Diagnose Excessive Oil Consumption	DP093		1.0	1.0	1.0	1.0	1.0
Diagnose Oil Leak	DP094		1.0	1.0	1.0	1.0	1.0
Diagnose Engine Performance Issue	DP095		1.0	1.0	1.0	1.0	1.0
Diesel Engine Compression Test-Perform	DP096	Glow Plug Hole	N/A	N/A	N/A	N/A	N/A
	DP097	Nozzle Hole	1.0	1.0	1.0	1.0	1.0
Diesel Engine Cylinder Leak Down Test-Perform	DP098		1.0	1.0	1.0	1.0	1.0
Drill & Extract Broken Bolt	DP099		1.0	1.0	1.0	1.0	1.0
ENGINE ASSEMBLY, BLOCK & MOUNTS	Operation Number	Detail	DEUTZ D914L03	DEUTZ D914L04	John Deere 4045T	John Deere 4045T	CATERPILLAR C7 (T3 Flex)

			DEUTZ D914L03	DEUTZ D914L04	JOHN DEERE 4045T	JOHN DEERE 4045T	CATERPILLAR C7 (T3 Flex)
Engine Assembly- Removal & Installation Includes: R&I only those components necessary for the removal of the complete engine assy. Includes transfer of all necessary parts	DP100		—	—	—	—	—
Engine Assembly- Remove, Install, & Overhaul Includes: Replace all applicable rings, sleeves, bearings, & all other misc. internal engine components. DOES NOT include machine work	DP101		—	—	—	—	—
Engine (Long Block)- Remove & Replace Consists of cylinder block fitted with pistons, rings, connecting rods, crankshaft, and all bearings, cylinder head, camshaft timing components, etc. Clean & Transfer all other applicable parts	DP102		—	—	—	—	—
Engine Mount and /or Mounts- Replace	DP103	One Engine Mount	0.4	0.4	0.4	0.4	0.4
	DP104	Each Additional Mount	0.1	0.1	0.1	0.1	0.1
ENGINE OILING	Operation Number	Detail	DEUTZ D914L03	DEUTZ D914L04	John Deere 4045T	John Deere 4045T	CATERPILLAR C7 (T3 Flex)
Auxiliary Engine Oil Cooler- Replace	DP105		N/A	N/A	0.5	0.5	0.5
Engine Oil Cooler- Replace	DP106		0.8	0.8	0.8	0.8	0.8
Engine Oil Cooler Hose- Replace	DP107	each	0.3	0.3	0.3	0.3	0.3
Engine Oil Filter- Replace	DP108		0.3	0.3	0.3	0.3	0.3
Oil Dipstick-Replace	DP109		0.1	0.1	0.1	0.1	0.1
Oil Dipstick Tube-Replace	DP110		0.3	0.3	0.3	0.3	0.3
Oil Pan Drain Plug & /or Gasket- Replace	DP111		0.2	0.2	0.2	0.2	0.2
Oil Pan Drain Valve - Replace	DP112		0.2	0.2	0.2	0.2	0.2
Oil Filter Adaptor and/or Gasket- Replace	DP113		0.5	0.5	0.5	0.5	0.5
OIL Return Line (Remote Filter/Crossover Line) - R&R	DP114		0.2	0.2	0.2	0.2	0.2
OIL Supply Line (Remote Filter/Crossover Line) - R&R	DP115		1.0	1.0	1.0	1.0	1.0
Oil Fill Cap- Replace or Install	DP116		0.2	0.2	0.2	0.2	0.2
Oil Pan and/or Gasket- Replace	DP117		1.0	1.0	1.2	1.2	1.5
Oil Pump- Replace	DP118		0.5	0.5	0.8	0.8	0.8
Oil Pressure Test-Perform	DP119		0.5	0.5	0.5	0.5	0.5
Oil Pressure Switch- Replace	DP120						

Oil Pressure Sensor- Replace	DP121		0.5	0.5	0.5	0.5	0.5
Oil Thermostat- Replace	DP122		0.5	0.5	0.5	0.5	0.5
HEAD & VALVETRAIN	Operation Number	Detail	DEUTZ D914L03	DEUTZ D914L04	John Deere 4045T	John Deere 4045T	CATERPILLAR C7 (T3 Flex)
Cylinder Head & or Gasket- Replace Includes: Remove carbon, check surfaces for warpage, adjust valves, and ignition timing where necessary	DP123		—	—	—	—	—
Intake Manifold &/or Gasket- Replace	DP124		1.0	1.0	1.0	1.0	1.5
Push Rod- Replace <small>DOES NOT Include: R&I Rocker Arms</small>	DP125		—	—	—	—	—
Rocker Arm &/or Shaft Assembly - Replace	DP126		—	—	—	—	—
Valve Adjustment Complete (Intake & Exhaust)	DP127		1.0	1.2	1.3	1.3	1.5
Valve Cover & or Gasket - Replace	DP128	each	0.3	0.3	0.5	0.5	0.5
Valve Lifters-Replace Includes: Adjust Valves when applicable	DP129		—	—	—	—	—
Valve Spring and or Seal-Replace <small>DOES NOT Include: R&I Cylinder Head</small>	DP130		—	—	—	—	—
	DP131		—	—	—	—	—
PISTON ASSEMBLIES, BEARINGS & CRANKSHAFT	Operation Number	Detail	DEUTZ D914L03	DEUTZ D914L04	John Deere 4045T	John Deere 4045T	CATERPILLAR C7 (T3 Flex)
Connecting Rod Bearings-Replace Includes: R&I Oil Pan	DP132		—	—	—	—	—
Crankshaft-Replace Includes: R&I replace bearing, & oil seals	DP133		—	—	—	—	—
Crankshaft Damper and/or Timing Cover	DP134		—	—	—	—	—
Flywheel <small>DOES NOT Include: R&I engine</small>	DP135		—	—	—	—	—
Main OIL Seal (Front)-Replace <small>DOES NOT Include: R&I Crankshaft Damper</small>	DP136		0.5	0.5	0.8	0.8	0.8
Main OIL Seal (Rear), Housing and/or Gasket Includes: R&I AC Alternator, Flywheel, & Seal	DP137		—	—	—	—	—
Main Bearings Includes: R&I engine, replace bearing, & oil seals	DP138		—	—	—	—	—
Piston, Rod and/or Rings -Replace	DP139		—	—	—	—	—
Generic Engine Labor Line Specify generic labor operation	DP140						
Fuel, Exhaust, & Emissions							
Labor Time							

Labor Operation Description	Operation Number	Detail	T4A60S-F3L	T6A60S-F4L	CD225	CD225M	HL200M
			DEUTZ D914L03	DEUTZ D914L04	John Deere 4045T	John Deere 4045T	CATERPILLAR C7 (T3 Flex)
Air Filter Element-Replace	DP141		0.3	0.3	0.3	0.3	0.3
Air Filter Housing- R&R or R&I	DP142		0.5	0.5	0.5	0.5	0.5
Air Filter Housing Hood- R&R or R&I	DP143		N/A	N/A	N/A	N/A	N/A
Air Filter Housing Lid- R&R or R&I	DP144		0.2	0.2	0.2	0.2	0.2
Air Inlet Elbow-Replace (Air filter housing to tube)	DP145		0.2	0.2	0.2	0.2	0.2
Air Inlet Elbow-Replace (tube to adaptor)	DP146		0.2	0.2	0.2	0.2	0.2
Air Inlet Tube-Replace (Elbow to elbow)	DP147		0.2	0.2	0.2	0.2	0.2
Air Restriction Indicator - R&R	DP148		0.2	0.2	0.2	0.2	0.2
Boost Pressure Sensor - Replace	DP149		N/A	N/A	N/A	N/A	0.3
Boost Temperature Sensor- Replace	DP150		N/A	N/A	N/A	N/A	0.3
Breather Filter-R&R or R&I	DP151		N/A	N/A	N/A	N/A	N/A
Breather Filter Housing- R&R or R&I	DP152		N/A	N/A	N/A	N/A	N/A
Breather Tube - R&R or R&I	DP153		N/A	N/A	N/A	N/A	N/A
Diagnose No Start	DP154		1.0	1.0	1.0	1.0	1.0
Diagnose Fuel System Issue	DP155		1.0	1.0	1.0	1.0	1.0
EGR Systems-Check	DP156		N/A	N/A	N/A	N/A	N/A
EGR Valve-Replace	DP157		N/A	N/A	N/A	N/A	N/A
EGR Lead Valve-Replace	DP158		N/A	N/A	N/A	N/A	N/A
EGR Cooler (1PC)-Replace	DP159		N/A	N/A	N/A	N/A	N/A
EGR Cooler (2PC)-Replace	DP160		N/A	N/A	N/A	N/A	N/A
EGR Position Sensor - R&R or R&I	DP161		N/A	N/A	N/A	N/A	N/A
DOC / DPF Filter Assembly - R&R or R&I	DP162		N/A	N/A	N/A	N/A	N/A
Exhaust Muffler Assembly - R&R or R&I	DP163		1.5	1.5	1.5	1.5	1.5
Exhaust Clamp-Replace or Install	DP164		0.3	0.3	0.3	0.3	0.3
Exhaust Backpressure Sensor - Replace	DP165		N/A	N/A	N/A	N/A	N/A
Exhaust Differential Pressure Sensor - Replace	DP166		N/A	N/A	N/A	N/A	N/A
Exhaust Gas Oxygen/Temp Sensor - Replace	DP167		N/A	N/A	N/A	N/A	N/A
Exhaust Manifold &/or Gaskets	DP168		1.0	1.0	1.0	1.0	1.4
Exhaust Pipe Assembly-Replace	DP169		0.8	0.8	0.8	0.8	1.0

Intake Air Temperature (IAT) Sensor - Replace	DP170		N/A	N/A	N/A	N/A	N/A
Intercooler / Charge Air Cooler (CAC) - R&R or R&I	DP171		N/A	N/A	N/A	N/A	N/A
Intercooler / Charge Air Cooler (CAC) Tube-R&R or R&I	DP172	Upper	N/A	N/A	N/A	N/A	N/A
	DP173	Lower	N/A	N/A	N/A	N/A	N/A
Fuel Cap - Replace	DP174		0.1	0.1	0.1	0.1	0.1
Fuel Cap /Level Gauge- Replace	DP175		0.3	0.3	0.3	0.3	0.3
Fuel Drain Valve - R&R or R&I	DP176		0.4	0.4	0.4	0.4	0.4
Fuel Filter &/or Fuel/Water Separator - Replace	DP177	Spin-on	0.2	0.2	0.2	0.2	0.2
	DP178	Cartridge	0.3	0.3	0.3	0.3	N/A
Fuel Injector- Replace (Includes QR Programming when applicable)	DP179	All	2.0	2.5	1.8	1.8	2.5
	DP180	Each	0.8	0.8	0.5	0.5	0.8
Fuel Pressure Sensor - Replace	DP181		0.5	0.5	0.5	0.5	0.5
Fuel Pressure Regulator - Replace	DP182		0.5	0.5	0.5	0.5	0.5
Fuel Temperature Sensor - Replace	DP183		N/A	N/A	N/A	N/A	N/A
Fuel Injection Control Unit / Common Rail Assembly - R&R or R&I	DP184		0.8	0.8	1.0	1.0	N/A
Fuel Injector Supply Line &/or Pipe - R&R or R&I	DP185	Each	0.2	0.2	0.2	0.2	0.4
Fuel Injection Pump - Replace	DP186		1.5	1.5	1.5	1.5	1.5
Fuel Filler Neck - Replace	DP187		0.8	0.8	0.8	0.8	0.8
Fuel Primer Pump - R&R or R&I	DP188		0.5	0.5	0.5	0.5	0.5
Fuel Pump - Replace (Electromagnetic)	DP189		0.7	0.7	0.7	0.7	0.7
Fuel Pump Inspection - Perform (Electromagnetic)	DP190		0.5	0.5	0.5	0.5	0.5
Injection System Air Bleeding Procedure	DP191		0.3	0.3	0.3	0.3	0.3
Suction Control Valve (SCV) - R&R or R&I	DP192		N/A	N/A	N/A	N/A	N/A
Turbo Inspection-Perform	DP193		N/A	N/A	0.5	0.5	0.5
Turbocharger-R&R or R&I	DP194		N/A	N/A	0.8	0.8	1.5
Turbocharger Coolant Line - R&R	DP195	Feed	N/A	N/A	N/A	N/A	N/A
	DP196	Return	N/A	N/A	N/A	N/A	N/A
Turbocharger Exhaust Pipe - R&R	DP197		N/A	N/A	0.5	0.5	0.5
Turbocharger Oil Line - R&R	DP198	Feed	N/A	N/A	0.5	0.5	0.5
	DP199	Return	N/A	N/A	0.5	0.5	0.5

Turbocharger Vane Position Sensor -R&R	DP200		N/A	N/A	N/A	N/A	N/A
Turbocharger Vane Position Solenoid Valve - R&R	DP201		N/A	N/A	N/A	N/A	N/A
Vacuum Pump-Replace	DP202		N/A	N/A	N/A	N/A	N/A
Waste Gate Actuator-Replace	DP203		N/A	N/A	N/A	N/A	0.6
Generic Fuel, Exhaust, & Emissions Labor Line Specify generic labor operation	DP204						

Make Ready & PM Tasks

Labor Operation Description	Operation Number	Detail	Labor Time				
			T4A60S-F3L	T6A60S-F4L	CD225	CD225M	HL200M
			DEUTZ D914L03	DEUTZ D914L04	John Deere 4045T	John Deere 4045T	CATERPILLAR C7 (T3 Flex)
150 Hr - PM - Air Compressors & Diesel Pumps	PM1014		1.0	1.0	1.0	1.0	1.0
PM Task #1009 - DIESEL PUMP MAKE READY PROCEDURES	PM1009		0.5	0.5	0.5	0.5	0.5
PM Task #1015 DOT Annual Trailer Inspection (STATE REQUIRED)	PM1015		1.0	1.0	1.0	1.0	1.0
PM Task #1017 - LOAD TEST DIESEL PUMP (WATER)	PM1017		0.5	0.5	0.5	0.5	0.5
Field Quality Control Equipment Inspection (Applies to equipment on location)	MR105		0.5	0.5	0.5	0.5	0.5

ENGINE DRIVEN PUMPS & CONNECTIONS

Labor Operation Description	Operation Number	Detail	Labor Time				
			T4A60S-F3L	T6A60S-F4L	CD225	CD225M	HL200M
			DEUTZ D914L03	DEUTZ D914L04	John Deere 4045T	John Deere 4045T	CATERPILLAR C7 (T3 Flex)
Alignment Check -Perform	DP205	Pump to Driver	0.5	0.5	0.5	0.5	0.5
Back Cover Plate Assy. - R&R	DP206		0.5	0.5	0.8	0.8	0.5
Ball Valve- R&R	DP207		0.3	0.3	0.3	0.3	0.3
Diagnose Pump Leak	DP208		1.0	1.0	1.0	1.0	1.0
Diagnose Inoperative Pump	DP209		1.0	1.0	1.0	1.0	1.0
Diagnose Pump Performance Issue	DP210		1.0	1.0	1.0	1.0	1.0
Drain & Refill Air Compressor Oil	DP211		0.4	0.4	0.4	0.4	0.4

Drain & Refil Mechanical Seal Coolant	DP212		0.3	0.3	0.3	0.3	0.3
Drive Coupling - R&R	DP213		0.8	0.8	0.8	0.8	0.8
Drive Flange Seal - R&R	DP214		1.0	1.0	1.0	1.0	1.0
Flaper Valve - Replace	DP215		0.6	0.6	0.8	0.8	0.6
Impeller - R&R includes: inspection and adjustment with shims(Rotating assembly removed)	DP216		0.3	0.3	0.3	0.3	0.3
Isolation Valve - R&R	DP217		0.5	0.5	0.5	0.5	0.5
Manifold Assembly - R&R or R&I	DP218		0.5	0.5	0.5	0.5	0.5
Piping Joints - R&R	DP219	Each	0.3	0.3	0.3	0.3	0.3
Piping Supports - R&R	DP220	Each	0.2	0.2	0.2	0.2	0.2
Pressure Relief Valve - R&R or R&I	DP221		0.2	0.2	0.2	0.2	0.2
Pump Assembly - R&R	DP222		2.0	2.0	2.0	2.0	2.0
Pump Assembly - Remove,Rebuild, and Reinstall	DP223		5.0	5.0	6.0	6.0	6.0
Pump Bearings - R&R (Pump shaft removed)	DP224	Each	0.2	0.2	0.2	0.2	0.2
Pump Seal - R&R	DP225		0.8	0.8	0.8	0.8	0.8
Pump Shaft - R&I	DP226		1.0	1.0	1.0	1.0	1.0
Rotating Assembly - R&I (Pump Assy. Removed)	DP227		0.8	0.8	0.8	0.8	0.8
Vacuum Gauge -Replace, Install	DP228	Suction	0.2	0.2	0.2	0.2	0.2
	DP229	Discharge	0.2	0.2	0.2	0.2	0.2
Rig Up Pump Includes: reducers,nipples, & unions	DP230		2.0	2.0	2.0	2.0	2.0
Remove pump bowl & grease o rings	DP231		3.0	3.0	3.0	3.0	3.0
Suction Flange &/or Gasket - R&R	DP232		0.6	0.6	0.6	0.6	0.6
Swedge -Remove,Replace, &/or Install	DP233		0.2	0.2	0.2	0.2	0.2
Wear Plate - R&R (Back cover plate assy. removed)	DP234		0.2	0.2	0.3	0.3	0.3

Technical Service Bulletins (TSB's)

