

1990 JEEP WRANGLER YJ

Reconditioning, Inspection & Service Report

RECONDITIONING PLAN COMPLETE



Completed reconditioning - front three-quarter exterior view.

VIN 2J4FY49T8LJ501969	Mileage ~110,000 original miles	Engine AMC 258 / 4.2L I-6
Transmission 5-speed manual	Fuel System Howell #YJ258 TBI EFI	Tires New 215/75R15 A/T

Purpose of this report

This report summarizes the documented recommissioning and reconditioning work completed after the Jeep spent approximately 12-18 months in indoor storage. The primary reconditioning plan is complete. A short list of optional future projects is provided separately for the next owner.

Buyer Quick Summary

Vehicle	1990 Jeep Wrangler YJ, VIN 2J4FY49T8LJ501969, approximately 110,000 original miles.
Engine	AMC 258 / 4.2L inline-six. Compression tested before restart: 135-145 PSI across all six cylinders.
Fuel Injection	Howell Engine Developments #YJ258 TBI system, installed by Sam's 4x4 in Tulsa, Oklahoma.
Brakes	Brake booster and master cylinder replaced; booster pushrod measured/corrected; rear drums replaced; brakes adjusted and re-bled.
Tires / Suspension	Four new OEM-size 215/75R15 all-terrain tires, new front and rear shocks, and professional alignment by Tate Boys Tire & Service.
4WD	2H, 4H, Neutral, and 4L tested successfully; related 4WD indicator lights operational.
Road Test	Jeep runs and drives great. Successfully road-tested at highway speeds up to approximately 75 mph.
Plan Status	Primary reconditioning plan complete. Optional future projects are listed separately.

Reconditioning philosophy

The vehicle was not simply restarted after storage. Engine condition, fuel system, brakes, tires, suspension, electrical systems, vacuum/EVAP plumbing, and 4WD operation were evaluated systematically. Serviceable original components were retained where practical.



Odometer reading documented during the project.



Driver view of steering wheel, dash, and gauges.

Engine Condition & Safe Restart

Compression Test - PASSED

#1	#2	#3	#4	#5	#6
135 PSI	140 PSI	140 PSI	145 PSI	135 PSI	140 PSI

Compression result

Average compression was approximately 139 PSI with only a 10 PSI maximum spread. No obvious weak cylinder was identified.

Pre-Start Preparation

- Engine oil level and condition checked; no fuel odor or abnormal contamination observed.
- Coolant level and condition checked; coolant appeared clean with no discoloration.
- No rodent activity or visible wiring damage found.
- Original spark plugs removed and inspected; condition was good.
- Approximately one teaspoon of Marvel Mystery Oil added to each cylinder and allowed to soak overnight.
- Engine rotated approximately three full revolutions by hand without binding or abnormal resistance.
- Initial engine oil and filter changed before first startup following storage.

Howell EFI, Fuel System & Vacuum Repairs

Howell EFI Conversion - VERIFIED

- Howell Engine Developments #YJ258 TBI Kit for 1987-91 YJ Wrangler 4.2L applications.
- Installation confirmed as having been performed by Sam's 4x4 in Tulsa, Oklahoma.
- Fuel tank removed during recommissioning and found completely dry.
- Fresh ethanol-free 87-octane gasoline added.
- Failed inline Howell fuel-pump fuse diagnosed and replaced; fuel-pump operation restored.
- Howell inline EFI fuel filter replaced.
- Fuel-tank cap replaced to provide a fresh seal.
- After fuel-pump power was restored, engine started promptly and idled normally.



Howell #YJ258 kit identification image.



Installed Howell throttle-body injection system.

EVAP & Vacuum System - REPAIRED

- Broken/disconnected EVAP canister vacuum/vapor lines were identified and proper routing restored.
- Fuel-tank vapor connection restored; PCV/purge connection verified; obsolete carburetor-bowl port remained capped for the Howell conversion.
- Distributor/purge vacuum signal circuit restored to the Howell ported-vacuum arrangement.
- One additional vacuum hose with a hole was found and repaired.
- A previously noticed rich exhaust/fuel odor was likely associated with the disconnected EVAP tank-vapor plumbing.



