# New booster rocket for shuttle undergoes full-scale test-firing

BRIGHAM CITY, Utah (AP) —A lesigned space shuttle booster cket roared into life in its first fullle test-firing Sunday, a successful d crucial step before the planned newal of shuttle missions next

The 126-foot-long solid fuel ocket blasted orange flame 500 feet a thick cloud of smoke boiled 00 feet into the sky above Morton niokol Inc.'s desert test site 25 es west of here as 9,500 spectawatched.

Before the solid fuel boosters are rtified and the shuttles are allowed fly again, officials have decided the redesigned booster must be -fired at least four times on the

Adm. Richard Truly, the National ronautics and Space Administra-n associate administrator for ace flight, said the test-firing eathed new hope into the nation's ce program, which has been bunded since Jan. 28, 1986, when explosion destroyed the shuttle allenger, killing its seven-member

presidential commission later ned the disaster on a faulty seal the booster rocket that allowed exhaust gasses out the side of the ket, igniting Challenger's exter-liquid fuel tank. NASA officials be the new design has eliminated t flaw.

I feel good about what we saw, the proof of this pudding will ne in the next few days" after eneers have had a chance to analyze

that we don't have to change direction, that's the important thing," Truly said. "It will prove that in fact the track we're on is the right track."

"This first demonstration of this series of (full-scale) tests will mean we need to do if we just put effort into it. I think this is going to be the thing that gets us back on-line with

the shuttle program." the track we're on is the right track."

Allan McDonald, director of Morton Thiokol's solid rocket motor redesign team, said, "We're absolu-

"This first demonstration . . . will mean that we don't have to change direction, that's the important thing. — Adm. Richard Truly

Following the test, engineers approached within 50 feet of the still-hot booster rocket and scanned it with binoculars. McDonald and John Thomas, head of NASA's booster rocket design team, said all of the rocket's systems appeared to have operated as expected.

The rocket used up 1 million pounds of propellant during the two-minute test, consuming it at a 9,000-pound-per-second pace, company spokesman Rocky Raab said.

Carver Kennedy, Morton Thio-kol's vice president for space pro-grams, said, "It obviously ran the right amount of time. The plume ran normal, it appears to be a normal, successful test.

Sen. Orrin Hatch, R-Utah, one of hundreds who watched the test, said,

tely elated about what we've seen to- parison, Raab said, 11 test-firings vere conducted for the booster used before Challenger exploded.

> In addition to the full-scale experiments, Morton Thiokol has conducted hundreds of smaller-scale

> The test of the booster was originally scheduled last Thursday, but was aborted three times by test equipment failures.

John Taylor, spokesman for the Marshall Space Center in Huntsville, Ala., told reporters Sunday that the first abort, caused by the failure of a water line for a cooling system, led to the two subsequent delays involving computer problems that occurred when engineers tried to reset the

"The abort . . . created these ground-support problems where the computers were out of sequence,'

firing was halted 10 seconds before ignition when a water main broke. Water was to be used to cool the rocket casing after firing.

The second countdown ended three minutes from ignition when a computer detected instrument readings that Thomas said "looked

A final attempt Thursday was stopped 12 seconds from ignition because of computer problems.

The inquiry into the Challenger disaster blamed a joint in a Thiokol booster that leaked superheated exhaust gases out the side of the rocket, igniting the contents of the external liquid fuel tank for the shuttle's main engines.

NASA and Thiokol are spending \$400 million to redesign the rocket and the joints between segments to ensure that such a leak doesn't hap-

The new joint between the rocket nozzle and the body of the booster includes 100 additional bolts, adhesively bonded insulation to replace putty used previously, a pressure relief slot and a third rubber-like Oring gasket.

In the old design, pressure from the violently burning fuel could force the joint apart and the hot gases could burn through the O-rings.