Labor Operation Description	Operation Number	Detail	Labor Time				
			T4A60S-F3L	T6A60S-F4L	CD225	CD225M	HL200M
			DEUTZ D914103	DEUTZ D914104	John Deere 4045T	John Deere 4045T	CATERPILLAR C7 (T3 Flow)
TSB# T-1023 Diesel Pump Chafing Wire Insulation	T1023		1.2	1.2	1.2	1.2	1.2

TRAILER

Labor Operation Description	Operation Number	Detail	Labor Time				
			T4A60S-F3L	T6A60S-F4L	CD225	CD225M	HL200M
			DEUTZ D914L03	DEUTZ D914L04	John Deere 4045T	John Deere 4045T	CATERPILLAR C7 (T3 Flex)
Axle Assy. -Replace	DP235	W/ Electric Brakes	3.0	3.0	3.0	3.0	3.0
	DP236	W/O Electric Brakes	2.5	2.5	2.5	2.5	2.5
Axle Seal- Replace Includes: Grease & Repack inner & outer wheel bearings	DP237		1.8	1.8	1.8	1.8	1.8
Break Away Switch-Replace	DP238		0.5	0.5	0.5	0.5	0.5
Break Away System Battery-Replace	DP239		0.4	0.4	0.4	0.4	0.4
Break Away System Complete - R&R, R&I, or Install	DP240		0.9	0.9	0.9	0.9	0.9
Charge & Retest Break Away Battery	DP241		0.25	0.25	0.25	0.25	0.25
Diagnose Inoperative Trailer Wiring	DP242		0.5	0.5	0.5	0.5	0.5
Document Holder- R&R, R&I, or Install	DP243		0.2	0.2	0.2	0.2	0.2
DOT Trailer Inspection (FMCSR)	DP244		1.0	1.0	1.0	1.0	1.0
DOT Reflective Tape-Replace .1 per section of tape replaced	DP245	Each	0.1	0.1	0.1	0.1	0.1
Drain & Refill Axle Gear Oil	DP246		N/A	N/A	N/A	N/A	N/A
Electric Brake Shoe/Backer Plate Assy.	DP247		2.5	2.5	2.5	2.5	2.5
Equalizer Rod- R&R, R&I, or Adjust	DP248		0.5	0.5	0.5	0.5	0.5
Fender-Replace &/or Resecure	DP249		0.5	0.5	0.5	0.5	0.5
Gooseneck Adjustable Coupler-Replace	DP250		0.2	0.2	0.2	0.2	0.2
Hub Cap- R&R, R&I, or Install	DP251	Dust	0.2	0.2	0.2	0.2	0.2
	DP252	Oil Bath	0.5	0.5	0.5	0.5	0.5
Landing Leg / Crank Handle-Replace	DP253		0.3	0.3	0.3	0.3	0.3
Leaf Spring-Replace	DP254		1.5	1.5	1.5	1.5	1.5
Light Bulb – Replace	DP255		0.2	0.2	0.2	0.2	0.2
Marker Light Assy.-Replace	DP256	Each	0.2	0.2	0.2	0.2	0.2

Mount & Balance Tire	DP257	Each	0.25	0.25	0.25	0.25	0.25
Taillight Assy.-Replace	DP258	Each	0.5	0.5	0.5	0.5	0.5
Tag Bracket or License Plate- R&R, R&I, or Install	DP259		0.2	0.2	0.2	0.2	0.2
Trailer 7-Way Wire Connector-Replace	DP260		0.5	0.5	0.5	0.5	0.5
Trailer 4-Pin Wire Connector-Replace	DP261		0.4	0.4	0.4	0.4	0.4
Trailer Wiring Repair	DP262		0.2	0.2	0.2	0.2	0.2
Valve Stem Assy.-Replace	DP263		0.3	0.3	0.3	0.3	0.3
Valve Stem Cap-Install	DP264		0.1	0.1	0.1	0.1	0.1
Valve Stem Core-Replace	DP265		0.2	0.2	0.2	0.2	0.2
Safety Chain- R&R, R&I, or Install	DP266	Pin-On	0.2	0.2	0.2	0.2	0.2
	DP267	Weld-On	0.5	0.5	0.5	0.5	0.5
Safety Chain Clevis- R&R, R&I, or Install	DP268		0.2	0.2	0.2	0.2	0.2
Wheel & Tire-R&I	DP269		0.1	0.1	0.1	0.1	0.1
Wheel Bearings- Replace Includes: Inner & Outer Bearings	DP270		1.8	1.8	1.8	1.8	1.8
Generic Trailer Labor Line Specify generic labor operation	DP271						

LABOR TIME GUIDE for Fresh Water Trailers

Labor Operation Description	Operation Number	Detail	Labor Time
			Fresh Water Trailers

Water System

Ball Valve (1/4") R&R	FW0001		0.5
Chase Nipple (1/4") R&R	FW0002		0.5
Hose (Suction) R&R	FW0003		0.6
Conduit Whip - Install	FW0004		0.8
Conduit Rings R&R	FW0005	Each	0.2
Hose (Discharge) R&R	FW0006		0.8
Pipe Fittings Misc. R&R	FW0007	Each	0.5
Pressure Gauge (0-100 PSI) R&R	FW0008		0.5
Pressure Switch R&R	FW0009		1.0
Pressure Switch Tubing R&R	FW0010		1.0
Pump Cabinet R&I or R&R	FW0011		1.2
Pump Foot R&R	FW0012		0.3
Pump Motor R&R	FW0013	Complete	1.2
Pump Motor Adaptor R&R	FW0014		1.4
Pump Rebuild	FW0015		1.8
PCV Valve R&R	FW0016		0.8
Water Tank (Dayton 5.3 gal.) R&R	FW0017		1.1
Water Holding Tank R&R	FW0018	Main	1.4
Water Holding Tank Hold Downs R&R	FW0019	Main	0.2

Make Ready & PM Tasks

Labor Operation Description	Operation Number	Detail	Labor Time
			Fresh Water Trailers
DOT Annual Trailer Inspection (STATE REQUIRED)	MR1015		1.0

TRAILER LABOR OPERATIONS

Labor Operation Description	Operation Number	Detail	Labor Time
			Fresh Water Trailers
Axle Assy. -Replace	FW0020	W/ Electric Brakes	3.0
	FW0021	W/O Electric Brakes	2.5
Axle Seal- Replace Includes: Grease & Repack inner & outer wheel bearings	FW0022		1.8

Break Away Switch-Replace	FW0023		0.5
Break Away System Battery-Replace	FW0024		0.4
Break Away System Complete - R&R, R&I, or Install	FW0025		0.9
Charge & Retest Break Away Battery	FW0026		0.25
Diagnose Inoperative Trailer Wiring	FW0027		0.5
Document Holder- R&R, R&I, or Install	FW0028		0.2
DOT Trailer Inspection (FMCSR)	FW0029		1.0
DOT Reflective Tape-Replace .1 per section of tape replaced	FW0030	Each	0.1
Drain & Refill Axle Gear Oil	FW0031		N/A
Electric Brake Shoe/Backer Plate Assy.	FW0032		2.5
Equalizer Rod- R&R, R&I, or Adjust	FW0033		0.5
Fender-Replace &/or Resecure	FW0034		0.5
Gooseneck Adjustable Coupler-Replace	FW0035		0.2
Hub Cap- R&R, R&I, or Install	FW0036	Dust	0.2
	FW0037	Oil Bath	0.5
Landing Leg / Crank Handle-Replace	FW0038		0.3
Leaf Spring-Replace	FW0039		1.5
Light Bulb – Replace	FW0040		0.2
Marker Light Assy.-Replace	FW0041	Each	0.2
Mount & Balance Tire	FW0042	Each	0.25
Taillight Assy.-Replace	FW0043	Each	0.5
Tag Bracket or License Plate- R&R, R&I, or Install	FW0044		0.2
Trailer 7-Way Wire Connector-Replace	FW0045		0.5
Trailer 4-Pin Wire Connector-Replace	FW0046		0.4
Trailer Wiring Repair	FW0047		0.2
Valve Stem Assy.-Replace	FW0048		0.3
Valve Stem Cap-Install	FW0049		0.1
Valve Stem Core-Replace	FW0050		0.2
Safety Chain- R&R, R&I, or Install	FW0051	Pin-On	0.2
	FW0052	Weld-On	0.5
Safety Chain Clevis- R&R, R&I, or Install	FW0053		0.2
Wheel & Tire-R&I	FW0054		0.1
Wheel Bearings- Replace Includes: Inner & Outer Bearings	FW0055		1.8
Generic Fresh Water Trailer Labor Line	FW0056		

Labor Time Guide for Light Towers V2

LABOR OPERATION DESCRIPTION	Operation Number	Detail	Labor Time																				
			DCA25SSIT4I	MAG8L	MAG20I	MLT3060M	MLT3060K	MQ6L	MXL20I	MXL30I	MXL8I	MXLA20I	MXLAH20I	MXLH8K	MXL8K	MXLA8K	NLP8K	NLPH8K	WACK8K	WACK6L	WACK6KO	WACK20I	
			BV-4LE2	LOMBARDINI	4LE1	MIT-L3E	D1005	LDW1003	ISUZU	ISUZU	4LE1	ISUZU	4LE1	D1005	D1105	D1105	D1105	D1105	D1105	D1105	KDW1003GE	KDW1003GE	BV-4LE2
AC Electrical & Lighting																							
AC Alternator Assy.- R&R or R&I Includes: Transfer of all required parts	AL100		8.8	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	5.2	5.2	5.2	5.2	5.2	5.2	
AC Alternator ID Plate- R&R or R&I	AL101		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	
Ballast Transformer- Replace	AL102	Each	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	
	AL103	Additional	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Ballast Capacitor -Replace	AL104	Each	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
	AL105	Additional	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Ballast Terminal Board -Replace	AL106		1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	
Circuit Breaker -Replace	AL107	Each	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Capacitor Farad Test -Perform	AL108	All	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Cord Reel -R&R or R&I	AL109		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Diagnose Inoperative AC Alternator	AL110		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Diagnose AC Electrical Concern	AL111		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Diagnose Inoperative Lighting System	AL112		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Fixture Mount Yoke Assembly - Replace	AL113		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	
Insulation Testing (Megger)	AL114		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
	AL115	Each	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lamp/Bulb - Replace	AL117	Each	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	AL137	Stadium Style	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Lamp Ceramic Socket Assy. - Replace	AL116	Each	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lamp Fixture Assy. - Replace	AL117	Each	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lamp Lens Cover &/or Gasket/Ring - Replace	AL118	Each	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
Light Bar Assembly 4-Light -R&R or R&I	AL119		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	
Light Bar Coiled Cord-R&R or R&I	AL120		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Light Bar Mechanical Actuator -R&R or R&I	AL121	Hydraulic	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	
Light Bar Actuator Replacement Motor-R&R or R&I	AL122	Hydraulic	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Main Circuit Breaker -R&R or R&I	AL123		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Main Mast Wiring Repair - Perform	AL136	Damaged	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	
Mast Wiring/Cord - Replace	AL124		1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
Mount AC Alternator-Replace	AL125		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	
	AL126	120V	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Outlet-Replace	AL127	240V	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
	AL128		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Phase Rotation-Check	AL129		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
Pop-Out Breaker - Replace	AL129		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
SAE/ Flywheel Adaptor - R&R or R&I	AL130		See AC Alternator Assy. - R&R or R&I																				
SAE/ Flywheel Adaptor Dust Cover- R&R or R&I ADD: .5 per additional dust cover plate	AL131	ALL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
SAE/ Flywheel Adaptor Housing - R&R or R&I	AL132		See AC Alternator Assy.- R&R or R&I																				
Transformer- Replace	AL133	Each	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
	AL134	Additional	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	
Generic AC Electrical Labor Line Specify generic labor operation	AL135																						

BODY MAST & HARDWARE

LABOR OPERATION DESCRIPTION	Operation Number	Detail	Labor Time																			
			DCA25SSIT4I	MAG8L	MAG20I	MLT3060M	MLT3060K	MQ6L	MXL20I	MXL30I	MXL8I	MXLA20I	MXLAH20I	MXLH8K	MXL8K	MXLA8K	NLP8K	NLPH8K	WACK8K	WACK6L	WACK6KO	WACK20I
			BV-4LE2	LOMBARDINI	4LE1	MIT-L3E	D1005	LDW1003	ISUZU	ISUZU	4LE1	ISUZU	4LE1	D1005	D1105	D1105	D1105	D1105	D1105	D1105	KDW1003GE	KDW1003GE
Cabinet Door Complete Assy.-Replace Includes: Transfer of all hardware	BH101	Left Side	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	BH102	Right Side	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Cabinet Door Handle Assy.-Replace	BH107	Each	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Cabinet Door Hinge-Replace	BH108	Each	0.6	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Cabinet Door Keep Latch-Replace	BH109	Each	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Door Prop -Replace	BH110		0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Instrument Panel - R&R or R&I	BH111		N/A	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Install Decal to Cabinet	BH112	Each	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Kick Out Spring- R&R or R&I	BH113		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Kick Out Spring Pad- R&R or R&I	BH114		0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Light Tower Mast Assy. Complete - R&R or R&I	BH115	Manual Winch	N/A	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	BH116	Electric Winch	N/A	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	BH117	Vertical/Hydraulic	N/A	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Light Tower Mast Assy. (Upper) - R&R or R&I	BH118	upper	3	3																		

Engine (Short Block) Remove & Replace Consists of cylinder block fitted with pistons, rings, connecting rods, crankshaft, and all bearings. Will require installation of cylinder heads and all other applicable parts	EL015		21.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Engine Mount and /or Mounts- Replace	EL016	One Engine Mount	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	EL017	Each Additional Mount	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Engine Oil Filter- Replace	EL018		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Oil Dipstick-Replace	EL019		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Oil Dipstick Tube-Replace	EL020		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Oil Pan Drain Plug & /or Gasket- Replace	EL021		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Oil Filter Adaptor and/or Gasket- Replace	EL022		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Oil Fill Cap- Replace or Install- Replace	EL023		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Oil Pan and/or Gasket- Replace	EL024		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Oil Pump- Replace Includes: R&I Shaft When Applicable	EL025		2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Oil Pressure Test-Perform	EL026		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Oil Pressure Switch- Replace	EL027		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Cylinder Head & or Gasket- Replace Includes: Remove carbon, check surfaces for warpage, adjust valves, and ignition timing where necessary	EL028		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Intake Manifold & or Gasket- Replace	EL029		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Rocker Arm &/or Shaft Assembly - Replace	EL030		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Valve Adjustment Complete (Intake & Exhaust)	EL031		0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Valve Cover & or Gasket - Replace	EL032		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Flywheel DOES NOT include: R&I engine	EL033		0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Main OIL Seal (Front)-Replace DOES NOT include: R&I Crankshaft Damper	EL034		0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Main OIL Seal (Rear), Housing and/or Gasket Includes: R&I AC Alternator, Flywheel, & Seal	EL035		8.8	7.5	8.8	7.5	7.5	7.5	8.9	8.9	7.5	8.9	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	8.8
Generic Engine Labor Line Specify generic labor operation	EL036																					

FUEL, EXHAUST, & EMISSIONS

LABOR OPERATION DESCRIPTION	Operation Number	Detail	Labor Time																			
			DCA25SSIT4I	MAG8L	MAG20I	MLT3060M	MLT3060K	MQ6L	MXL20I	MXL30I	MXL8I	MXLA20I	MXLAH20I	MXLH8K	MXL8K	MXLABK	NLP8K	NLP8K	WACK8K	WACK6L	WACK6KO	WACK20I
			BV-4LE2	LOMBARDINI	4LE1	MIT-13E	D1005	LDW1003	ISUZU	ISUZU	4LE1	ISUZU	4LE1	D1005	D1105	D1105	D1105	D1105	D1105	D1105	D1105	KDW1003GE
Air Filter Element-Replace	FEE01		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Air Filter Housing- R&R or R&I	FEE02		0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Air Filter Housing Lid- R&R or R&I	FEE03		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Air Inlet Elbow-Replace (Air filter housing to tube)	FEE05		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Engine stop lever	FEE06		N/A	N/A	N/A	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A	0.5	0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A
Exhaust Clamp-Replace or Install	FEE07		0.3	0.3	0.3	N/A	N/A	0.3	0.3	0.3	0.3	0.3	0.3	N/A	N/A	N/A	N/A	N/A	N/A	0.3	0.3	0.3
Exhaust Manifold & or Gaskets	FEE08		1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Exhaust Pipe / Muffler Assembly-Replace	FEE09		0.5	0.5	0.5	0.8	0.8	0.5	0.5	0.5	0.5	0.5	0.5	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.5	0.5
Exhaust Pipe Assembly-Replace Catalyst to Spark Arrestor	FEE10		0.3	0.3	0.3	N/A	N/A	0.3	0.3	0.3	0.3	0.3	0.3	N/A	N/A	N/A	N/A	N/A	N/A	0.3	0.3	0.3
Fuel Injection Pump -Replace (Includes	FEE11	All	3.8	4.2	3.8	4.2	4.2	3.8	3.8	3.8	3.8	3.8	3.8	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	3.8
	FEE12	Individual	1.1	N/A	1.1	N/A	N/A	1.1	1.1	1.1	1.1	1.1	1.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.1
Fuel Injector - Adjust &/or Replace	FEE13		N/A	N/A	N/A	1.1	1.1	N/A	N/A	N/A	N/A	N/A	N/A	1.1	1.1	1.1	1.1	1.1	1.1	1.1	N/A	N/A
Fuel Filter -Replace	FEE14		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Fuel Flush	FEE15		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Fuel Lift Pump - R&R or R&I	FEE16		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Fuel Pick Up Tube - R&R & R&I	FEE17		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Fuel Return Line -Replace	FEE18		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Fuel Suction Line -Replace	FEE19		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Fuel Tank Assy- R&R &/or R&I	FEE20			2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Glow Plugs -Replace	FEE21	each	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Speed Control Lever	FEE22		N/A	N/A	N/A	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A	0.5	0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A