Ignition, Tune-Up & Cooling System

Ignition & Baseline Service - COMPLETE

- New spark plugs installed and properly gapped.
- New spark-plug wires installed.
- PCV valve replaced.
- Engine vent valve replaced.
- Second engine oil and filter change completed after recommissioning to establish a fresh baseline.
- Tune-up performed: plugs and gap rechecked; distributor cap and rotor replaced.
- Ignition timing checked and found properly set; no adjustment required.

Cooling System - INSPECTED / PASSED

- Coolant level was correct and visible condition was excellent with no discoloration.
- No immediate cooling-system concern was identified during the completed reconditioning plan.

Future cooling-system consideration

Upper and lower radiator hoses and the thermostat have been moved to the Future Projects for Consideration list rather than being classified as unfinished reconditioning work.

Brake System Reconditioning

Brake System - COMPLETE

- Brake booster replaced.
- Master cylinder replaced.
- Brake system bled.
- Booster pushrod measured with a dedicated adjustment gauge; loose locknut and incorrect rod length were identified, corrected, and secured.
- Front rotors inspected with no obvious glazing or damage; front pads approximately 70% remaining.
- Rear brake assemblies inspected; shoes approximately 70% remaining with no visible wheel-cylinder leakage or fluid contamination.
- Both rear brake drums replaced because the original drums were significantly scarred.
- Rear brakes adjusted and the complete brake system bled again.
- Parking brake tested and working properly.
- No recurrence of the earlier front-brake overheating condition during subsequent road testing.



Rear brake assembly during inspection. Shoes retained substantial lining and no visible fluid contamination was found.

Tires, Suspension, Alignment & Road Test

Tires - REPLACED

- Original tires dated from 2002-2004 and exhibited age-related tread-groove cracking despite good tread depth.
- All four aged tires removed.
- Four new OEM-size 215/75R15 All-Terrain tires installed.
- Tire pressure set to 32 PSI cold per vehicle door placard.

Suspension & Alignment - COMPLETE

- New front shock absorbers installed.
- New rear shock absorbers installed.
- Professional wheel alignment performed by Tate Boys Tire & Service when the new tires were installed.
- Braking-related sway was almost completely eliminated after tire, shock, and alignment work.
- No excessive body bounce observed.

Highway Road Test - PASSED

Following the brake, tire, suspension, alignment, tune-up, and vacuum-system work, the Jeep was road-tested at highway speeds up to approximately 75 mph. It demonstrated excellent highway drivability, stable handling, substantially improved braking stability, and no recurrence of brake overheating.



New OEM-size 215/75R15 all-terrain tire installed on the Jeep.



Close-up of the new all-terrain tread.

Drivetrain & Four-Wheel Drive

4WD Operational Test - PASSED

Mode	Result
2H	Passed - normal operation
4H	Passed - engaged and operated correctly
Neutral	Passed
4L	Passed - low-range operation confirmed

4WD indicators

Associated 4WD indicator lights were tested and operational.

Drivetrain Fluids

- Front differential fluid condition and level checked; condition appeared good and level acceptable.
- Rear differential fluid condition and level checked; condition appeared good and level acceptable.

Electrical, Lighting, Interior & Accessories

Turn Signals	Failed flasher replaced; turn signals restored to normal operation.
Rear LED Lighting	Aftermarket LED tail/brake/turn lamps were restored to operation after replacement of a blown 15A fuse. Exact original cause of the fuse failure cannot be confirmed.
Driver Headlight	Driver-side headlight replaced because the low beam was inoperative.
Radio	Electrical connectors cleaned and flip-down screen mechanism repaired; radio operation restored.
Passenger Half-Door	Interior handle assembly replaced because the original was sticking badly and the lever had broken. Internal latch/linkage components lubricated and tested.
Other Items	Half-door grommets replaced; fitted rubber floor mats installed; new wiper blades installed.