The joint has previously been tested in very brief firings, including a six-second firing earlier this month in which the joint held in spite of

## Lee Marvin, 'tough guy' movie great, dies at 63 of heart attack in Arizona

ming actor Lee Marvin, a gravel-ced World War II Marine who nt on to star as the consummate igh guy in films like "The Man o Shot Liberty Valance" and he Dirty Dozen," has died at the

Marvin, who also played an un-nted role in a historic "palimony" , died of a heart attack Saturday ucson Medical Center Marvin's third wife and childhood

etheart, Pamela Feeley, was at his side when he died, Tucson Medi-Center spokesman Tom Reavis Marvin had been hospitalized

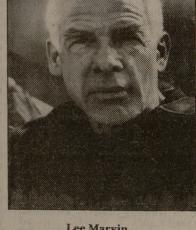
ce Aug. 13 with a run-down conon related to the flu.

Ernest Borgnine, who starred th Marvin in "Bad Day at Black k" in 1954 and "Emperor of the rth Pole" in 1973, wept when told Marvin's death.

"We always had a great respect for chother," he said.

We loved each other.

was a softy. "He knew I knew that.



Lee Marvin

Last December, Marvin had intes-The old rascal never let on, but tinal surgery after suffering abdominal pains while at his ranch near

there was an inflammation of the with Marvin in the 1963 movie "The

But no malignancy was found. ing the war, Marvin fell into acting by chance while working as a plumb-

He landed a small role in "You're

In The Navy Now" in 1951.

He established himself in the 1950s and 1960s as a menacing figure, ever brandishing a gun and a mean expression.

Marvin's best-known tough-guy roles were in such films as "The Dirty Dozen," "The Man Who Shot Liberty Valance," "The Big Red One," "Donovan's Reef," and "Prime

His television series "M Squad" can for three years beginning in

Marvin won an Academy Award as a double character in his role as a drunken gunfighter and his evil twin in "Cat Ballou," the 1965 western parody which also starred Jane

President Reagan, who co-starred

Killers," and his wife, Nancy, extended their sympathies to Marvin's family and friends.

The president and Mrs. Reagan are vacationing in Santa Parbara,

In 1979, Marvin made headlines in a landmark "palimony" case when he was sued for half his fortune by his former live-in girlfriend, Mich-

She legally changed her last name

Her right to sue was upheld but her claim was ultimately rejected, though the actor was ordered to pay her a nominal sum for rehabilita-

In 1984, after marrying for a third time, Marvin moved to his

"There is going to be a very small, private funeral in Tucson," his publicist, Paul Wasserman, said Sunday in Los Angeles.

A public memorial service will be held in Hollywood within two weeks,

## "I will miss him." Hospital spokesmen said then Abortion rights activists predict fights n court over new legislation proposals

agan administration's proposed les to cut federal money for aborcounseling won applause Sun-from abortion opponents, but brition rights activists predicted regulations will be fought in the

The representatives of the reprotive rights community are ready litigate the minute these regula-ns go into effect," said Jennifer eer, legal coordinator for the Nanal Abortion Rights Action

izer charged the administration's ent "is basically to shut off all inmation about abortions.

On Saturday, the Department of

WASHINGTON (AP) — The agan administration's proposed es to cut federal money for abornic counseling won applause Sunand federally funded family planning programs.

> Under the proposals, family planning clinics that receive federal funds - but carry out abortions with private funds — would be required to keep the two functions totally apart by such means as separate entrances, examination rooms and medical and financial records.

The proposals were outlined in a policy announced last month by President Reagan. They will be published Tuesday in the Federal Register and spell out how the depart-

nate all Title X language that requires recipients of federal funds to suggest abortion as an alternative for

pregnant women.
Following a 60-day comment period, the department analyzes the comment and usually issues final regulations.

Joseph Scheidler, executive director of the Chicago-based Pro-Life Action League, praised the proposed regulations as signs of a move toward a ban on federal funding for all family planning services.

"I think it's a good start that they

WELCOME BACK TO AGGIELAND

**4 Locations to Serve Your Auto Needs** 

are separating abortion completely from other quote-unquote services," Scheidler said. "But we won't be really happy until all tax money is withdrawn from these services alto-

"If people want to pay for that stuff, that should be their business but it shouldn't be with our money.