LABOR TIME GUIDE for NG GENERATORS

Labor Operation Description	Operation Number	Detail	Labor Time										
			TG30	TG45	TG60	TG70	NG90	TG100	NG150	TG200	TG250	TG350	TG400
AC ELECTRICAL													
AC Alternator Assy.- R&R or R&I Includes: Transfer of all required parts	AC100	Stamford	6.2	6.4	6.4	9.0	5.6	5.6	N/A	9.0	9.0	10.0	10.0
	AC101	Marathon	6.2	6.4	6.4	9.0	5.6	5.6	N/A	9.0	9.0	10.0	10.0
	AC102	Denyo		N/A	N/A	N/A	N/A	N/A	9.0	N/A	N/A	N/A	N/A
AC Alternator Plastic Rear Cover- R&R or R&I	AC103		1.0	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
AC Alternator ID Plate- R&R or R&I	AC104		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
AC Alternator Cabinet Top Lid- R&R or R&I	AC105		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Adjust AVR Setting	D1006		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Adjust MCB Instantaneous Trip Settings	D1007		0.5	0.5	0.5	0.5	0.5	0.5	N/A	0.5	0.5	0.5	0.5
Automatic Voltage Regulator (AVR) -R&R or R&I	AC106		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Breaker/ Outlet 20 or 30 Amp.-Replace	AC107		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Current Transformer (CT)- R&R or R&I	AC108	Each	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Conduit Nipple, Bushing, & Lock Ring-R&R or R&I	AC109		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Diagnose Inoperative AC Alternator	D1008		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose AC Electrical Concern	D1009		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Breaker Failing to Close	D1024		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Voltage Instability Issue	D1025		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diode Test-Perform	D1010		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Exciter Armature/Rotor R&R or R&I	AC151	Stamford											
	AC152	Marathon											
	AC153	Denyo											
Exciter Stator-R&R or R&I	AC110	Stamford	6.0	6.0	6.0	5.0	4.0	4.0	N/A	5.0	5.0	6.0	7.0
	AC111	Marathon	6.0	6.0	6.0	5.0	4.0	4.0	N/A	5.0	5.0	6.0	7.0
	AC112	Denyo	N/A	N/A	N/A	N/A	N/A	N/A	5.0	N/A	N/A	N/A	N/A
Fabricate 3 rd Generation EMP Frame	F1000	5.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fan- R&R or R&I	AC155		See AC Alternator Assy.- R&R or R&I										
Insulation Testing (Megger)	D1011		1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Knife Switch Assy. Complete- R&R or R&I	AC113		1.5	1.5	1.5	2.0	1.5	1.5	1.5	2.0	2.0	2.0	2.0
Knife Switch Cross Arm Insulator - R&R or R&I	AC114		N/A	N/A	N/A	0.8	N/A	N/A	N/A	0.8	0.8	0.8	0.8
Knife Switch Door Thumb Retainer - R&R or R&I	AC115		N/A	N/A	N/A	0.3	N/A	N/A	N/A	0.3	0.3	0.3	0.3

Rotating Rectifier-R&R or R&I	AC142	Stamford	3.0	3.0	3.0	4.0	2.0	2.0		4.0	4.0	4.0	4.0
	AC143	Marathon	3.5	3.5	3.5	3.5	2.5	2.5		3.5	3.5	5.5	5.5
SAE/ Flywheel Adaptor - R&R or R&I	AC146	See AC Alternator Assy.- R&R or R&I											
SAE/ Flywheel Adaptor Dust Cover- R&R or R&I ADD: .5 per additional dust cover plate	AC154	ALL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Generic AC Electrical Labor Line Specify generic labor operation	AC144												

CABINET & HARDWARE

Labor Operation Description	Operation Number	Detail	Labor Time										
			TG30	TG45	TG60	TG70	NG90	TG100	NG150	TG200	TG250	TG350	TG400
Bump Stop for Rear Door -Replace	CH100		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Cabinet Door Complete Assy.-Replace Includes: Transfer of all hardware	CH101	L Front Side	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	CH102	L Rear Side	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	CH103	R Front Side	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	CH104	R Rear Side	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	CH105	L 3 rd Door	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	CH106	Rear Door	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Cabinet Door Handle Assy.-Replace	CH107	Each	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Cabinet Door Hinges-Replace	CH108	Each	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Cabinet Door Keep Latch-Replace	CH109	Each	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Cabinet Door Seal -Replace	CH130	Each	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Drip Rail-Replace	CH110	Each	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Install Decal to Cabinet	CH111	Each	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Install Unit to Trailer	CH112		1.8	1.8	1.8	2.0	1.8	1.8	3.0	2.0	2.0	2.0	2.0
Install Cabinet Enclosure to Skid (Complete)	CH113		3.0	3.0	3.0	4.0	3.0	3.0	6.0	4.0	4.0	5.0	5.0
Insulation -Replace Includes: R&R Screen/Specify location multiple by Qty.	CH114	Each	N/A	N/A	N/A	1.3	1.3	1.3	0.8	1.3	1.3	1.3	1.3
PANEL, Corner-Replace	CH115	L Front	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0	2.0	2.0
	CH116	R Front	N/A	N/A	N/A	2.0	2.0	2.0	N/A	2.0	2.0	2.0	2.0
	CH117	L Rear	2.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0	2.0	2.0
	CH118	R Rear	N/A	N/A	N/A	4.0	3.0	3.0	N/A	4.0	4.0	4.0	4.0
PANEL, Header-Replace	CH119												
	CH120												
PANEL, Top-Replace	CH121	Front & Rear	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	CH122	Center	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
PANEL, Top Screen-Replace	CH123					1.0			1.0	1.0	1.0	1.0	1.0

Battery Maintainer- Installation	DC112		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.0
Charging System Check Includes: Battery test, alternator output test, & starter test.	D1012		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Charge & Retest Battery or Batteries	D1013		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Clean & Tighten Battery Terminals	DC113	Each	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Engine Stop Solenoid-Replace	DC114		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Ground Strap-Replace	DC115		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Specific Gravity Battery Test	DC160	Hydrometer	0.5	0.5	0.5	0.8	0.5	0.5	0.8	0.8	0.8	0.8	0.8
Starter-Replace	DC116		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose ECM Communication Loss	DC117		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose No Start Condition	DC118		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Fault Code	DC119		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ignition Systems & Sensors			TG30	TG45	TG60	TG70	NG90	TG100	NG150	TG200	TG250	TG350	TG400
Camshaft Position/ Timing Sensor-Replace	DC120		0.8	0.8	0.8	0.5	0.8	0.8	0.5	0.5	0.5	0.5	0.5
Crankshaft Position Sensor-Replace	DC121		1.0	1.0	1.0	0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A
Distributor Assembly-Replace	DC122		1.5	1.5	1.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Distributor Cap & Ignition Rotor-Replace	DC123		1.0	1.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ignition Coil -Replace	DC124	Each Coil	1.0	1.0	1.0	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3
R&R Ignition Plug Boot	DC125	Each Plug Boot	N/A	N/A	N/A	0.2	0.2	N/A	0.2	0.2	0.2	0.2	0.2
Ignition Plug Wire Set	DC126	Each Ignition SET	1.0	1.0	1.0	N/A	N/A	0.8	N/A	N/A	N/A	N/A	N/A
R&R Spark Plug	DC127	Each Spark Plug	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Ignition Module-Replace	DC128		0.4	0.4	0.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Knock Sensor-Replace	DC129		0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Instrumentation, Wiring, Control , & Monitoring			TG30	TG45	TG60	TG70	NG90	TG100	NG150	TG200	TG250	TG350	TG400
Basler 2020 - R&R &/or R&I	DC162		0.8	0.8	0.8	0.8	N/A	0.8	0.8	0.8	0.8	0.8	0.8
Basler 2020HD - R&R &/or R&I	DC163		0.8	0.8	0.8	0.8		0.8	0.8	0.8	0.8	0.8	0.8
Basler 2020LSM R&R &/or R&I (Load Share Module)	DC164		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.7	0.7	0.7
Alarm Speaker R&R &/or R&I	DC166	Basler Only	N/A	0.6	N/A	0.6	0.5	N/A	N/A	0.6	0.6	0.6	0.6
Can Enabled Dual Band GPS System-Install	DC130	M8	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Can Enabled CT Monitor System-Install (Controls Inc. Model# XCAN-AC)	T1024	XCAN-AC	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Controller-Replace Includes: Complete Assy.	DC132	Basler HD2020	N/A	N/A	N/A	3.0	N/A	N/A	3.0	3.0	3.0	3.0	3.0

Engine Oil Cooler Hose- Replace	E5009		N/A	N/A	N/A	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Engine Oil Filter- Replace	E5010		0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Oil Dipstick-Replace	E5011		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Oil Dipstick Tube-Replace	E5012		0.5	0.5	0.5		0.5	0.5					
Oil Pan Drain Plug & /or Gasket- Replace	E5013		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Oil Filter Adaptor and/or Gasket- Replace	E5014		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Oil Fill Cap- Replace or Install- Replace	E5015		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Oil Pan and/or Gasket- Replace	E5016		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Oil Pan Pre-Installation Leak Test	E5017		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Oil Pump- Replace <small>Includes: R&I Shaft When Applicable</small>	E5018		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Oil Pump Drive-Replace (Dummy Shaft) Does not Include: Intake manifold R&R	E5019		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Oil Pressure Switch- Replace	E5020		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Oil Pressure Sensor- Replace	E5021		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Oil Thermostat- Replace	E5022		N/A	N/A	N/A	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
HEAD & VALVETRAIN			TG30	TG45	TG60	TG70	NG90	TG100	NG150	TG200	TG250	TG350	TG400
Balance Shaft Bearing- Replace	E5023												
Balance Shaft Gear- Replace	E5024												
Camshaft- Replace <small>(Engine Removed)</small>	E5025		1.5	1.5	1.5	4.0	1.5	1.5	4.0	4.0	5.25	5.25	5.25
Camshaft Bearing Set- Replace	E5026												
Camshaft Gear- Replace	E5027					2.75			2.75	2.75	3.7	3.7	3.7
Cylinder Head & or Gasket- Replace <small>Includes: Remove carbon, check surfaces for warpage, adjust valves, and ignition timing</small>	E5028	One Cylinder Head	8.5	8.5	8.5	3.5	9.2	9.2	3.5	3.5	4.0	4.0	4.0
	E5029	Each Additional Head	3.7	3.7	3.7	2.5	3.1	3.1	2.5	2.5	3.0	3.0	3.0
Intake Manifold & or Gasket- Replace	E5030		3.2	3.7	3.9	3.0	4.8	4.8	3.0	3.0	3.5	3.5	3.5
Push Rod- Replace <small>DOES NOT Include: R&I Rocker Arms</small>	E5031	One Push Rod	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Rocker Arm &/or Shaft Assembly - Replace <small>Includes: R&I Valve Cover</small>	E5032	Individual	0.9	0.9	0.9	1.5	0.9	0.9	1.5	1.5	1.8	1.8	1.8
	E5033	Set	3.1	2.9	3.8	6.3	3.8	3.8	6.3	6.3	8.2	9.8	11.4
Rocker Arm Jam Nut &/or Adjuster - Replace	E5056	Each	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Rocker Arm Stud- Replace	E5034	Each	0.3	0.3	0.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Timing Chain and/ or Sprocket- Replace	E5035			6.0	6.0	N/A	7.0	7.0	N/A	N/A	N/A	N/A	N/A
Timing Cover and/or Gasket- Replace	E5036			5.1	5.1	4.0	6.1	6.1	4.0	4.0	4.5	4.5	4.5
Timing Cover Seal- Replace		Refer to: Operation #L5010 Crankshaft Damper and/or Timing Cover Seal -Replace											
Valve Adjustment Complete (Intake & Exhaust)	E5037		1.8	1.8	2.0	1.5	N/A	N/A	1.5	1.5	1.6	1.8	2.0
Valve Recondition & or Replace	E5038	One Cylinder Head	9.5	9.5	9.5	3.0	10.1	10.1	3.0	3.0	5.0	5.0	5.0

Adjust Gas Pressure Regulator-Replace	FE102		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Air Filter Element-Replace	FE103		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Air Filter Housing- R&R or R&I	FE104		0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.9	0.9	0.9
Air Filter Housing Hood- R&R or R&I	FE105		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Air Filter Housing Lid- R&R or R&I	FE106		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Air Inlet Elbow-Replace (Air filter housing to tube)	FE107		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Air Inlet Elbow-Replace (tube to adaptor)	FE108		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Air Inlet Tube-Replace (Elbow to elbow)	FE109		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
CAC Tube &/or Boot -R&R or R&I (CAC to Throttle Body)	FE180		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
CAC Tube &/or Boot -R&R or R&I (Turbo to CAC)	FE181		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Convert LP Gas Connection Port-Fabricate (Convert from 1/4 to 1/2 opening)	F1001		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
CCV Filter-R&R or R&I	FE110		0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.4	0.4	0.4	0.4
CCV Filter Housing- R&R or R&I	FE111		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose Backfiring Condition	D1017		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose No Start In LP Mode	D1018		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose No Start In NG Mode	D1019		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Diagnose NG to LP Switching Inoperative	D1020		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Dual Fuel Kit- Install Includes: Installation of all components to convert a NG unit to NG/LPG	FE112		6.0	6.0	6.0	6.0	6.0	6.0	N/A	6.0	8.0	8.0	8.0
Engine Control Module (ECM) –R&R or R&I	FE113		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Electronic Pressure Regulator (EPR) –R&R or R&I INCLUDES: Pressure Checks & Transfer of all fittings	FE114		1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Electronic Throttle Body –R&R or R&I	FE115		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
EPR Mounting Bracket –R&R or R&I	FE116		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
EPR Adaptor Bracket –R&R or R&I	FE117		1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
EXHAUST			TG30	TG45	TG60	TG70	NG90	TG100	NG150	TG200	TG250	TG350	TG400
Catalytic Converter-R&R or R&I Add 1.0 per additional Catalytic Converter	FE118		1.0	1.0	1.0	1.0	1.0	1.0	1.5	1.0	1.0	1.0	1.0
Catalyst Back Pressure Test	FE177		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Exhaust Clamp-Replace or Install	FE119	Specify	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Exhaust Manifold & or Gaskets	FE120	Both Sides	N/A	N/A	N/A	3.0	N/A	N/A	3.0	3.0	8.0	8.6	9.0
	FE121	One Side	N/A	N/A	N/A	1.5	N/A	N/A	1.5	1.5	4.0	4.3	4.5

TSB#-1004 TGR100 Engine Pulley Upgrade for PSI 8.8L	T1004		N/A	N/A	N/A	N/A	N/A	1.6	N/A	N/A	N/A	N/A	N/A
TSB#T-1005 Install Dual Fuel Kit Upgrade	T1005		6.0	6.0	6.0	N/A	N/A	6.0	6.0	6.0	8.0	8.0	8.0
TSB#T-1006 Maxitrol Filter Housing Delete	T1006A		1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
	T1006B	Inspect Only	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
TSB#T-1007 NG/LP Timer Switch Delay Upgrade	T1007		4.0	4.0	4.0	N/A	N/A	4.0	4.0	4.0	4.0	4.0	4.0
TSB#T-1008 Doosan Serpentine Belt Upgrade Kit	T1008		N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.0	5.0	5.0	5.0
TSB#T-1009 Taylor Manufacturing debris issue	T1009		1.0	1.0	1.0	1.0	N/A	1.0	1.0	1.0	1.0	1.0	1.0
TSB#T-1010 Install Day Tank Upgrade	T1010		4.0	4.0	4.0	N/A	N/A	4.0	4.0	4.0	4.0	4.0	4.0
TSB#T-10011 Taylor Mains Breaker Lug loose	T1011		N/A	N/A	0.5	N/A	N/A	0.5	0.5	0.5	0.5	0.5	0.5
TSB#T-1014 Taylor rectifier wire chafing on shaft issue	T1014		N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.0	1.0	1.0	1.0
TSB#T-1024 Install Can Enabled CT Monitor (Controls Inc. Model# XCAN-AC)	T1024		2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
TSB#T-1028 TG100 Valve Cover Swap	T1028		N/A	N/A	N/A	N/A	N/A	1.0	N/A	N/A	N/A	N/A	N/A
TSB#T-1029 Taylor TG100 Fuel System Support Bracket	T1029		N/A	N/A	N/A	N/A	N/A	1.5	N/A	N/A	N/A	N/A	N/A
TSB#T-1032 Taylor TGR200 Generator Sub Panel Stud Issue	T1032		N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.5	N/A	N/A	N/A
TSB#T-1038 Taylor TG100 AC Cabinet Wire Chafing	T1038		N/A	N/A	N/A	N/A	N/A	0.5	N/A	N/A	N/A	N/A	N/A
TSB#T-1039 Taylor TG45-60 AC Cabinet Wire Chafing	T1039		N/A	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TSB#T-1040 Taylor Faulty Radiator Hose Clamps	T1040		N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.4	0.4	0.4	0.4
TSB#T-1042 Doosan V-Series Timing Sensor Leaking Oil	T1042		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.5	0.5	0.5
TSB#T-1051 Taylor TG250 AC Cabinet Wire Chafing	T1051		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.5	N/A	N/A
TSB#T-1061 Taylor Incorrect Oil System Hose	T1061		N/A	N/A	0.9	N/A	N/A	0.9	N/A	0.9	0.9	0.9	0.9
TSB#T-10062 Taylor MCB Enclosure Upgrade	T1062		N/A	N/A	N/A	N/A	N/A	N/A	N/A	4.2	4.2	4.2	4.2
TSB#T-1064 Install Aftermarket Cold Weather Pneumatic Fan Upgrade Kit	T1064		N/A	N/A	N/A	N/A	N/A	N/A	N/A	7.0	7.0	7.0	8.0
TSB# T-1065 Inoperative High Level Shutdown Switch	T1065		N/A	N/A	1.5	N/A	N/A	1.5	1.5	1.5	1.5	1.5	1.5
TSB# T-1066 Coolant Reservoir Installation	T1066		N/A	0.8	0.8	N/A	0.8	0.8	0.8	0.8	0.8	0.8	0.8
TSB# T-1067 Doosan Exhaust Manifold/Cooling System Pressure Test	T1067		N/A	N/A	1.5	1.5	N/A	1.5	1.5	1.5	1.5	1.5	1.5