Tops & Exterior Accessories

- Bestop soft top - excellent condition.
- Bikini top - average condition.
- Chrome bull guard with LED light bar.
- External doors-off mirrors.
- Aftermarket LED rear tail/brake/turn lights.



Driver-area interior, dashboard, shifter, and controls.



Front seating and center console area.

Future Projects for Consideration

Primary reconditioning plan is complete

The items below are not classified as unfinished repairs. They are optional future maintenance or improvement projects for the next owner to consider.

Cooling	Replace upper and lower radiator hoses as preventive maintenance.
Cooling	Replace thermostat during future cooling-system service.
Maintenance	Replace accessory belts as preventive baseline maintenance.
A/C	Diagnose factory air-conditioning system. Blower operates, but air does not become cold and the compressor clutch has not been observed engaging. The longtime owner reported the A/C was essentially not used after the family purchased the Jeep in 1992.

Factory A/C - Current Observation

- Cabin blower operates strongly.
- Vent air does not become cold.
- Compressor clutch has not been observed engaging.
- No refrigerant was added during this reconditioning project.

Service & Reconditioning Summary

Category	Work Performed	Status
Engine	Compression test	Complete
Engine	Cylinder lubrication before restart	Complete
Engine	Spark plugs and wires	Replaced
Engine	PCV and vent valves	Replaced
Engine	Two oil/filter changes	Complete
Ignition	Distributor cap and rotor	Replaced
Ignition	Ignition timing check	Passed
Vacuum	EVAP / vacuum-line repairs	Complete
Fuel	Howell fuel-pump inline fuse	Replaced
Fuel	Howell inline EFI fuel filter	Replaced
Fuel	Fuel cap	Replaced
Fuel	Fresh ethanol-free 87-octane fuel	Complete
Brakes	Brake booster + master cylinder	Replaced
Brakes	Booster pushrod	Measured / corrected
Brakes	Rear drums	Replaced
Brakes	Rear adjustment + full bleed	Complete
Tires	Four 215/75R15 A/T tires	Replaced
Suspension	Front and rear shocks	Replaced
Alignment	Professional alignment - Tate Boys	Complete

Service & Reconditioning Summary (continued)

Category	Work Performed	Status
4WD	2H / 4H / N / 4L	Passed
Drivetrain	Front/rear differential fluid check	Passed
Electrical	Turn-signal flasher	Replaced
Electrical	Brake-light/rear LED circuit fuse	Replaced
Lighting	Driver-side headlight	Replaced
Interior	Passenger half-door handle	Replaced
Interior	Radio repair	Complete
Exterior	Wiper blades	Replaced
Exterior	Half-door grommets	Replaced
Accessories	Fitted rubber floor mats	Installed
Road Test	Local/highway road testing to ~75 mph	Passed
Future	Upper & lower radiator hoses	Consider
Future	Thermostat	Consider
Future	Accessory belts	Consider
Future	Factory A/C diagnosis	Consider

Buyer Notes

Documented reconditioning

This Jeep was not simply fitted with a battery and restarted after storage. The reconditioning process included engine preparation and compression testing, fuel-system inspection, Howell EFI troubleshooting, vacuum/EVAP repairs, brake-system reconditioning, tire and shock replacement, professional alignment, 4WD testing, electrical repairs, tune-up work, and local/highway road testing.

- Serviceable original components were retained where practical.
- The primary reconditioning plan is complete. Optional future projects are listed separately for transparency.
- The Jeep runs and drives great following completion of the work described in this report.
- The vehicle owner has reviewed the work performed and is very satisfied with the reconditioning plan and results.
- This report is intended as a good-faith summary of observed condition and work performed; it is not a warranty or substitute for an independent pre-purchase inspection.