Phyllis Schlafly, president of the conservative Eagle Forum, said the proposed regulations were a good

"I think the American people and Congress do not want to fund abor-tions in any way," Schlafly said in a telephone interview from her home in Alton, Ill. "I think these regulations are long overdue.

**TIRE & AUTO CENTER** 

2707 Texas Ave.

Bryan

823-0551

**TIRE & AUTO CENTER** 400 E. University Dr. **College Station** 696-1729

FREE TIRE ROTATION

w/ coupon EXP 9/30/87

**ALL LOCATIONS** 

UNIROY

ARMSTRONG **YOKOHAMA GET ACQUAINTED COUPON** 

**College Station** 

503 Nimitz

693-1735

**MUFFLER CENTER** 

GET ACQUAINTED COUPON **COMPUTER SPIN** BALANCE \$2.95/wheel w/ coupon EXP 9/30/87

**EXXON SERVICE CENTER** 1721 S. Texas Ave. **College Station** 693-4378 **HWY 30 & HWY 6** 

**EXON** 

**GET ACQUAINTED COUPON** 10% DISCOUNT ON **EXHAUST WORK** w/ coupon EXP 9/30/87

**GET ACQUAINTED COUPON** UP TO 5 qts. SUPERFLOW OIL-FILTER-LUB w/ coupon EXP 9/30/87

Goodrich

All coupons good on most cars & light trucks

### E & L GOMPUTERS GRAND **OPENING**

PC/XT TURBO, 640K, 2-DRIVES, MONITOR PC/AT COMPATABLE 8Mhz, 512K, 1.2M FLOPPY

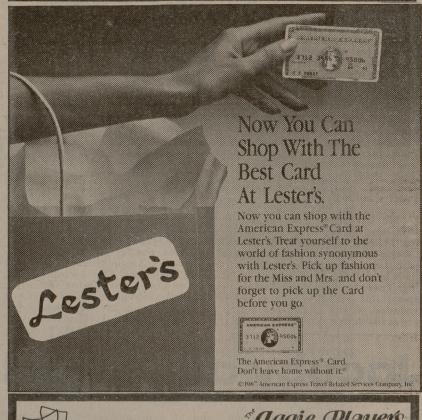
AMBER MONITOR, GRAPHICS CARD PANASONIC 1080i PRINTER w/cable EVEREX 1200 BAUD MODEM w/software SAMSUNG EGA MONITOR AND EGA CARD HARD-DRIVES 20 MEG W/CONTROLLER CARD

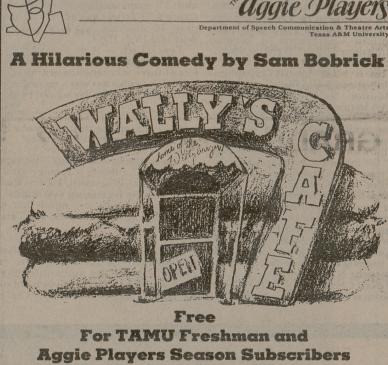
\$189 \$99 \$585 \$319 0

\$1169

DISKETTES E & L DSDD \$.45 ea. \$ 1.09 ea. E & L DSHD 3 1/2" DISKETTES \$ 1.75 ea. SMALL CASE (HOLDS 10 DISKETTES) \$3.00

SKAGGS SHOPPING CENTER MONDAY - SATURDAY 10am - 7pm PHONE 846-8164 or 846-5262





WENT FROM A SIZE 16 TO A 10."

RUDDER FORUM Tickets available at Rudder box office

\$4.00 for Students and General Public

8 pm

SEPTEMBER 3 & 4

Thanks to the New NUTRI/SYSTEM°Flavor Set-Point Weight Loss Program.

Tracy Jefferies lost 36 lbs. and became a size 10 again on this comprehensive weight loss program The program also includes:



■ Nutritional, flavorful, easy-to-prepare meals. NUTRI/SYSTEM

Flavor Enhancers ■ New NUTRI/SYSTEM Flavor Chews. Behavioral Counseling.

■ Weight Maintenance. Our client Tracy Jefferies lost 36 lbs. We Succeed

**Where Diets** Fail You. nutri/system

**505 University Drive College Station** 260-9038