LABOR TIME GUIDE for Office Trailers

Labor Operation Description	Operation Number	Detail	Labor Time
			All Models

(A/C) Electrical Equipment

Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
Breaker, circuit, 120 VAC, R&R	OT8000		0.4
Breaker, circuit, GFI, 120 VAC, R&R	OT8001		0.5
Breaker Panel R&R	OT8002		2.0
Converter, Power, A/C to D/C, R&R	OT8003	w/breaker panel, complete, R&R	2.0
	OT8004	w/breaker panel, converter only, R&R	1.5
	OT8005	Converter, stand alone, R&R	1.0
Cord, power supply Cord, 30A, R&R	OT8006		1.0
Cord, power supply Cord, 50A, R&R	OT8007		1.5
Cord reel, new, install	OT8008		2.5
Cord reel, repair	OT8009		1.0
Generator R&R	OT8010	All	4.0
Light, ceiling, A/C, R&R	OT8011		0.4
Receptacle (Double, single, wall outlet, std.) R&R	OT8012		0.4
Receptacle (GFCI) R&R	OT8013		0.6
Receptacle, new, install	OT8014	(includes wire into breaker box)	4.0
Switch, transfer (auto), R&R	OT8015		2.0
Switch, wall, R&R	OT8016		0.5
Generic AC Electrical Labor Line	OT8017		

(D/C) Electrical Equipment

Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
Battery, R&R	OT8018		0.5
Battery, (remote location), R&R	OT8019		0.8
Battery Cable R&R	OT8020		0.5
Battery Cable End R&R	OT8021		0.5
Battery Cable (generator), R&R	OT8022		3.5
Battery Charge Solenoid, R&R	OT8023		0.7
Battery Charge Switch, R&R	OT8024		0.6
Battery Isolater R&R	OT8025		0.9

Battery Isolater (New Install)	OT8026	(includes load and hydrometer tests, fill water to proper level, clean	3.0
Battery, power converter/charger	OT8027	See A/C Equipment	
Inverter DC/AC R&R	OT8028	Cabinet mounted, hardwired	2.0
	OT8029	Non-hardwired	1.0
Lighting, D/C, Exterior	Operation Number	Detail	All Models
Light, assist handle, complete R&R	OT8030		0.6
Light, bulb, miscellaneous standard, R&R	OT8031		0.2
Light, clearance or marker screw mount, R&R	OT8032	Complete assembly	0.5
Light, clearance or marker bolt through, R&R	OT8033	Complete assembly	1.5
Light, clearance or marker Lens, R&R, clean	OT8034		0.2
Light, clearance or marker Reseal	OT8035		0.2
Light, license plate, R&R	OT8036		0.4
Light, patio, R&R	OT8037		0.6
Light, reflectors, no power, stick on or screw on, R&R	OT8038		0.2
Light, scare, R&R	OT8039		0.9
Light, tail, assembly R&R	OT8040	Mount surface, R&R	0.5
	OT8041	Mount, flush, or in fiberglass cap	1.0
	OT8042	Clean contacts and connection	0.3
	OT8043	Lens, R&R	0.2
Lighting, D/C, Interior	Operation Number	Detail	All Models
Light, bulb, miscellaneous standard, R&R	OT8044		0.2
Light, ceiling, R&R	OT8045		0.5
Light, map, R&R	OT8046		0.2
Light, reading, R&R	OT8047		0.5
Light, wall lamp assembly, R&R	OT8048		0.5
Solar, Panels/Chargers	Operation Number	Detail	All Models
Solar panel, install (under 30 watts w/regulator)	OT8049		1.5
Solar panel, install (over 30 watts w/regulator)	OT8050		2.8
Switches/Connectors/Wiring	Operation Number	Detail	All Models
Breaker, circuit, 12 VDC, R&R	OT8051		0.4
Fuse (any), R&R	OT8050		0.2
Outlet, R&R 12 volt power point	OT8052		0.5
Switch, rocker, R&R	OT8053		0.4
Switch, toggle, R&R	OT8054		0.4

Switch, wall, R&R	OT8055		0.4
Generic DC Electrical Labor Line	OT8056		
EXTERIOR			
Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
Bumpers	Operation Number	Detail	All Models
Bumper, alignment with no attachments	OT8057		0.5
Bumper, channel type, rear bolt on, R&R	OT8058		1.0
Bumper cover, rear square, R&R	OT8059		0.6
Bumper, end cap, R&R	OT8060		0.2
Bumper, rear, sq. tube, bolt on, R&R	OT8061		1.0
Bumper, rear, sq. tube, welded, R&R*	OT8062		2.5
Bumper, steel, sand/prime/paint	OT8063		2.0
Mud flap, caster wheels, each, R&R	OT8064		0.5
Mud flap R&R	OT8065	Each	0.6
Skid guards, caster wheels, each, R&R	OT8066		0.8
Skid guards, travel trailer, rear, fabricate, weld & paint*	OT8067	(includes time to disconnect and reconnect battery)	1.5
Doors, Access and Compartment	Operation Number	Detail	All Models
Door, access, battery, vented, R&R	OT8068		1.0
Door, access, power cord assembly, square, R&R	OT8069		1.0
Door, access, power cord cable hatch, round, R&R	OT8070		0.5
Door, storage compartment, gasket or weatherstrip, R&R	OT8071		1.0
Door, storage compartment, gas strut, R&R	OT8072		1.5
Door, storage compartment, handle, R&R	OT8073		0.6
Door, storage compartment, hold back, compartment door, R&R	OT8074		0.3
Door, storage compartment, reseal without removal	OT8075		0.2
Lock, flush mount, compartment door, R&R	OT8076		0.5
Lock, key type, access, compartment, hatch door, R&R	OT8077		0.4
Lock, thumb twist type, access, compartment, hatch door, R&R	OT8078		0.5
Doors, Entry	Operation Number	Detail	All Models
Door, entry, adjust	OT8079		0.6
Door, entry, complete assembly, motorhome, R&R	OT8080		3.0
Door, entry, complete assembly, trailer, R&R	OT8081		2.5
Door, entry, hinge, R&R	OT8082		0.4
Door, entry, hold back, R&R	OT8083		0.2

Door, entry, lock, R&R	OT8084		0.5
Door, entry, dead bolt, R&R (includes adjustment)	OT8085		0.5
Door, entry, lock, repair	OT8086		0.5
Door, entry, lock, striker plate, R&R	OT8087		0.3
Door, entry, reseal without removal	OT8088		0.6
Door, entry, sliding patio door assembly, trailer, R&R	OT8089		3.5
Door, entry, sliding patio door, trailer, reseal without removal	OT8090		1.0
Door, entry, window, R&R	OT8091		1.0
Entry, assist handle, R&R	OT8092		0.5
Entry, drip cap, R&R	OT8093		0.4
Screen door, R&R	OT8094		0.5
Screen door, latch, R&R	OT8095		0.2
Screen door, screen, R&R	OT8096		0.6
Screen door, slider	OT8097		0.3
Weatherstrip, entry or screen door, R&R	OT8098		0.4
Entry, Steps	Operation Number	Detail	All Models
Entry step, complete bolt-on, manual, R&R (and paint)	OT8099		1.3
Entry step, complete bolt-on, power/electric, R&R	OT8100		1.5
Entry step, complete weld-on, power/electric R&R	OT8101	(custom fit)	2.0
Entry step, door switch, R&R	OT8102		0.5
Entry step, electronics package, R&R	OT8103		1.0
Entry step, light assembly, R&R	OT8104		0.5
Entry step, linkage, R&R	OT8105		0.5
Entry step, motor, R&R	OT8106		1.5
Entry step, solenoid, vacuum, R&R	OT8107		1.0
Wiring operation (any)	OT8108	(maximum time)	1.0
Moldings, Trim & Corner Caps	Operation Number	Detail	All Models
Corner cap, sidewall to real wall, R&R	OT8109		2.5
Corner cap, roof to sidewall, R&R	OT8110	(per linear ft.)	0.3
Molding, flat, corner, gutter, trim, R&R	OT8111		0.3
Molding, insert, R&R	OT8112		0.4
Molding, vinyl, adhesive backed, R&R	OT8113		0.2
Termination bar, transition seam, roof to cap, R&R	OT8114		0.4
Termination bar, transition seam, roof to cap, R&R	OT8115		0.3
Venting	Operation Number	Detail	All Models

Vent, roof, crank up, add vent, cut and frame opening	OT8116		2.0
Vent, roof, crank up, complete, new, R&R	OT8117		1.0
Vent, roof, crank up, complete, old, R&R	OT8118	(includes cleaning)*	1.5
Vent, roof, crank up, cover only, R&R	OT8119		0.5
Vent, roof, crank up, cover seal, R&R	OT8120		0.3
Vent, roof, crank up, crank handle, R&R	OT8121		0.1
Vent, roof, crank up, crank/regulator, R&R	OT8122		0.5
Vent, roof, crank up, fan blade, R&R	OT8123		0.3
Vent, roof, crank up, fan motor, R&R	OT8124		0.5
Vent, roof, crank up, fan motor switch, R&R	OT8125		0.4
Vent, roof, crank up, garnish, interior, R&R	OT8126		0.2
Vent, roof, plumbing stack, R&R	OT8127		0.5
Vent, roof, plumbing stack, reseal	OT8128		0.3
Vent, roof, refer, R&R	OT8129		1.0
Vent, roof, reseal (crank up, refer)	OT8130		0.5
Vent, sidewall, dryer, R&R	OT8131		0.6
Wheel Housings and Wheel/Fender Skirts	Operation Number	Detail	All Models
Wheel/fender skirt, single axle, R&R	OT8132		0.9
Wheel/fender skirt, tandem axle, R&R	OT8133		1.1
Wheel/fender skirt, fiberglass panel, R&R	OT8134		3.0
Wheel housing, folding trailer, R&R	OT8135		1.6
Wheel housing, rebuild*	OT8136		2.0
Wheel housing, travel trailer, R&R	OT8137	Single	0.6
	OT8138	Tandem	1.0
	OT8139	Triple	0.4
Wheel opening, trim, each, R&R	OT8140		1.0
Windows	Operation Number	Detail	All Models
Window, assembly, up to 400 sq. in., R&R	OT8141		1.5
Window, assembly, more than 400 sq. in., R&R	OT8142		2.5
Window, crank handle, R&R	OT8143		0.2
Window, crank operator, R&R	OT8144		1.0
Window, glass channel weatherstrip, R&R	OT8145	(per ft.)	0.4
Window, latch, R&R	OT8146		0.2
Window, reseal without removal	OT8147		0.5
Window, screen material, R&R	OT8148		0.5
Window, screen with frame, R&R	OT8149		0.5

Generic Exterior Labor Line	OT8150		
HEATING & AIR CONDITIONING			
Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
ROOF AIR CONDITIONER	Operation Number	Detail	All Models
Air conditioner, R&R (Complete Includes Housing)	OT8151	(includes replace gasket)	5.0
Air conditioner, R&R (Cooling Section Only)	OT8152		2.0
Capacitor, Fan, R&R	OT8153		1.0
Capacitor, Run, R&R	OT8154		1.0
Capacitor, Start, R&R	OT8155		0.8
Ceiling assembly, R&R	OT8156	(and to tighten "hold-down" bolts)	0.5
Condenser, fan blade/wheel, R&R	OT8157		1.0
Device, overload, R&R	OT8158		0.8
Device, solid state start, R&R	OT8159		1.0
Diagnose Inoperative Air Conditioner	OT8160		1.0
EVAC/vacuum/recharge	OT8161		1.0
Evaporator, impeller, R&R	OT8162		2.0
Gasket, mounting, R&R	OT8163		1.5
Heat-strip - Install	OT8164	(add to existing mounted air conditioner)	0.8
Heat-strip - Install	OT8165	(install before initial A/C installation)	0.4
Module board, main, R&R	OT8166		1.5
Motor, fan, R&R	OT8167		2.0
Motor, mount, R&R	OT8168		2.0
Relay, start, R&R	OT8169		0.9
Shroud, R&R	OT8170		0.6
Switch, selector, R&R	OT8171		0.8
Thermostat, R&R	OT8172	Ducted, new model	1.0
	OT8173	Ducted, same model	0.7
	OT8174	Direct discharge	0.5
COOL HEAT PUMP	Operation Number	Detail	All Models
Air conditioner, R&R (includes replace gasket)	OT8175		1.2
Bolts, anchor bolts, R&R stripped (each)	OT8176		0.6
Capacitor, Fan, R&R	OT8177		1.0
Capacitor, Run, R&R	OT8178		1.0
Capacitor, Start, R&R	OT8179		1.0

Capillary tube, leak	OT8180	(includes EVAC/vacuum/recharge)	3.0
Ceiling assembly, R&R	OT8181	(and to tighten "hold-down" bolts)	0.5
Compressor, R&R	OT8182		2.0
Condensation, in ducts, dry and seal, in/outlet	OT8183		1.0
Condensation, outlet unplug	OT8184		1.0
Condenser, R&R	OT8185	(includes EVAC/vacuum/recharge)	2.0
Condenser, coil leak	OT8186	(includes EVAC/vacuum/recharge)	2.5
Condenser, fan blade/wheel, R&R	OT8187		1.7
Control, cold, R&R	OT8188		1.0
Control, fan speed, R&R, non-ducted ceiling control	OT8189		0.5
Control, module board, main, R&R	OT8190		1.0
Drip tray, R&R	OT8191		2.8
Evaporator, blower wheel, R&R	OT8192		1.4
EVAC/vacuum/recharge	OT8193		1.0
Evaporator, coil leak	OT8194	(includes EVAC/vacuum/recharge)	3.1
Evaporator, shroud, R&R	OT8195		0.6
Filter/dryer, R&R	OT8196		3.0
Gasket, mounting, R&R	OT8197		1.5
Heat-strip - Install	OT8198	(add to existing mounted air conditioner)	0.8
Heat-strip - Install	OT8199	(install before initial A/C installation)	0.4
Relay, start, R&R	OT8200		0.8
Sensor, ambient, R&R	OT8201		0.5
Sensor, remote, R&R	OT8202		0.5
Shroud, R&R	OT8203		0.5
Suction line, leak Repair	OT8204	(includes EVAC/vacuum/recharge)	2.5
Switch, selector, R&R	OT8205		0.9
Thermostat, R&R	OT8206	Ducted, new model	1.0
	OT8207	Ducted, same model	0.7
	OT8208	Direct discharge	0.5
Valve, reversing, R&R	OT8209	(includes EVAC/vacuum/recharge)	3.0
Valve, tap, install	OT8210	(if needed)	0.9

INTERIOR

Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
Cabinetry and Doors	Operation Number	Detail	All Models

Cabinet door, prop rod, R&R	OT8211		0.3
Cabinet drawer, box, repair	OT8212		0.6
Cabinet drawer, guide, R&R	OT8213		0.5
Cabinet drawer, reset guide and rails	OT8214		1.0
Countertop, R&R (per running ft.)	OT8215		0.8
Door, folding, passage, R&R	OT8216		0.9
Door, folding, passage, track, ceiling, R&R (per ft.)	OT8217		0.1
Door, hinged passage, R&R	OT8218		0.5
Frame, cabinet, overhead, R&R (per linear ft.)	OT8219		0.5
Frame, cabinet, under counter, R&R (per linear ft.)	OT8220		0.7
Hinge, cabinet, R&R	OT8221		0.3
Frame, cabinet, under counter, R&R (per linear ft.)	OT8222		0.3
Hinge, passage door, R&R	OT8223		0.4
Latch, cabinet door, R&R	OT8224		0.4
Latch, passage door, R&R	OT8225		0.4
Flooring	Operation Number	Detail	All Models
Carpet jamb/threshold, R&R	OT8226		0.2
Floor frame, per stud	OT8227	(per Stud)	4.0
Floor, plywood decking, R&R (per sq. ft.)	OT8228	(per sq. ft.)	0.3
Hardwood flooring, R&R (per sq. ft.)	OT8229	(per sq. ft.)	1.0
Hardwood flooring, sport repair and recoat	OT8230		2.0
Tile, ceramic, R&R	OT8231	1 to 4 sq. ft., with grout	4.0
	OT8232	Additional sq. ft., each	1.0
Underlayment, R&R (per sq. ft.)	OT8233	(per sq. ft.)	0.3
Underlayment, install new (per sq. ft.)	OT8234	(per sq. ft.)	0.2
Vinyl flooring, R&R per sq. ft.),	OT8235	add for sub floor(repair if needed)	0.30
	OT8236	Additions of molding/trim work (per linear ft.)	0.1
Soft Trim	Operation Number	Detail	All Models
Brackets, curtain rod, new, install set	OT8237		0.4
Window, curtain track, per ft., R&R	OT8238		0.20
Window, shade or blind, R&R	OT8239		0.4
Window, shade or blind, new, install	OT8240		0.5
Window, valance, R&R	OT8241		1.0
Window, valance board, R&R	OT8242		0.6
Miscellaneous	Operation Number	Detail	All Models
Chair, R&R	OT8243		0.2