Beginning the reconditioning process - the Jeep with its longtime owner on pickup day. Owner face blurred for privacy.

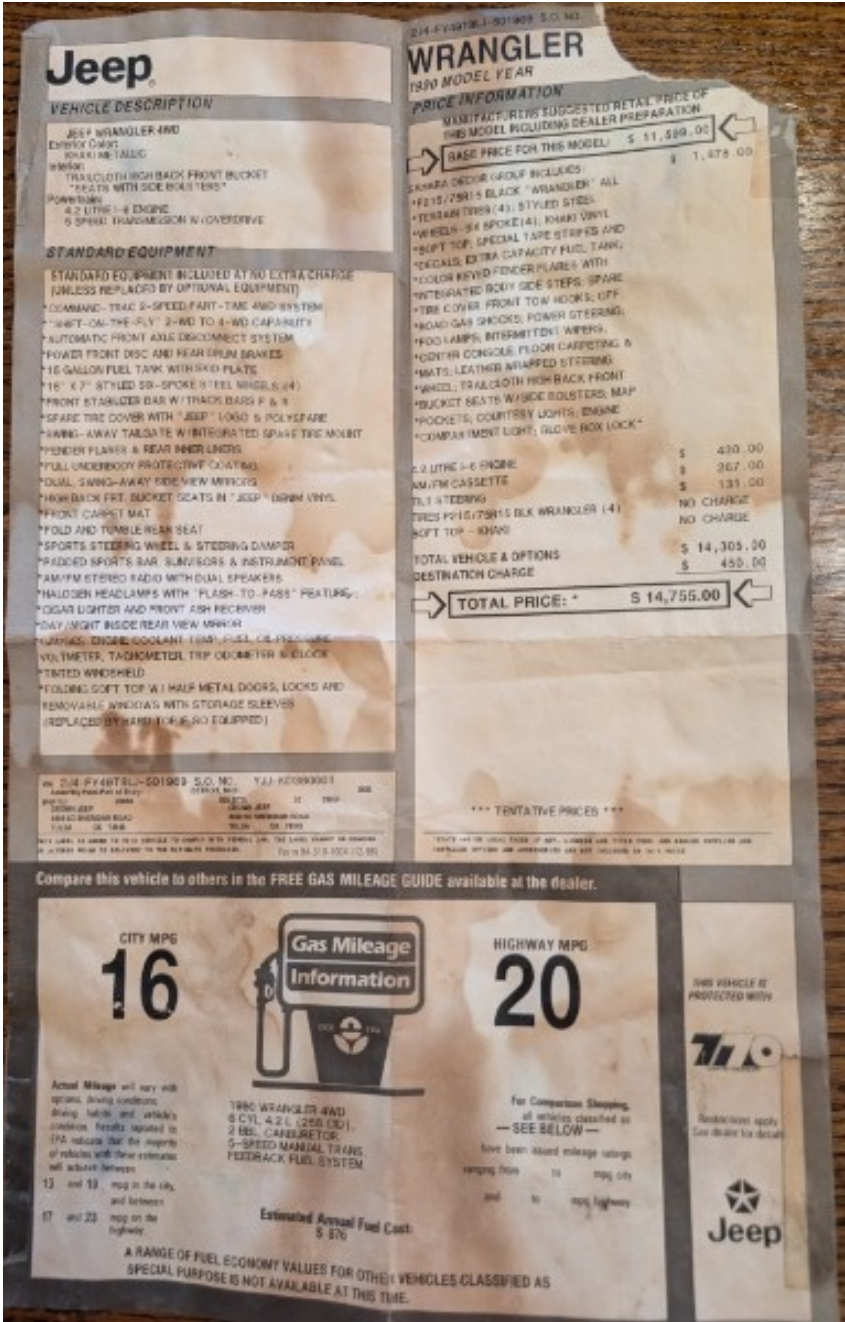


Completed Jeep following reconditioning, new tires, shocks, and alignment.