Coffee maker, R&R	OT8244		0.5
Detector R&R (Carbon Monoxide, LP, & Smoke)	OT8245	Battery Powered	0.5
	OT8246	Hard Wired	0.8
Duct, register, R&R	OT8247		0.4
Fire extinguisher bracket, R&R	OT8248		0.4
Phone jack, R&R	OT8249		0.3
Rug, R&R	OT8250		0.2
Paneling, Moldings and Ceiling Fabric	Operation Number	Detail	All Models
Interior molding, batten, new or R&R	OT8251	(per linear. ft.)	0.2
Interior molding, chair rail, door opening, cabinet	OT8252	(per linear. ft.)	0.2
Ceiling, fabric, R&R (per sq. ft.)	OT8253	(per sq. ft.)	0.3
Ceiling, panel, R&R (per sq. ft.)	OT8254	(per sq. ft.)	0.3
Insulation fiberglass mat, R&R, (per sq. ft.)	OT8255	(per sq. ft.)	0.2
Wall/cabinet, panel, R&R (per sq. ft.)	OT8256	(per sq. ft.)	0.5
Wall/ceiling, seam tape (per section)	OT8257	(per section)	0.3
Generic Interior Labor Line	OT8258		

Make Ready & PM Tasks

Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
OFFICE TRAILER MAKE READY PROCEDURES	MR1039		2.0
DOT Annual Trailer Inspection <small>(STATE REQUIRED)</small>	MR1015		1.0
Pressure Wash Office Trailer (Clean)	OT8259	Mild	0.5
	OT8260	Heavy	1.0
	OT8261	Severe	2.0

RADIO , TV, & Monitors

Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
Radio and Audio	Operation Number	Detail	All Models
Antenna, radio, Class C, R&R	OT8262		
Antenna, CB radio, install	OT8263		
CB radio, install	OT8264		
CD carousel-remote, R&R*	OT8265		
Coax cable wiring R&R	OT8266	per linear ft. (minimum time)	

Exterior entertainment center, R&R	OT8267		
Intercom R&R	OT8268		
Radio (built-in), R&R	OT8269		
Speakers, radio, R&R	OT8270		
Speaker, subwoofer-remote, R&R	OT8271		
TV , Monitors, & Antenna	Operation Number	Detail	All Models
Amplifier, R&R	OT8272		0.9
Antenna, TV, head only, replace	OT8273		0.8
Antenna, TV R&R	OT8274	Side mount	0.8
	OT8275	Omnidirectional	1.5
	OT8276	Roof mount	1.0
	OT8277	Roof mount with power outlet	2.0
Cell Phone Booster, Install	OT8278		1.8
Coax cable outlet R&R	OT8279		0.8
Coax cable wiring R&R	OT8280	per linear ft. (minimum time)	0.7
Crank handle, antenna elevate, manual, R&R	OT8281		0.4
Digital converter box R&R	OT8282		0.5
DVD/VCR player, R&R	OT8283		0.5
Ehernet Cable Oultet R&R	OT8284		0.8
Ehernet Cable Wiring R&R	OT8285		0.7
Internet Router R&R	OT8286		0.8
Gear kit, manual, R&R	OT8287		0.6
Outlet, TV, R&R,	OT8288		0.4
Power Supply Strip R&R	OT8289	GFCI 110V	0.6
TV &/or Monitor R&R	OT8290		1.2
SATELLITE SYSTEMS	Operation Number	Detail	All Models
Circuit board, King Dome, R&R	OT8291		1.0
Console, King Dome, R&R	OT8292		1.0
Control unit, R&R	OT8293	Kingdome	0.6
	OT8294	Winegard	1.0
Coax cable, replace	OT8295		1.0
Complete, roof unit, R&R, including reseal	OT8296		1.0
Complete, satellite system, install	OT8297	Electric	4.0
	OT8298	Manual	1.0
Dome, cover, R&R	OT8299		0.5
Gear housing, (lift assembly) electric Winegard, R&R	OT8300		1.5

Gear, manual crank, R&R	OT8301		0.5
GPS, R&R	OT8302		1.2
Limit switch, R&R	OT8303		1.0
LNBF sensor, R&R	OT8304		1.0
Motor azimuth, R&R	OT8305		1.0
Motor elevation, R&R	OT8306		1.0
Receiver, including programming, R&R	OT8307		0.8
Receiver, software update	OT8308		1.0
Reflector, R&R	OT8309		0.5
Wiring harness, replace	OT8310		1.0
Generic Radio & TV Labor Line	OT8311		

REFRIGERATORS

Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
Circuit board, lower, R&R	OT8312		1.0
Circuit board, upper, R&R (switch card)	OT8313		1.0
Cooling unit (RV up to 8 cu. ft.) R&R (add for R&R refrigerator)*	OT8314	Single door	3.0
	OT8315	Double door	3.0
	OT8316	Side-by-side model	4.5
	OT8317	NDR Models	4.5
Door, each, R&R	OT8318		0.4
Door handle assembly R&R	OT8319		0.8
Door gasket, R&R	OT8320		1.2
Door liners, including gasket	OT8321		1.9
Gas safety valve, manual, R&R	OT8322	LP Models	1.0
Gas shut-off valve, R&R	OT8323	LP Models	1.0
Gas solenoid valve, AES and Ames, R&R	OT8324	LP Models	1.0
Heating element, R&R	OT8325		1.0
Igniter, piezo, R&R	OT8326	LP Models	0.9
In-line fuse holder, R&R	OT8327	(for DC and feed line)	
Refrigerator, complete, R&R*	OT8328	(direct replacement only)*	2.5
Refrigerator, complete, replace with different model	OT8329	(includes 1 hour of cabinet and fascia modification)*	3.0
Refrigerator service	OT8330	(includes clean-venting, burner/burner orifice, outside compartment, LP pressure and electrical test. Operation and cycling monitoring for 24 hours)	1.0

Safety valve magnet, R&R	OT8331	(solenoid valve, or solenoid valve coil)	1.0
Thermocouple, R&R	OT8332		1.0
Thermostat (gas and electric), R&R	OT8333	(add for R&R refrigerator, if needed)*	1.6
Thermistor, R&R	OT8334		1.0
Generic Refriderators Labor Line	OT8335		

RUNNING GEAR AND CHASSIS

Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
Axle Assy. -Replace	OT8336	W/ Electric Brakes	3.0
	OT8337	W/O Electric Brakes	2.5
Axle Seal- Replace <small>Includes: Grease & Repack inner & outer wheel bearings</small>	OT8338		1.8
Brake, adjust, per axle	OT8339		0.6
Brake, hub and drum R&R**	OT8340	(1 axle, both sides)	1.2
Brake, hub and drum R&R**	OT8341	(2 axles, both sides)	2.2
Brake, Shoes R&R	OT8342	(lining and brake hardware, per axle),	1.7
Break Away Switch-Replace	OT8343		0.5
Break Away System Battery-Replace	OT8344		0.4
Break Away System Complete - R&R, R&I, or Install	OT8345		0.9
Charge & Retest Break Away Battery	OT8346		0.25
Coupler Assy. Bolt on, R&R	OT8347		1.00
Coupler Assy. Latch assembly only, R&R	OT8348		0.50
Coupler Assy. Weld on, R&R	OT8349	(certified welder required)	1.50
Diagnose Inoperative Trailer Wiring	OT8350		0.5
Document Holder- R&R, R&I, or Install	OT8351		0.2
DOT Trailer Inspection (FMCSR)	OT8352		1.0
DOT Reflective Tape-Replace <small>.1 per section of tape replaced</small>	OT8353	Each	0.1
Drain & Refill Axle Gear Oil	OT8354		N/A
Electric Brake Shoe/Backer Plate Assy.	OT8355		2.5
Equalizer Rod- R&R, R&I, or Adjust	OT8356		0.5
Fender-Replace &/or Resecure	OT8357		0.5
Hub Cap- R&R, R&I, or Install	OT8358	Dust	0.2

Cap- R&R, R&I, or Install	OT8359	Oil Bath	0.5
Jack (Camper Lift) R&R	OT8360	Each	0.5
Jack ,Tongue R&R	OT8361	Power (with battery on trailer tongue)	1.0
Jack, scissor type, install/R&R	OT8362	Set of 2	1.0
	OT8363	Set of 4	1.8
Landing Leg / Crank Handle-Replace	OT8364		0.3
Leaf Spring-Replace	OT8365	Each	1.0
Leveling Stabilizers R&R	OT8366	Electric	9.0
	OT8367	Hydraulic (automatic)	12.0
	OT8368	Hydraulic (manual)	10.0
Light Bulb - Replace	OT8369		0.2
Marker Light Assy.-Replace	OT8370	Each	0.2
Mount & Balance Tire	OT8371	Each	0.25
Pin-box, 5th wheel, R&R	OT8372		1.00
Taillight Assy.-Replace	OT8373	Each	0.5
Safety Chain- R&R, R&I, or Install	OT8374	Pin-On	0.2
	OT8375	Weld-On	0.5
Safety Chain Clevis- R&R, R&I, or Install	OT8376		0.2
Shock absorber, each, R&R	OT8377		0.5
Suspension kit (complete)	OT8378	Tandem axle	2.5
	OT8379	Triple axle	4.5
	OT8380	Axle flip (Per Axle)	2.0
Tag Bracket or License Plate- R&R, R&I, or Install	OT8381		0.2
Trailer 7-Way Wire Connector-Replace	OT8382		0.5
Trailer 4-Pin Wire Connector-Replace	OT8383		0.4
Trailer Wiring Repair	OT8384		0.2
Valve Stem Assy.-Replace	OT8385		0.3
Valve Stem Cap-Install	OT8386		0.1
Valve Stem Core-Replace	OT8387		0.2
Wheel & Tire-R&I	OT8388		0.1
Wheel Bearings- Replace Includes: Inner & Outer Bearings	OT8389	Both Sides	1.8
Generic Running Gear & Chassis Labor Line	OT8390		

LABOR TIME GUIDE for Pressure Washers

Labor Operation Description	Operation Number	Detail	Labor Time									
			Alkota	Alkota	Alkota	Alkota	Pump & Control	PSC	Alkota	Alkota	Alkota	Alkota
			3255X4 Vanguard 6.5hp	4405G Honda 20hp	4355X4 Honda 13hp	5305A Kohler 18hp	PWHE104040	ES429K448A-EX1 460	5301AEUL Electric	4142 Electric	4182 Electric	430XM4 Electric

PRESSURE WASHER SPECIFIC LABOR OPERATIONS

Labor Operation Description	Operation Number	Detail	Labor Time											
			Alkota	Alkota	Alkota	Alkota	Pump & Control	PSC	Alkota	Alkota	Alkota	Alkota		
			3255X4 Vanguard 6.5hp	4405G Honda 20hp	4355X4 Honda 13hp	5305A Kohler 18hp	PWHE104040	ES429K448A-EX1 460	5301AEUL Electric	4142 Electric	4182 Electric	430XM4 Electric	518X4 Electric	
Air Band - Adjust	PW0000		0.1	0.1	0.1	0.1	0.1	0.1	N/A	0.1	0.1	0.1	0.1	0.1
Air Band - Relace	PW0001		0.4	0.4	0.4	0.4	0.4	0.4	N/A	0.4	0.4	0.4	0.4	0.4
Ball Valve (1/4") - R&R	PW0002		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Ball Valve (2") - R&R	PW0003		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Blower Fan Cage - R&R or R&I (motor removed)	PW0004		0.2	0.2	0.2	0.2	0.2	0.2	N/A	0.2	0.2	0.2	0.2	0.2
Blower Fan Motor - R&R or R&I	PW0005		0.7	0.7	0.7	0.7	0.7	0.7	N/A	0.7	0.7	0.7	0.7	0.7
Burner Assembly - R&R	PW0006		1.5	1.5	1.5	1.5	1.5	1.5	N/A	1.5	1.5	1.5	1.5	1.5
Chase Nipple (1/4") - R&R	PW0007		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Diagnose Inoperative Pressure Washer	PW0008		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Float Ball - R&R	PW0009		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Float Tank Filtration Screen - R&R	PW0010		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Float Tank Assembly - R&R	PW0011		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Float Valve - R&R	PW0012		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Float Rod - Adjust &/or Replace	PW0013		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Fuel Pump Filter, Burner - Replace	PW0014		0.3	0.3	0.3	0.3	0.3	0.3	N/A	0.3	0.3	0.3	0.3	0.3
Fuel Pump, Burner - R&R	PW0015		0.5	0.5	0.5	0.5	0.5	0.5	N/A	0.5	0.5	0.5	0.5	0.5
Fuel Pump Nozzle, Burner - Replace	PW0016		0.3	0.3	0.3	0.3	0.3	0.3	N/A	0.3	0.3	0.3	0.3	0.3
Fuel Tank, Burner - R&R or R&I	PW0017		0.8	0.8	0.8	0.8	0.8	0.8	N/A	0.8	0.8	0.8	0.8	0.8
Heater Coil Assembly, Water - R&R	PW0018		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Manifold Heater Assembly - R&R	PW0019	Ea	N/A	N/A	N/A	N/A	N/A	N/A	0.4	N/A	N/A	N/A	N/A	N/A
Metering Valve R&R	PW0020		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Pipe Fittings Misc. - R&R (specify)	PW0021	Each	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Pulley, Pump Motor - R&R or R&I	PW0022		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Pump Motor - R&R	PW0023	Complete	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Pump Motor - Rebuild	PW0024		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Pump Motor Adaptor - R&R	PW0025		1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Restrictor 11/32 - R&R	PW0026		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Restrictor 25/64 - R&R	PW0027		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Unloader Valve - R&R	PW0028		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Vacuum Switch R&R	PW0029		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Wand Assembly - Replace	PW0030		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Wand Gun/ Trigger Assembly - Replace	PW0031		0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Water Holding Tank R&R	PW0032	Main	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
Water Holding Tank Hold Downs R&R	PW0033	Main	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Generic Pressure Washer Labor Line Specify generic labor operation	PW0034													

DC ELECTRICAL

Labor Operation Description	Operation Number	Detail	Labor Time											
			Alkota	Alkota	Alkota	Alkota	Pump & Control	PSC	Alkota	Alkota	Alkota	Alkota		
			3255X4 Vanguard 6.5hp	4405G Honda 20hp	4355X4 Honda 13hp	5305A Kohler 18hp	PWHE104040	ES429K448A-EX1 460	5301AEUL Electric	4142 Electric	4182 Electric	430XM4 Electric	518X4 Electric	
Battery - R&R or R&I	PW0035		0.5	0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A
Battery Cable-Replace, Positive R&R or R&I	PW0036		0.5	0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A
Battery Cable- Replace, Negative R&R or R&I	PW0037		0.5	0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A
Battery Hold Down J-Hook & Bracket- Install	PW0038		0.2	0.2	0.2	0.2	0.2	0.2	N/A	N/A	N/A	N/A	N/A	N/A
Battery Terminal End-Replace	PW0039	Each	0.3	0.3	0.3	0.3	0.3	0.3	N/A	N/A	N/A	N/A	N/A	N/A

Charging System Check Includes: Battery test, alternator output test, & starter test.	PW0040		0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A
Charge & Retest Battery or Batteries	PW0041		0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A
Clean & Tighten Battery Terminals	PW0042	Each	0.2	0.2	0.2	0.2	0.2	N/A	N/A	N/A	N/A	N/A	N/A
Diagnose No Start Condition	PW0043		1.0	1.0	1.0	1.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Electrode Igniter, Burner - Adjust	PW0044		0.1	0.1	0.1	0.1	0.1	N/A	0.1	0.1	0.1	0.1	0.1
Electrode Igniter, Burner - Replace	PW0045		0.5	0.5	0.5	0.5	0.5	N/A	0.5	0.5	0.5	0.5	0.5
Ground Strap-Replace	PW0046		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Specific Gravity Battery Test	PW0047	Hydrometer	0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A
Starter-Replace	PW0048		0.6	0.6	0.6	0.6	0.6	N/A	N/A	N/A	N/A	N/A	N/A
Ignition Systems & Sensors			3255X4 Vanguard 6.5hp	4405G Honda 20hp	4355X4 Honda 13hp	5305A Kohler 18hp	PWHE104040	ES429K448A-EX1 460	5301AEUL Electric	4142 Electric	4182 Electric	430XM4 Electric	518X4 Electric
Magneto Assembly - Adjust	PW0049		0.3	0.3	0.3	0.3	0.3	N/A	N/A	N/A	N/A	N/A	N/A
Magneto Assembly - Replace	PW0050		1.0	1.0	1.0	1.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Low Engine Oil Level Switch - R&R	PW0051		0.3	0.3	0.3	0.3	0.3	N/A	N/A	N/A	N/A	N/A	N/A
Spark Plug - R&R	PW0052	Each	0.3	0.3	0.3	0.3	0.3	N/A	N/A	N/A	N/A	N/A	N/A
Spark Plug Wire/ Boot - Replace	PW0053		0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A
Instrumentation, Wiring, Control , & Monitoring			3255X4 Vanguard 6.5hp	4405G Honda 20hp	4355X4 Honda 13hp	5305A Kohler 18hp	PWHE104040	ES429K448A-EX1 460	5301AEUL Electric	4142 Electric	4182 Electric	430XM4 Electric	518X4 Electric
DC Fuse-Replace	PW0054		0.1	0.1	0.1	0.1	0.1	N/A	N/A	N/A	N/A	N/A	N/A
Electrical Pigtail Connector Repair	PW0055	Each	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Emergency Stop Solenoid-Replace	PW0056		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Engine Wiring Harness-Replace	PW0057		0.8	0.8	0.8	0.8	0.8	N/A	N/A	N/A	N/A	N/A	N/A
Gauge- R&R or R&I	PW0058	Water Temp	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	PW0059	Water Pressure	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Hour Meter-Replace	PW0060	OEM	0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A
	PW0061	Pre-Settable	0.8	0.8	0.8	0.8	0.8	N/A	N/A	N/A	N/A	N/A	N/A
Power ON/OFF Switch - R&R	PW0062		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Temperature Control Switch - Replace	PW0063		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Generic DC Electrical Labor Line Specify generic labor operation	PW0064												

ENGINE

Labor Operation Description	Operation Number	Detail	Labor Time											
			Alkota	Alkota	Alkota	Alkota	Pump & Control	PSC	Alkota	Alkota	Alkota	Alkota	Alkota	
			3255X4 Vanguard 6.5hp	4405G Honda 20hp	4355X4 Honda 13hp	5305A Kohler 18hp	PWHE104040	ES429K448A-EX1 460	5301AEUL Electric	4142 Electric	4182 Electric	430XM4 Electric	518X4 Electric	
Choke Assembly - Replace (Engine-mounted)	PW0065		0.5	0.5	0.5	0.5	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A
Choke Assembly - Replace (Remote-mounted)	PW0066		0.8	0.8	0.8	0.8	0.8	0.8	N/A	N/A	N/A	N/A	N/A	N/A
Choke Knob - Replace	PW0067		0.1	0.1	0.1	0.1	0.1	0.1	N/A	N/A	N/A	N/A	N/A	N/A
Diagnose No Start Condition	PW0068		1.0	1.0	1.0	1.0	1.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Diagnose Engine Knock	PW0069		1.0	1.0	1.0	1.0	1.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Diagnose Excessive Oil Consumption	PW0070		1.0	1.0	1.0	1.0	1.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Diagnose Oil Leak	PW0071		1.0	1.0	1.0	1.0	1.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Diagnose Engine Performance Issue	PW0072		1.0	1.0	1.0	1.0	1.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A
Drill & Extract Broken Bolt	PW0073		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Drive Belt - Replace	PW0074		0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	
Engine Assembly- Removal & Installation Includes: R&I only those components necessary for the removal of the complete engine assy. DOES NOT include transfer of parts or tune	PW0075		3.5	3.5	3.5	3.5	3.5	3.5	N/A	N/A	N/A	N/A	N/A	
Oil Dipstick-Replace	PW0076		0.1	0.1	0.1	0.1	0.1	0.1	N/A	N/A	N/A	N/A	N/A	
Oil Dipstick Tube-Replace	PW0077		N/A	N/A	N/A	N/A	N/A	0.3	N/A	N/A	N/A	N/A	N/A	
Oil Pan Drain Plug & /or Gasket- Replace	PW0078		0.1	0.1	0.1	0.1	0.1	0.1	N/A	N/A	N/A	N/A	N/A	
Oil Filter Adaptor and/or Gasket- Replace	PW0079		0.3	0.3	0.3	0.3	0.3	0.3	N/A	N/A	N/A	N/A	N/A	
Oil Fill Cap- Replace or Install- Replace	PW0080		0.1	0.1	0.1	0.1	0.1	0.1	N/A	N/A	N/A	N/A	N/A	
Cylinder Head & or Gasket- Replace Includes: Remove carbon, check surfaces for warpage, adjust valves, and ignition timing where necessary	PW0081		1.2	1.2	1.2	1.2	1.2	1.2	N/A	N/A	N/A	N/A	N/A	
Valve Adjustment Complete (Intake & Exhaust)	PW0082		0.8	0.8	0.8	0.8	0.8	0.8	N/A	N/A	N/A	N/A	N/A	
Valve Cover & or Gasket - Replace	PW0083		0.2	0.2	0.2	0.2	0.2	0.2	N/A	N/A	N/A	N/A	N/A	

LABOR TIME GUIDE for Campers & Trailer Houses

Labor Operation Description	Operation Number	Detail	Labor Time
			All Models

(A/C) Electrical Equipment

Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
Breaker, circuit, 120 VAC, R&R	TH8000		0.4
Breaker, circuit, GFI, 120 VAC, R&R	TH8001		0.5
Converter, Power, A/C to D/C, R&R	TH8002	w/breaker panel, complete, R&R	2.0
	TH8003	w/breaker panel, converter only, R&R	1.5
	TH8004	Converter, stand alone, R&R	1.0
Cord, power supply Cord, 30A, R&R	TH8005		1.0
Cord, power supply Cord, 50A, R&R	TH8006		1.5
Cord reel, new, install	TH8007		2.5
Cord reel, repair	TH8008		1.0
Generator R&R	TH8009	All	4.0
Light, ceiling, A/C, R&R	TH8010		0.4
Receptacle (Double, single, wall outlet, std.) R&R	TH8011		0.4
Receptacle (GFCI) R&R	TH8012		0.6
Receptacle, new, install	TH8013	(includes wire into breaker box)	4.0
Switch, transfer (auto), R&R	TH8014		2.0
Switch, wall, R&R	TH8015		0.5
Generic AC Electrical Labor Line	TH8016		

(D/C) Electrical Equipment

Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
Battery, R&R	TH8017		0.5
Battery, (remote location), R&R	TH8018		0.8
Battery Cable R&R	TH8019		0.5
Battery Cable End R&R	TH8020		0.5
Battery Cable (generator), R&R	TH8021		3.5
Battery Charge Solenoid, R&R	TH8022		0.7
Battery Charge Switch, R&R	TH8023		0.6
Battery Isolater R&R	TH8024		0.9
Battery Isolater (New Install)	TH8025	(includes load and hydrometer tests, fill	3.0

Battery, power converter/charger	TH8026	See A/C Equipment	
Inverter DC/AC R&R	TH8027	Cabinet mounted, hardwired	2.0
	TH8028	Non-hardwired	1.0
Lighting, D/C, Exterior	Operation Number	Detail	All Models
Light, assist handle, complete R&R	TH8029		0.6
Light, bulb, miscellaneous standard, R&R	TH8030		0.2
Light, clearance or marker screw mount, R&R	TH8031	Complete assembly	0.5
Light, clearance or marker bolt through, R&R	TH8032	Complete assembly	1.5
Light, clearance or marker Lens, R&R, clean	TH8033		0.2
Light, clearance or marker Reseal	TH8034		0.2
Light, license plate, R&R	TH8035		0.4
Light, patio, R&R	TH8036		0.6
Light, reflectors, no power, stick on or screw on, R&R	TH8037		0.2
Light, scare, R&R	TH8038		0.9
Light, tail, assembly R&R	TH8039	Mount surface, R&R	0.5
	TH8040	Mount, flush, or in fiberglass cap	1.0
	TH8041	Clean contacts and connection	0.3
	TH8042	Lens, R&R	0.2
Lighting, D/C, Interior	Operation Number	Detail	All Models
Light, bulb, miscellaneous standard, R&R	TH8043		0.2
Light, ceiling, R&R	TH8044		0.5
Light, map, R&R	TH8045		0.2
Light, reading, R&R	TH8046		0.5
Light, wall lamp assembly, R&R	TH8047		0.5
Monitor Panels, Range Hoods	Operation Number	Detail	All Models
Monitor panel-water/holding R&R	TH8048	Complete panel, R&R	0.6
	TH8049	install, new	1.5
	TH8050	Probe, well nut type, R&R	0.4
Monitor panel-water/holding (complex), R&R	TH8051		2.0
Range hood with light and fan, R&R	TH8052		1.4
Range hood with monitor panel, R&R	TH8053		2.6
Solar, Panels/Chargers	Operation Number	Detail	All Models
Solar panel, install (under 30 watts w/regulator)	TH8054		1.5
Solar panel, install (over 30 watts w/regulator)	TH8055		2.8
Switches/Connectors/Wiring	Operation Number	Detail	All Models
Breaker, circuit, 12 VDC, R&R	TH8056		0.4

Fuse (any), R&R	TH8057		0.2
Outlet, R&R 12 volt power point	TH8058		0.5
Switch, rocker, R&R	TH8059		0.4
Switch, toggle, R&R	TH8060		0.4
Switch, wall, R&R	TH8061		0.4
Generic DC Electrical Labor Line	TH8062		

EXTERIOR

Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
AWNINGS	Operation Number	Detail	All Models
Awning Hardware Set, Complete R&R	TH8063		0.8
Awning Fabric only- R&R	TH8064	(does not include R&R awning complete)	1.5
Add winds to existing unit	TH8065		0.5
Arm, inner, R&R	TH8066		0.2
Arm, outer, R&R	TH8067		0.5
Bracket, bottom mount, R&R	TH8068		0.2
Bracket, top mount, R&R	TH8069		0.5
Complete awning, existing, R&R	TH8070	Manual	2.0
	TH8071	Electric	2.5
Complete awning, New, R&R	TH8072	Manual	2.5
	TH8073	Electric	3.0
Fabric, slat, R&R, aluminum guard	TH8074		2.0
Knob, arm/rafter, R&R	TH8075		0.3
Knob, nut/insert, R&R	TH8076		0.3
Lift handle, R&R	TH8077		0.3
Rafter, inner, R&R	TH8078		0.2
Rafter, outer, R&R (includes R&R mount bracket)	TH8079		0.5
Replace pole	TH8080		0.2
Repairs to fabric, minor	TH8081		0.5
Roller Tube Assy. R&R	TH8082		2.0
Slider catch, R&R	TH8083		0.3
Torsion/Spring Assy. -R&R	TH8084		1.0
Roof Rack R&R	TH8085		2.0
Roof Ladder R&R	TH8086		1.5
Travel lock, R&R	TH8087		0.2
Bumpers	Operation Number	Detail	All Models

Bumper, alignment with no attachments	TH8088		0.5
Bumper, channel type, rear bolt on, R&R	TH8089		1.0
Bumper cover, rear square, R&R	TH8090		0.6
Bumper, end cap, R&R	TH8091		0.2
Bumper, rear, sq. tube, bolt on, R&R	TH8092		1.0
Bumper, rear, sq. tube, welded, R&R*	TH8093		2.5
Bumper, steel, sand/prime/paint	TH8094		2.0
Mud flap, caster wheels, each, R&R	TH8095		0.5
Mud flap R&R	TH8096	Each	0.6
Skid guards, caster wheels, each, R&R	TH8097		0.8
Skid guards, travel trailer, rear, fabricate, weld & paint*	TH8098	(includes time to disconnect and reconnect battery)	1.5
Doors, Access and Compartment	Operation Number	Detail	All Models
Door, access, battery, vented, R&R	TH8099		1.0
Door, access, power cord assembly, square, R&R	TH8100		1.0
Door, access, power cord cable hatch, round, R&R	TH8101		0.5
Door, access, propane, compartment, vented, R&R	TH8102		1.5
Door, access, water fill, assembly, R&R	TH8103		1.5
Door, storage compartment, gasket or weatherstrip, R&R	TH8104		1.0
Door, storage compartment, gas strut, R&R	TH8105		1.5
Door, storage compartment, handle, R&R	TH8106		0.6
Door, storage compartment, hold back,compartment door, R&R	TH8107		0.3
Door, storage compartment, reseal without removal	TH8108		0.2
Lock, flush mount, compartment door, R&R	TH8109		0.5
Lock, key type, access, compartment, hatch door, R&R	TH8110		0.4
Lock, thumb twist type, access, compartment,hatch door, R&R	TH8111		0.5
Water entry, city connection, R&R	TH8112		0.8
Water tank fill, slide, tip hatch, R&R	TH8113		0.5
Doors, Entry	Operation Number	Detail	All Models
Door, entry, adjust	TH8114		0.6
Door, entry, complete assembly, motorhome, R&R	TH8115		3.0
Door, entry, complete assembly, trailer, R&R	TH8116		2.5
Door, entry, hinge, R&R	TH8117		0.4
Door, entry, hold back, R&R	TH8118		0.2
Door, entry, lock, R&R	TH8119		0.5
Door, entry, dead bolt, R&R (includes adjustment)	TH8120		0.5
Door, entry, lock, repair	TH8121		0.5

Door, entry, lock, striker plate, R&R	TH8122		0.3
Door, entry, reseal without removal	TH8123		0.6
Door, entry, sliding patio door assembly, trailer, R&R	TH8124		3.5
Door, entry, sliding patio door, trailer, reseal without removal	TH8125		1.0
Door, entry, window, R&R	TH8126		1.0
Entry, assist handle, R&R	TH8127		0.5
Entry, drip cap, R&R	TH8128		0.4
Screen door, R&R	TH8129		0.5
Screen door, latch, R&R	TH8130		0.2
Screen door, screen, R&R	TH8131		0.6
Screen door, slider	TH8132		0.3
Weatherstrip, entry or screen door, R&R	TH8133		0.4
Entry, Steps	Operation Number	Detail	All Models
Entry step, complete bolt-on, manual, R&R (and paint)	TH8134		1.3
Entry step, complete bolt-on, power/electric, R&R	TH8135		1.5
Entry step, complete weld-on, power/electric R&R	TH8136	(custom fit)	2.0
Entry step, door switch, R&R	TH8137		0.5
Entry step, electronics package, R&R	TH8138		1.0
Entry step, light assembly, R&R	TH8139		0.5
Entry step, linkage, R&R	TH8140		0.5
Entry step, motor, R&R	TH8141		1.5
Entry step, solenoid, vacuum, R&R	TH8142		1.0
Wiring operation (any)	TH8143	(maximum time)	1.0
Moldings, Trim & Corner Caps	Operation Number	Detail	All Models
Corner cap, sidewall to real wall, R&R	TH8144		2.5
Corner cap, roof to sidewall, R&R	TH8145	(per linear ft.)	0.3
Molding, flat, corner, gutter, trim, R&R	TH8146		0.3
Molding, insert, R&R	TH8147		0.4
Molding, vinyl, adhesive backed, R&R	TH8148		0.2
Termination bar, transition seam, roof to cap, R&R	TH8149		0.4
Termination bar, transition seam, roof to cap, R&R	TH8150		0.3
Venting	Operation Number	Detail	All Models
Vent, roof, crank up, add vent, cut and frame opening	TH8151		2.0
Vent, roof, crank up, complete, new, R&R	TH8152		1.0
Vent, roof, crank up, complete, old, R&R	TH8153	(includes cleaning)*	1.5

Vent, roof, crank up, cover only, R&R	TH8154		0.5
Vent, roof, crank up, cover seal, R&R	TH8155		0.3
Vent, roof, crank up, crank handle, R&R	TH8156		0.1
Vent, roof, crank up, crank/regulator, R&R	TH8157		0.5
Vent, roof, crank up, fan blade, R&R	TH8158		0.3
Vent, roof, crank up, fan motor, R&R	TH8159		0.5
Vent, roof, crank up, fan motor switch, R&R	TH8160		0.4
Vent, roof, crank up, garnish, interior, R&R	TH8161		0.2
Vent, roof, plumbing stack, R&R	TH8162		0.5
Vent, roof, plumbing stack, reseal	TH8163		0.3
Vent, roof, refer, R&R	TH8164		1.0
Vent, roof, reseal (crank up, refer)	TH8165		0.5
Vent, sidewall, dryer, R&R	TH8166		0.6
Vent, sidewall, furnace, R&R	TH8167		0.8
Wheel Housings and Wheel/Fender Skirts	Operation Number	Detail	All Models
Wheel/fender skirt, single axle, R&R	TH8168		0.9
Wheel/fender skirt, tandem axle, R&R	TH8169		1.1
Wheel/fender skirt, fiberglass panel, R&R	TH8170		3.0
Wheel housing, folding trailer, R&R	TH8171		1.6
Wheel housing, rebuild*	TH8172		2.0
Wheel housing, travel trailer, R&R	TH8173	Single	0.6
	TH8174	Tandem	1.0
	TH8175	Triple	0.4
Wheel opening, trim, each, R&R	TH8176		1.0
Windows	Operation Number	Detail	All Models
Window, assembly, up to 400 sq. in., R&R	TH8177		1.5
Window, assembly, more than 400 sq. in., R&R	TH8178		2.5
Window, crank handle, R&R	TH8179		0.2
Window, crank operator, R&R	TH8180		1.0
Window, glass channel weatherstrip, R&R	TH8181	(per ft.)	0.4
Window, latch, R&R	TH8182		0.2
Window, reseal without removal	TH8183		0.5
Window, screen material, R&R	TH8184		0.5
Window, screen with frame, R&R	TH8185		0.5
Generic Exterior Labor Line	TH8186		

GAS RANGE & OVEN

Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
Burner assembly (range), R&R	TH8187		0.4
Burner valve (range), R&R (includes R&I manifold)	TH8188		1.0
Cover, bifold, R&R	TH8189		0.3
Igniter, piezo, R&R	TH8190		0.4
Ignition module, R&R	TH8191		0.8
Oven, burner, R&R	TH8192		0.4
Oven, door assembly, R&R	TH8193		0.9
Oven, door handle, R&R	TH8194		0.4
Oven, door panel, R&R	TH8195		0.4
Oven, door seal, R&R	TH8196		0.4
Oven, door springs, each, R&R	TH8197		0.6
Oven, door spring hinge, R&R	TH8198		1.1
Pilot, filter, R&R	TH8199		0.4
Pilot, oven, clean and adjust	TH8200		0.9
Pilot, range, assembly, R&R	TH8201		0.7
Pilot, range, clean and adjust	TH8202		0.4
Range hood (powered), R&R	TH8203		1.2
Regulator, in-line, R&R	TH8204		0.5
Safety valve (oven), R&R	TH8205		0.8
Stove top, no oven, R&R	TH8206		1.6
Thermostat (oven), calibrate	TH8207		1.0
Thermostat (oven), R&R	TH8208		1.0
Generic Range & Oven Labor Line	TH8209		