Original Documentation

Original documents located during reconditioning

The original Monroney window sticker and equipment build sheet were found in the center console.



Original 1990 Jeep Wrangler Monroney window sticker.
Background cropped for presentation; the document itself is shown as found.

The original equipment build sheet is reproduced on the following three pages.

Equipment Listing

VIN 2J4FY49T8LJ501969
Vehicle Description 1990 JEEP WRANGLER 4X4

STANDARD EQUIPMENT

- * MONOTONE PAINT
- * BATTERY RUN DOWN PROTECTION
- * POWER FRONT DISC/REAR DRUM BRAKES
- * COMMAND-TRAC PART TIME 4WD SYSTEM
- * DANA 30/186MM FRONT AXLE
- * 3.07 REAR AXLE RATIO
- * DANA M235 WIDE REAR AXLE
- * TINTED WINDSHIELD GLASS
- * PLASTIC FRONT DOOR WINDOW
- * HALF METAL DOORS WITH LOCKS
- * DO NOT USE - SEE HCA
- * 100 MPH PRIMARY SPEEDOMETER
- * PERFORMANCE DATA & VIDEO RECORDER
- * CIGAR LIGHTER
- * DESCRIPTION NOT AVAILABLE
- * HALOGEN HEADLAMPS
- * PAINTED FRONT BUMPER
- * Dark Chrome Exterior Accents
- * Off Road Truck Tailgate
- * European II Emissions
- * EVAP Control System
- * Heavy Duty Engine Cooling
- * Yellowish Green

- * Compact Spare Tire
- * Outside Tire Carrier
- * Build To U.S. Mkt. Specifications
- * GVW/Payload Rating
- * U.S. Dealer Retail
- * Zone 52-Kansas City

OPTIONAL EQUIPMENT

- * CLOTH SEATS
- * DESCRIPTION NOT AVAILABLE
- * DRIVER CONFIDENCE GROUP
- * LONGHORN SOUTHFORK PACKAGE
- * SAHARA DECOR GROUP
- * DESCRIPTION NOT AVAILABLE
- * HIGH BACK BUCKET SEATS
- * REAR FOLDING SEAT
- * FLOOR CARPET
- * CARGO COMPARTMENT CARPET
- * FRONT & REAR FLOOR MATS
- * SPARE TIRE COVER
- * FULL LENGTH FLOOR CONSOLE
- * ALL MANUAL TRANSMISSIONS
- * 5-SPEED MANUAL TRANSMISSION
- * ALL ENGINES
- * DESCRIPTION NOT AVAILABLE
- * DESCRIPTION NOT AVAILABLE
- * LEFT MANUAL MIRROR
- * RIGHT MANUAL MIRROR
- * OPEN

- * VAR INTERMITTENT WINDSHIELD WIPERS
- * LOCKING GLOVE BOX
- * DESCRIPTION NOT AVAILABLE
- * COURTESY LAMPS
- * UNDERHOOD LAMP
- * FRONT FOG LAMPS
- * Gloss Black Rear Fascia Applique
- * Bodyside Side Steps
- * 20 Gallon Fuel Tank
- * Yellowish Green
- * All Radio Equipped Vehicles
- * AM/FM Cassette Radio
- * 2 Speakers
- * Power Rack and Pinion Steering
- * Leather Wrapped Steering Wheel
- * Front Heavy Duty Shock Absorbers
- * Rear Heavy Duty Shock Absorbers
- * Tilt Steering Column
- * All Tires
- * P215/75R15 RBL Wrangler AT Tires
- * DESCRIPTION NOT AVAILABLE
- * 15X7.0 Styled Steel Wheels
- * All Steel Wheels
- * Tow Hooks
- * 9 Additional Gallons of Gas
- * Rear Spring Group I
- * Left Front Spring Group Vi
- * Right Front Spring Group VI
- * AMES Department Stores