HEATING & AIR CONDITIONING

Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
ROOF AIR CONDITIONER			
	Operation Number	Detail	All Models
Air conditioner, R&R (Complete Includes Housing)	TH8210	(includes replace gasket)	5.0
Air conditioner, R&R (Cooling Section Only)	TH8211		2.0
Capacitor, Fan, R&R	TH8212		1.0
Capacitor, Run, R&R	TH8213		1.0

Capacitor, Start, R&R	TH8214		0.8
Ceiling assembly, R&R	TH8215	(and to tighten "hold-down" bolts)	0.5
Condenser, fan blade/wheel, R&R	TH8216		1.0
Device, overload, R&R	TH8217		0.8
Device, solid state start, R&R	TH8218		1.0
Diagnose Inoperative Air Conditioner	TH8219		1.0
EVAC/vacuum/recharge	TH8220		1.0
Evaporator, impeller, R&R	TH8221		2.0
Gasket, mounting, R&R	TH8222		1.5
Heat-strip - Install	TH8223	(add to existing mounted air conditioner)	0.8
Heat-strip - Install	TH8224	(install before initial A/C installation)	0.4
Module board, main, R&R	TH8225		1.5
Motor, fan, R&R	TH8226		2.0
Motor, mount, R&R	TH8227		2.0
Relay, start, R&R	TH8228		0.9
Shroud, R&R	TH8229		0.6
Switch, selector, R&R	TH8230		0.8
Thermostat, R&R	TH8231	Ducted, new model	1.0
	TH8232	Ducted, same model	0.7
	TH8233	Direct discharge	0.5
COOL HEAT PUMP	Operation Number	Detail	All Models
Air conditioner, R&R (includes replace gasket)	TH8234		1.2
Bolts, anchor bolts, R&R stripped (each)	TH8235		0.6
Capacitor, Fan, R&R	TH8236		1.0
Capacitor, Run, R&R	TH8237		1.0
Capacitor, Start, R&R	TH8238		1.0
Capillary tube, leak	TH8239	(includes EVAC/vacuum/recharge)	3.0
Ceiling assembly, R&R	TH8240	(and to tighten "hold-down" bolts)	0.5
Compressor, R&R	TH8241		2.0
Condensation, in ducts, dry and seal, in/outlet	TH8242		1.0
Condensation, outlet unplug	TH8243		1.0
Condenser, R&R	TH8244	(includes EVAC/vacuum/recharge)	2.0
Condenser, coil leak	TH8245	(includes EVAC/vacuum/recharge)	2.5
Condenser, fan blade/wheel, R&R	TH8246		1.7
Control, cold, R&R	TH8247		1.0

Control, fan speed, R&R, non-ducted ceiling control	TH8248		0.5
Control, module board, main, R&R	TH8249		1.0
Drip tray, R&R	TH8250		2.8
Evaporator, blower wheel, R&R	TH8251		1.4
EVAC/vacuum/recharge	TH8252		1.0
Evaporator, coil leak	TH8253	(includes EVAC/vacuum/recharge)	3.1
Evaporator, shroud, R&R	TH8254		0.6
Filter/dryer, R&R	TH8255		3.0
Gasket, mounting, R&R	TH8256		1.5
Heat-strip - Install	TH8257	(add to existing mounted air conditioner)	0.8
Heat-strip - Install	TH8258	(install before initial A/C installation)	0.4
Relay, start, R&R	TH8259		0.8
Sensor, ambient, R&R	TH8260		0.5
Sensor, remote, R&R	TH8261		0.5
Shroud, R&R	TH8262		0.5
Suction line, leak Repair	TH8263	(includes EVAC/vacuum/recharge)	2.5
Switch, selector, R&R	TH8264		0.9
Thermostat, R&R	TH8265	Ducted, new model	1.0
	TH8266	Ducted, same model	0.7
	TH8267	Direct discharge	0.5
Valve, reversing, R&R	TH8268	(includes EVAC/vacuum/recharge)	3.0
Valve, tap, install	TH8269	(if needed)	0.9
FURNACES	Operation Number	Detail	All Models
Blower, housing, R&R	TH8270		0.7
Blower, motor, R&R	TH8271		1.4
Blower, motor bracket, R&R	TH8272		1.4
Blower, motor capacitor, R&R	TH8273		0.7
Blower, motor mounting wall, R&R	TH8274		1.7
Blower, wheel, air (circulating), R&R	TH8275		1.0
Blower, wheel, air (combustion), R&R	TH8276		1.2
Breaker, circuit, R&R	TH8277		0.6
Burner, R&R	TH8278		0.8
Burner, box, R&R	TH8279		0.9
Burner, orifice, R&R	TH8280		0.8
Cap, draft, R&R	TH8281		0.5

Casing, furnace, R&R	TH8282		1.2
Chamber, combustion, R&R	TH8283		1.7
Control, DSI board, R&R	TH8284		0.9
Control, DSI board bracket	TH8285		0.9
Door, R&R	TH8286		0.9
Electrode, R&R	TH8287		0.9
Furnace, complete, R&R	TH8288		2.5
Gasket, combustion chamber, R&R	TH8289		1.7
Gasket, electrode, R&R	TH8290		0.8
High tension lead, R&R	TH8291		0.7
Manifold, inlet, R&R	TH8292		1.0
Manifold, outlet, R&R	TH8293		0.7
Relay, time delay, R&R	TH8294		1.1
Switch, limit switch, R&R	TH8295		0.8
Switch, sail (micro switch), R&R	TH8296		1.0
Thermostat, R&R	TH8297		0.7
Valve, R&R	TH8298		1.0
Valve bracket, R&R	TH8299		0.9
Valve coil, R&R	TH8300		1.0
Wiring harness, R&R	TH8301		1.2
Generic Heating & A/C Labor Line	TH8302		

INTERIOR

Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
Cabinetry and Doors	Operation Number	Detail	All Models
Cabinet, medicine, lighted, R&R	TH8303		0.5
Cabinet, medicine, unlighted, R&R	TH8304		0.3
Cabinet door, R&R	TH8305		0.4
Cabinet door, medicine, R&R	TH8306		0.50
Cabinet door, prop rod, R&R	TH8307		0.3
Cabinet drawer, box, repair	TH8308		0.6
Cabinet drawer, guide, R&R	TH8309		0.5
Cabinet drawer, reset guide and rails	TH8310		1.0

Countertop, R&R (per running ft.)	TH8311		0.8
Door, folding, passage, R&R	TH8312		0.9
Door, folding, passage, track, ceiling, R&R (per ft.)	TH8313		0.1
Door, hinged passage, R&R	TH8314		0.5
Door, shower/bath, R&R	TH8315		1.0
Frame, cabinet, overhead, R&R (per linear ft.)	TH8316		0.5
Frame, cabinet, under counter, R&R (per linear ft.)	TH8317		0.7
Frame, dinette seat, R&R (per linear ft.)	TH8318		0.5
Frame, wardrobe, R&R (per linear ft.)	TH8319		0.2
Hinge, cabinet, R&R	TH8320		0.3
Frame, cabinet, under counter, R&R (per linear ft.)	TH8321		0.3
Frame, dinette seat, R&R (per linear ft.)	TH8322		0.3
Frame, wardrobe, R&R (per linear ft.)	TH8323		0.2
Hinge, cabinet, R&R	TH8324		0.3
Hinge, overhead bunk, R&R	TH8325		0.5
Hinge, passage door, R&R	TH8326		0.4
Latch, cabinet door, R&R	TH8327		0.4
Latch, passage door, R&R	TH8328		0.4
Flooring	Operation Number	Detail	All Models
Carpet, installation (per sq. ft., includes removal)	TH8329	(per sq. ft., includes removal)	0.2
Carpet jamb/threshold, R&R	TH8330		0.2
Carpet removal (per sq. ft.)	TH8331	(per sq. ft.)	0.1
Floor frame, per stud	TH8332	(per Stud)	4.0
Floor, plywood decking, R&R (per sq. ft.)	TH8333	(per sq. ft.)	0.3
Hardwood flooring, R&R (per sq. ft.)	TH8334	(per sq. ft.)	1.0
Hardwood flooring, sport repair and recoat	TH8335		2.0
Tile, ceramic, R&R	TH8336	1 to 4 sq. ft., with grout	4.0
	TH8337	Additional sq. ft., each	1.0
Underlayment, R&R (per sq. ft.)	TH8338	(per sq. ft.)	0.3
Underlayment, install new (per sq. ft.)	TH8339	(per sq. ft.)	0.2
Vinyl flooring, R&R per sq. ft.),	TH8340	add for sub floor(repair if needed)	0.30
	TH8341	Additions of molding/trim work (per linear ft.)	0.1
Furniture and Soft Trim	Operation Number	Detail	All Models
Bracket, wall table, R&R	TH8342		0.5
Brackets, curtain rod, new, install set	TH8343		0.4
Bunk, overhead, R&R	TH8344		2.1

Couch, box mount or flip type, R&R	TH8345		1.6
Couch/sofa, with steel leg support, R&R	TH8346		1.1
Gaucha, wood frame, R&R (per linear ft.)	TH8347		0.4
Table, dinette and supports, R&R	TH8348		0.9
Table, dinette, pedestal table base, R&R	TH8349		0.4
Table, dinette, transfer hardware	TH8350		0.6
Window, curtain track, per ft., R&R	TH8351		0.20
Window, shade or blind, R&R	TH8352		0.4
Window, shade or blind, new, install	TH8353		0.5
Window, valance, R&R	TH8354		1.0
Window, valance board, R&R	TH8355		0.6
Miscellaneous	Operation Number	Detail	All Models
Coffee maker, R&R	TH8356		0.5
Detector R&R (Carbon Monoxide, LP, & Smoke)	TH8357	Battery Powered	0.5
	TH8358	Hard Wired	0.8
Duct, register, R&R	TH8359		0.4
Fire extinguisher bracket, R&R	TH8360		0.4
Phone jack, R&R	TH8361		0.3
Microwave Oven R&R	TH8362	(pre-wired)	2.0
	TH8363	(non-pre-wired)	3.0
Tissue holder, R&R	TH8364		0.3
Washer/Dryer R&R	TH8365	All Models	5.8
Paneling, Moldings and Ceiling Fabric	Operation Number	Detail	All Models
Interior molding, batten, new or R&R	TH8366	(per linear. ft.)	0.2
Interior molding, chair rail, door opening, cabinet	TH8367	(per linear. ft.)	0.2
Ceiling, fabric, R&R (per sq. ft.)	TH8368	(per sq. ft.)	0.3
Ceiling, panel, R&R (per sq. ft.)	TH8369	(per sq. ft.)	0.3
Insulation fiberglass mat, R&R, (per sq. ft.)	TH8370	(per sq. ft.)	0.2
Wall/cabinet, panel, R&R (per sq. ft.)	TH8371	(per sq. ft.)	0.5
Wall/ceiling, seam tape (per section)	TH8372	(per section)	0.3
Generic Interior Labor Line	TH8373		
Make Ready & PM Tasks			
Labor Operation Description	Operation	Detail	Labor Time
			All Models

TRAILER HOUSE MAKE READY PROCEDURES	MR1029		4.0
DOT Annual Trailer Inspection (STATE REQUIRED)	MR1015		1.0

PROPANE SYSTEM

Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
ASME, tank, LP, (horizontal, frame-mount), R&R	TH8374		2.0
ASME, tank, LP, gauge, sight (on tank), R&R	TH8375		0.7
ASME, tank, LP, service valve (each), R&R	TH8376		1.0
ASME, tank, LP, fill valve (each), R&R	TH8377		1.0
ASME, tank, LP, outage fitting (20% valve), R&R	TH8378		0.40
Detector, leak, electronic, R&R	TH8379		0.5
Diagnose LP System Concern	TH8380		1.0
DOT, cylinder, LP gas, R&R	TH8381		0.2
DOT, cylinder, changeover (complete unit includes regular and hoses)	TH8382		1.0
Fitting, brass, R&R	TH8383		0.3
Hose, high pressure, R&R	TH8384		0.5
Hose, low pressure, appliance, R&R	TH8385		0.5
Rack, gas cylinder (single), R&R (bolted)	TH8386		0.6
Rack, gas cylinder (double), R&R (bolted)	TH8387		0.7
Regulator (double-tank or frame-mount), R&R	TH8388		0.9
Testing, propane safety/pressure	TH8389	System test includes lockup, operating, & Timed drop pressure tests	0.5
Tubing, manifold or copper appliance R&R	TH8390	(.1 per linear ft.)	0.10
Generic Propane System Labor Line	TH8391		

RADIO AND TV

Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
Radio and Audio	Operation Number	Detail	All Models
Antenna, radio, Class C, R&R	TH8392		0.9
Antenna, CB radio, install	TH8393		0.8
CB radio, install	TH8394		0.8
CD carousel-remote, R&R*	TH8395		1.5
Coax cable wiring R&R	TH8396	per linear ft. (minimum time)	1.0

Exterior entertainment center, R&R	TH8397		2.0
Intercom R&R	TH8398		0.8
Radio (built-in), R&R	TH8399		0.7
Speakers, radio, R&R	TH8400		0.9
Speaker, subwoofer-remote, R&R	TH8401		0.5
TV and Antenna	Operation Number	Detail	All Models
Amplifier, R&R	TH8402		0.9
Antenna, TV, head only, replace	TH8403		0.8
Antenna, TV R&R	TH8404	Side mount	0.8
	TH8405	Omnidirectional	1.5
	TH8406	Roof mount	1.0
	TH8407	Roof mount with power outlet	2.0
Coax cable outlet R&R	TH8408		0.8
Coax cable wiring R&R	TH8409	per linear ft. (minimum time)	0.7
Crank handle, antenna elevate, manual, R&R	TH8410		0.4
Digital converter box R&R	TH8411		0.5
DVD/VCR player, R&R	TH8412		0.5
Gear kit, manual, R&R	TH8413		0.6
Outlet, TV, R&R,	TH8414		0.4
TV, R&R	TH8415		1.2
SATELLITE SYSTEMS	Operation Number	Detail	All Models
Circuit board, King Dome, R&R	TH8416		1.0
Console, King Dome, R&R	TH8417		1.0
Control unit, R&R	TH8418	Kingdome	0.6
	TH8419	Winegard	1.0
Coax cable, replace	TH8420		1.0
Complete, roof unit, R&R, including reseal	TH8421		1.0
Complete, satellite system, install	TH8422	Electric	4.0
	TH8423	Manual	1.0
Dome, cover, R&R	TH8424		0.5
Gear housing, (lift assembly) electric Winegard, R&R	TH8425		1.5
Gear, manual crank, R&R	TH8426		0.5
GPS, R&R	TH8427		1.2
Limit switch, R&R	TH8428		1.0
LNBF sensor, R&R	TH8429		1.0
Motor azimuth, R&R	TH8430		1.0

Motor elevation, R&R	TH8431	1.0
Receiver, including programming, R&R	TH8432	0.8
Receiver, software update	TH8433	1.0
Reflector, R&R	TH8434	0.5
Wiring harness, replace	TH8435	1.0
Generic Radio & TV Labor Line	TH8436	

REFRIGERATORS

Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
Burner assembly, clean	TH8437	LP Models	0.9
Burner, orifice, R&R	TH8438	LP Models	1.1
Circuit board, lower, R&R	TH8439		1.0
Circuit board, upper, R&R (switch card)	TH8440		1.0
Cooling unit (RV up to 8 cu. ft.) R&R (add for R&R refrigerator)*	TH8441	Single door	3.0
	TH8442	Double door	3.0
	TH8443	Side-by-side model	4.5
	TH8444	NDR Models	4.5
Door, each, R&R	TH8445		0.4
Door handle assembly R&R	TH8446		0.8
Door gasket, R&R	TH8447		1.2
Door liners, including gasket	TH8448		1.9
Gas safety valve, manual, R&R	TH8449	LP Models	1.0
Gas shut-off valve, R&R	TH8450	LP Models	1.0
Gas solenoid valve, AES and Ames, R&R	TH8451	LP Models	1.0
Heating element, R&R	TH8452		1.0
Igniter, piezo, R&R	TH8453	LP Models	0.9
In-line fuse holder, R&R	TH8454	(for DC and feed line)	0.2
Refrigerator, complete, R&R*	TH8455	(direct replacement only)*	2.5
Refrigerator, complete, replace with different model	TH8456	(includes 1 hour of cabinet and fascia modification)*	3.0
Refrigerator service	TH8457	(includes clean-venting, burner/burner orifice, outside compartment, LP pressure and electrical test. Operation and cycling monitoring for 24 hours)	1.0
Safety valve magnet, R&R	TH8458	(solenoid valve, or solenoid valve coil)	1.0
Thermocouple, R&R	TH8459		1.0

Thermostat (gas and electric), R&R	TH8460	(add for R&R refrigerator, if needed)*	1.6
Thermistor, R&R	TH8461		1.0
Generic Refriderators Labor Line	TH8462		
RUNNING GEAR AND CHASSIS			
Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
Axle Assy. -Replace	TH8463	W/ Electric Brakes	3.0
	TH8464	W/O Electric Brakes	2.5
Axle Seal- Replace <small>Includes: Grease & Repack inner & outer wheel bearings</small>	TH8465		1.8
Brake, adjust, per axle	TH8466		0.6
Brake, hub and drum R&R**	TH8467	(1 axle, both sides)	1.2
Brake, hub and drum R&R**	TH8468	(2 axles, both sides)	2.2
Brake, Shoes R&R	TH8469	(lining and brake hardware, per axle),	1.7
Break Away Switch-Replace	TH8470		0.5
Break Away System Battery-Replace	TH8471		0.4
Break Away System Complete - R&R, R&I, or Install	TH8472		0.9
Charge & Retest Break Away Battery	TH8473		0.25
Coupler Assy. Bolt on, R&R	TH8474		1.00
Coupler Assy. Latch assembly only, R&R	TH8475		0.50
Coupler Assy. Weld on, R&R	TH8476	(certified welder required)	1.50
Diagnose Inoperative Trailer Wiring	TH8477		0.5
Document Holder- R&R, R&I, or Install	TH8478		0.2
DOT Trailer Inspection (FMCSR)	TH8479		1.0
DOT Reflective Tape-Replace <small>.1 per section of tape replaced</small>	TH8480	Each	0.1
Drain & Refill Axle Gear Oil	TH8481		N/A
Electric Brake Shoe/Backer Plate Assy.	TH8482		2.5
Equalizer Rod- R&R, R&I, or Adjust	TH8483		0.5
Fender-Replace &/or Resecure	TH8484		0.5
Gooseneck Adjustable Coupler-Replace	TH8485		0.2
Hub Cap- R&R, R&I, or Install	TH8486	Dust	0.2
	TH8487	Oil Bath	0.5
Jack, 5th wheel landing gear Jacks, complete, R&R	TH8488		2.0

Jack, 5th wheel landing gear Overhead gear box	TH8489		1.5
Jack, 5th wheel landing gear mounting fabrication	TH8490	(certified welder required)	1.5
Jack (Camper Lift) R&R	TH8491	Each	0.5
Jack ,Tongue R&R	TH8492	Power (with battery on trailer tongue)	1.0
Jack, scissor type, install/R&R	TH8493	Set of 2	1.0
	TH8494	Set of 4	1.8
Landing Leg / Crank Handle-Replace	TH8495		0.3
Leaf Spring-Replace	TH8496	Each	1.0
Leveling Stabilizers R&R	TH8497	Electric	9.0
	TH8498	Hydraulic (automatic)	12.0
	TH8499	Hydraulic (manual)	10.0
Light Bulb – Replace	TH8500		0.2
Marker Light Assy.-Replace	TH8501	Each	0.2
Mount & Balance Tire	TH8502	Each	0.25
Pin-box, 5th wheel, R&R	TH8503		
Taillight Assy.-Replace	TH8504	Each	0.5
Safety Chain- R&R, R&l, or Install	TH8505	Pin-On	0.2
	TH8506	Weld-On	0.5
Safety Chain Clevis- R&R, R&l, or Install	TH8507		0.2
Shock absorber, each, R&R	TH8508		
Suspension kit (complete)	TH8509	Tandem axle	2.5
	TH8510	Triple axle	4.5
	TH8511	Axle flip (Per Axle)	2.0
Tag Bracket or License Plate- R&R, R&l, or Install	TH84512		0.2
Trailer 7-Way Wire Connector-Replace	TH8513		0.5
Trailer 4-Pin Wire Connector-Replace	TH8514		0.4
Trailer Wiring Repair	TH8515		0.2
Valve Stem Assy.-Replace	TH8516		0.3
Valve Stem Cap-Install	TH8517		0.1
Valve Stem Core-Replace	TH8518		0.2
Wheel & Tire-R&l	TH8519		0.1
Wheel Bearings- Replace Includes: Inner & Outer Bearings	TH8520	Both Sides	1.8
Generic Running Gear & Chassis Labor Line	TH8521		

Slide Outs

Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
Adjusting, room assembly, vertical and lateral	TH8522		1.0
Adjustment, cables, in/out	TH8523		1.0
Adjustment, cables, hoses, flex	TH8524		1.0
Fascia, interior trim, vertical, R&R	TH8525		1.0
Fascia, interior trim, horizontal, top, R&R	TH8526		2.0
Pin, mechanism shear, R&R	TH8527		0.5
Room, complete, R&R*	TH8528		5.5
Sealant, roof, reseal	TH8529		1.0
Sealant, sidewall, reseal	TH8530		1.0
Sealant, underbelly, reseal	TH8531		1.0
Seals, perimeter bulb (inside or outside), R&R	TH8532		1.0
Seals, weather seal, main R&R	TH8533	each, per side,	0.8
Seals, weather seal, main, top, R&R	TH8534		1.2
Underbelly, repair	TH8535		1.0
Slideout Mechanism Repair, Electric	Operation Number	Detail	All Models
Breaker, relay, R&R	TH8536		0.5
Cable, drive, R&R	TH8537		1.6
Cable, drive, pulley assembly, R&R	TH8538		0.6
Chain drive, chain assembly, R&R	TH8539		1.6
Control, module, R&R	TH8540		0.7
Drive, motor assembly/gear box assembly	TH8541		1.0
Drive, shaft shear pin	TH8542		0.5
Switch, interior, R&R	TH8543		0.3
Switch, limit, R&R	TH8544		1.8
Switch, rocker, R&R	TH8545		1.8
Slideout Mechanism Repair, Hydraulic	Operation Number	Detail	All Models
Actuator, cylinder, R&R	TH8546		1.3
Actuator, cylinder, bedroom, R&R	TH8547		1.5
Hose, hydraulic, R&R	TH8548		1.1
Leaks, troubleshoot	TH8549		0.5
Pump, adjust pressure (includes test)	TH8550		0.9
Pump, bleed/purge	TH8551		0.8
Pump, R&R	TH8552		1.5

Pump, manifold, R&R	TH8553		0.8
Pump, motor, R&R	TH8554		1.6
Switch, single, R&R	TH8555		1.5
Switch, limit, R&R	TH8556		0.5
Switch solenoid, R&R	TH8557		0.5
Generic Slide Outs Labor Line	TH8558		

Water Heaters

Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
Anode rod, R&R	TH8559		0.5
Burner, main orifice and/or burner tube, R&R	TH8560		0.6
Bypass kit, install, manual or electric	TH8561		1.2
Complete Water Heater Assembly, R&R	TH8562	Standard	1.5
	TH8563	DSI, A/C	2.0
	TH8564	motor aide	1.9
	TH8565	With bypass kit	2.0
Door, access, R&R	TH8566		0.3
Door, with frame, assembly, R&R	TH8567	Suburban model	0.4
DSI board, R&R	TH8568		0.6
ECO and thermostat, R&R	TH8569		0.6
Gas control valve R&R	TH8570	Electronic Model	1.1
	TH8571	Pilot model, R&R	1.1
Heater, IIOVAC element, R&R	TH8572	Front Side of Tank	0.5
	TH8573	Back Side Of Tank	1.0
Pilot assembly, R&R	TH8574		0.7
Pressure relief valve (T&P), R&R	TH8575		0.6
Reignitor, R&R	TH8576		0.3
Spark and probe assembly, R&R	TH8577		0.4
Switch, wall, on/off, R&R	TH8578		0.6
Burner, main, R&R	TH8579		0.5
Tank, inner, R&R (pilot model)	TH8580	(includes R&R complete unit)	2.0
Tank, inner, R&R (DSI model)	TH8581	(includes R&R complete unit)	2.5
Valve, drain, R&R	TH8582		0.5
Valve, mixing, R&R	TH8583		0.6
Generic Water Heaters Labor Line	TH8584		

WATER SYSTEMS (FRESH & WASTE)

Labor Operation Description	Operation Number	Detail	Labor Time
			All Models
Fresh Water	Operation Number	Detail	All Models
Check-valve (in-line), R&R	TH8585		0.5
Entry/fill City, R&R	TH8586		0.9
Entry/fill Combo with door, R&R	TH8587		1.1
Entry/fill Potable, R&R	TH8588		0.6
Faucet, R&R	TH8589		1.0
Faucet Misc. Repair	TH8590		0.9
Filter- Water R&R	TH8591	Attached to pump	0.5
	TH8592	In-line, R&R, (per linear ft.)	0.5
	TH8593	Install new element	0.2
	TH8594	Install new with separate faucet	2.0
	TH8595	Wall mount, R&R	0.8
	TH8596	Purifier, R&R	1.0
	TH8597	Purifier, install new	2.0
PUMP- Water R&R	TH8598	Adjust	0.3
	TH8599	Electric, demand, R&R	1.0
	TH8600	Hand, R&R	1.0
	TH8601	Strainer, R&R	0.3
	TH8602	Winterize tube valve, R&R	0.2
Shower, head, R&R	TH8603		1.0
Shower, mixer valve, R&R	TH8604		2.1
Water line/fittings, fresh R&R	TH8605	Tubing, R&R (per piece up to 6 ft.)	0.4
	TH8606	Fitting, copper, flare, R&R	0.4
	TH8607	Fitting, plastic, clamp ring, R&R	0.4
	TH8608	Fitting, plastic, nut cone, ring, R&R	0.4
	TH8609	plastic, slide in, quick connect, R&R	0.4
	TH8610	threaded, plastic, brass, couplers,tees, el's, R&R	0.4
Water system (air-pressure, "leak test")	TH8611		0.5
Water tank, storage, R&R	TH8612		4.0
Waste Water	Operation Number	Detail	All Models
Bathtub, R&R	TH8613		4.0
	TH8614	Fittings, ABS-slip type, all sizes, R&R**	1.0

Drain pipe/fittings, ABS-type R&R	TH8615	Fittings, ABS-slip type, all sizes, complex, cut out,assemble and splice (tee, wye, four way)	1.5
	TH8616	Hanger, R&R	0.2
	TH8617	Pipe/tubing, R&R (per piece up to 6 ft.)	1.0
	TH8618	Trap, R&R	1.0
Gate Valve R&R	TH8619	R&R, (glue together), not enclosed**	1.9
	TH8620	R&R, (bolt together), not enclosed**	1.9
	TH8621	Rebuild, Thetford type	2.1
Holding Tank Assy. R&R	TH8622		4.5
Holding Tank Blanket, install	TH8623		0.8
Holding Tank Clean and flush, per tank	TH8624		1.0
Holding Tank Flood test	TH8625		1.0
Holding Tank Monitor probe, install	TH8626		1.0
Shower stall, R&R	TH8627		6.0
Sink, R&R	TH8628		1.8
Toilet Complete, all, R&R	TH8629		1.2
Toilet Floor flange, slip, glued, R&R	TH8630		1.2
Toilet Floor flange, threaded, R&R	TH8631		0.8
Toilet Vacuum-breaker, R&R	TH8632	(does not include R&R toilet)	0.5
Toilet Water valve, "ball-valve", R&R	TH8633	(does not include R&R toilet)	1.0
Winterizing Equipment	Operation Number	Detail	All Models
Winterize Self-contained system and traps	TH8634		1.2
Winterize Non-self-contained system and traps,	TH8635		0.7
Winterize Clothes washer	TH8636		0.7
Winterize Filter	TH8637		0.7
Winterize Icemaker	TH8638		0.7
Winterize Waste holding tank, winterize	TH8639		0.5
Winterize Sink and shower/tub traps, only	TH8640		0.2
Winterize equipment	TH8641	Water pump, winterizing tube and valve, install	0.5
	TH8642	Add water heater bypass (electrical)	1.4
	TH8643	Add water heater bypass (manual)	2.2
De-winterizing (flush out system)	TH8644		1.0
Generic Water Systems Labor Line	TH8645		

LABOR TIME GUIDE for Transport Trailers

Labor Operation Description	Operation Number	Detail	Labor Time
			Transport Trailers
Axle Assy. -Replace	TRP001	W/ Electric Brakes	3.0
	TRP002	W/O Electric Brakes	2.5
Axle Seal- Replace Includes: Grease & Repack inner & outer wheel bearings	TRP003		1.8
Break Away Switch-Replace	TRP004		0.5
Break Away System Battery-Replace	TRP005		0.4
Break Away System Complete - R&R, R&I, or Install	TRP006		0.9
Charge & Retest Break Away Battery	TRP007		0.25
Diagnose Inoperative Trailer Wiring	TRP008		0.5
Document Holder- R&R, R&I, or Install	TRP009		0.2
DOT Trailer Inspection (FMCSR)	TRP010		1.0
DOT Reflective Tape-Replace .1 per section of tape replaced	TRP011	Each	0.1
Drain & Refill Axle Gear Oil	TRP012		N/A
Electric Brake Shoe/Backer Plate Assy.	TRP013		2.5
Equalizer Rod- R&R, R&I, or Adjust	TRP014		0.5
Fender-Replace &/or Resecure	TRP015		0.5
Gooseneck Adjustable Coupler-Replace	TRP016		0.2
Hub Cap- R&R, R&I, or Install	TRP017	Dust	0.2
	TRP018	Oil Bath	0.5
Landing Leg / Crank Handle-Replace	TRP019		0.3
Leaf Spring-Replace	TRP020		1.5
Light Bulb - Replace	TRP021		0.2
Marker Light Assy.-Replace	TRP022	Each	0.2
Mount & Balance Tire	TRP023	Each	0.25
Taillight Assy.-Replace	TRP024	Each	0.5
Tag Bracket or License Plate- R&R, R&I, or Install	TRP025		0.2
Trailer 7-Way Wire Connector-Replace	TRP026		0.5
Trailer 4-Pin Wire Connector-Replace	TRP027		0.4
Trailer Wiring Repair	TRP028		0.2
Valve Stem Assy.-Replace	TRP029		0.3
Valve Stem Cap-Install	TRP030		0.1
Valve Stem Core-Replace	TRP031		0.2
Safety Chain- R&R, R&I, or Install	TRP032	Pin-On	0.2
	TRP033	Weld-On	0.5
Safety Chain Clevis- R&R, R&I, or Install	TRP034		0.2
Wheel & Tire-R&I	TRP035		0.1

Wheel Bearings- Replace Includes: Inner & Outer Bearings	TRP036		1.8
Generic Transport Trailer Labor Line	TRP037		
Make Ready & PM Tasks			
Labor Operation Description	Operation Number	Detail	Labor Time
			Transport Trailers
DOT Annual Trailer Inspection (STATE REQUIRED)	MR1015		1.0

LABOR TIME GUIDE for Trash Trailers

Labor Operation Description	Operation Number	Detail	Labor Time
			Trash Trailers
Axle Assy. -Replace	TT0001	W/ Electric Brakes	3.0
	TT0002	W/O Electric Brakes	2.5
Axle Seal- Replace <small>Includes: Grease & Repack inner & outer wheel bearings</small>	TT0003		1.8
Break Away Switch-Replace	TT0004		0.5
Break Away System Battery-Replace	TT0005		0.4
Break Away System Complete - R&R, R&I, or Install	TT0006		0.9
Charge & Retest Break Away Battery	TT0007		0.25
Diagnose Inoperative Trailer Wiring	TT0008		0.5
Document Holder- R&R, R&I, or Install	TT0009		0.2
DOT Trailer Inspection (FMCSR)	TT0010		1.0
DOT Reflective Tape-Replace <small>.1 per section of tape replaced</small>	TT0011	Each	0.1
Drain & Refill Axle Gear Oil	TT0012		N/A
Electric Brake Shoe/Backer Plate Assy.	TT0013		2.5
Equalizer Rod- R&R, R&I, or Adjust	TT0014		0.5
Fender-Replace &/or Resecure	TT0015		0.5
Gooseneck Adjustable Coupler-Replace	TT0016		0.2
Hub Cap- R&R, R&I, or Install	TT0017	Dust	0.2
	TT0018	Oil Bath	0.5
Landing Leg / Crank Handle-Replace	TT0019		0.3
Leaf Spring-Replace	TT0039		1.5
Light Bulb - Replace	TT0040		0.2
Marker Light Assy.-Replace	TT0041	Each	0.2
Mount & Balance Tire	TT0042	Each	0.25
Taillight Assy.-Replace	TT0043	Each	0.5
Tag Bracket or License Plate- R&R, R&I, or Install	TT0044		0.2
Trailer 7-Way Wire Connector-Replace	TT0045		0.5
Trailer 4-Pin Wire Connector-Replace	TT0046		0.4
Trailer Wiring Repair	TT0047		0.2
Valve Stem Assy.-Replace	TT0048		0.3
Valve Stem Cap-Install	TT0049		0.1
Valve Stem Core-Replace	TT0050		0.2
Safety Chain- R&R, R&I, or Install	TT0051	Pin-On	0.2
	TT0052	Weld-On	0.5
Safety Chain Clevis- R&R, R&I, or Install	TT0053		0.2
Wheel & Tire-R&I	TT0054		0.1
Wheel Bearings- Replace <small>Includes: Inner & Outer Bearings</small>	TT0055		1.8
Generic Fresh Water Trailer Labor Line	TT0056		

Make Ready & PM Tasks

Labor Operation Description	Operation Number	Detail	Labor Time
			Trash Trailers
DOT Annual Trailer Inspection (STATE REQUIRED)	MR1015		1.0
TRASH TRAILER MAKE READY PROCEDURES	MR1023		1.0

LABOR GUIDE

REQUEST FOR REVIEW FORM

Name:	Date:	
Position:	Branch:	
Please specify the following items below:		
Is this a request to have an existing labor line revised?	YES	NO
If you answered yes to the question above please specify the operation number	#	
Is this a request to have a new labor line added?	YES	NO
Asset ID No:		
Asset Description:		
Model No:		
Serial No:		
Engine Make:		
Engine Model:		
Engine Serial No:		
AC Alternator Make:		

DESCRIPTION

When completing this form, it is important to submit a complete (detailed) description of the of the new or revised labor line you are requesting. Once you have filled out the "Request for Review" form please email it to: shawn.diamond@gvty.com please limit your inquiries to quantity of one per form. All inquiries received will be acknowledged and reviewed. A review will be conducted of the Labor Time Guide text and procedure ASAP. Thank You in advance for contributing to the labor guide!